



FEDERAL SIGNAL VAMA

Protecting people and our planet

PRODUCT GUIDE

Emergency Service Equipment

Federal Signal Vama, European market leader for Emergency Warning Systems, offers integrated solutions for police, ambulance, fire, rescue and service vehicles market.



www.fedsigvama.com



WHO ARE WE?

Federal Signal Corporation (FSC, with website www.federalsignal.com) designs and manufactures a suite of products and integrated solutions for municipal, governmental, industrial, and commercial customers under a variety of recognized brand names.

Environmental Solutions (ESG) that offers environmental solutions due to its complete product range (Vacuum trucks, sewer cleaners, hydro-excavators, street sweepers, waterblasters etc.) and **Safety and Security Systems (SSG)** are the two business groups that belongs to FSC.

SSG has the following divisions:

Integrated Warning Systems for Emergency vehicles (Public Safety Systems, PSS), Indoor and outdoor mass warning and notification systems division (Integrated Systems), Signaling products and mining and electrical safety equipment division.

Federal Signal Vama (FSV), belonging to PSS division, serves these Emergency Warning Systems in the European markets, which offers integrated solutions for Police, Ambulance, Fire, Rescue and Service markets. Furthermore, we install and make transformations to all kinds of emergency and service vehicles. Our large range of products and services together with our engineering and manufacturing flexibility ensure we are able to customize the solution expected by each customer.

FSV leading engineering and manufacturing capabilities have resulted in the most dependable emergency warning equipment available in Europe.

Innovative engineering and skilled workmanship have earned FSV a reputation for quality and performance appreciated by the customers we serve throughout Europe.



OUR MISSION

Providing Products and Services to Protect People and Our Planet.

OUR VALUES

We operate with the highest principles and deliver results through customer focus, innovation, continuous improvement, teamwork and investing in our people.

WHERE ARE WE?

European central office

- Vilassar de Dalt - Barcelona (Spain)

Production plants in Europe

- Vilassar de Dalt - Barcelona (Spain)

- Bytom (Polonia)

Comercial office (Central administration)

- Madrid (Spain)



FACILITIES

Federal Signal Vama is a company founded in 1969, pioneering the concept of police cars as we know them today. In 1992 it was acquired by the Federal Signal Corporation Industrial Group, a world leader in warning systems, which is listed on New York stock exchange. Federal Signal Vama became the European market business unit responsible for the emergency sector (Police, Fire and Ambulance) and services (Heavy Duty).

With important annual investments to develop new products, the engineering department can offer integrated solutions for all end user requirements. Because of Federal Signal Vama employee's constant development and innovation Federal Signal Vama has built an excellent reputation for quality and performance that is appreciated by customers all over Europe.

INGENEERING AND R+D

Federal Signal Vama's R and D department comprises a team of engineers divided in three technical categories; **software, electronics and mechanics**. This way, Federal Signal Vama offers integrated hardware and software solutions to enable the management of all the communications systems in the emergency and service vehicles.

A 3D printer allows the rapid development of prototypes in the early stages of the product development project. Thanks to this, Federal Signal Vama's engineers can check that the project is practical and the product is suitable for its intended market. Market information is collected both by marketing and commercial departments.

QUALITY

The Quality department does a variety of tests and checks to ensure the products meet the level of quality expected by the European market, Federal Signal Vama's main market place. These tests include life tests, vibration, temperature, humidity and many more, to ensure products achieve the relevant European homologations, including Regulation R65 relating to colour, light intensity and flash patterns (carried out with a photometric device and oscilloscope) and Regulation R10 relating to electromagnetic compatibility (carried out with a Faraday chamber). This high level of quality has lead to Federal Signal Vama achieving ISO 9001 and ACAU (Auto Certification Automotive Unity) certification.

PRODUCTION LINE

With two production facilities (one in Poland and one in Barcelona, Spain), Federal Signal Vama achieves a leadership and manufacturing capability that leads to a high reliability in its emergency warning systems, one of its highlights.

Our Barcelona manufacturing facility covers 7,500 square meters. Within this is our printed circuit production area utilizing Pick and Place robots, mounting components directly onto multilayer printed circuit boards. Final soldering in a convection oven is also fully automated.

Once the printed circuit boards have been checked, they have a protective varnish applied to ensure protection from adverse climatic conditions and to help to achieve an excellent performance.

Federal Signal Vama produces more than 400,000 wiring harnesses every year, using over 1,400,000 meters of electrical cable. Wiring harnesses are designed to assist installation into the emergency vehicle. All wiring harnesses are manufactured using electrical cables matched to the electrical loads and fitted with appropriate connectors.

Our lightbar production lines supply lightbars to all Europe. Federal Signal Vama manufactures more than 10 different lightbar platforms, among these, Valor lightbars with its "V" form, which reduces the risk and increases the emergency vehicle security at intersections, or the Traffic Storm lightbar, that includes a foldable LED panel, providing additional information in emergency situations. Each lightbar model is designed to meet the requirements of the different European markets.

The **grill light assembly area** produces lights using the latest LED technology, taking a special care in lights' sealing, to ensure perfect waterproof products when required.

In the special production area the well known Prisoner Kits are manufactured. This system converts the rear passenger area of a police vehicle into a secure area for the prisoner, while ensuring the safety of the police officers. A thermo forming machine manufactures the different elements included on the kit, like the separated shield and the rear seats, with a 5 axis CNC machine which finishes the process and gives the final and distinctive appearance.

In the mechanical workshop a computer programed punching machine starts the manufacture of the metal housings.

The **metal housings** then continue to a computer programmed bending machine which finishes the product ready for final assembly.

MAIN WARNING LIGHTS**LIGHTBARS**

| | |
|------------------------|----|
| N Quasar Series | 6 |
| Traffic Storm Series | 12 |
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| Vista Series | 16 |
| Arjent Solaris Series | 18 |
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| 4000/3000/2000 Series | 26 |
| Mini Legend | 30 |

LED BEACONS

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|------------------------|----|

| | |
|------------------------------|----|
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| LM800 / LP800 Solaris Series | 35 |
| LM400 / LP400 Solaris Series | 36 |
| Trident Series | 37 |

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| Black box with GPS, analogic lightbars | 90 |

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ABOUT THE PRODUCT GUIDE

- Products are classified according to their categories (main warning lights, supplemental warning lights, internal warning lights, area lighting, sirens & audible warning, controllers, recording system and accessories).
- Within each category, products are grouped in families or Series.
- **N** **NEW** indicates a new entry in the Price List.
- For each product the Reference number (#), model and description are shown. Product reference numbers are the same as those used in our business system. Please order the product by its corresponding reference number.
- Lightbar options cannot be bought separately from the lightbar.
- For a proper and safe installation and operation, remember to read all installation manuals carefully.

* Provided information about price, product, dimensions, features and specifications could be subject to change without notice.

NEWS 2017



LIGHTBARS

QUASAR Series

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LED BEACONS

GEMINIS Series

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LED SIGNS

FSX Sun Visor

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SCENE LIGHTS

LineLED

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RECORDING SYSTEM

Videobadge,
body worn camera

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Sales conditions

(1) AGREEMENT AND LIMITATIONS. The agreement between Seller and Buyer (the "sales contract") with respect to the sale of goods (the "goods") described on the other side hereof shall consist of the terms appearing hereon and on the other side hereof together with any additions or revisions of such terms mutually agreed to in writing by Seller and Buyer. Seller objects to and shall not be bound by any additional or different terms, whether printed or otherwise, in Buyer's purchase order or in any other communication from Buyer to Seller unless specifically agreed to by Seller in writing. Except as expressly stated in the sales contract, no reference to Buyer's purchase order or other communication from Buyer shall be deemed to incorporate by reference any terms appearing therein. The sales contract shall be for the benefit of Seller and Buyer and not for the benefit of any other person. Prior courses of dealing, trade usage and verbal agreements not reduced to a writing signed by Seller, to the extent they modify, add to, detract from, supplant or explain the sales contract, shall not be binding on Seller.

(2) TERMINATION OR MODIFICATION. The sales contract may be modified or terminated only upon Seller's written consent except that stenographic and clerical errors are subject to correction by Seller or upon Seller's written consent. If Seller shall declare or consent to a termination of the sales contract, in whole or in part, Buyer, in the absence of contrary written agreement signed by Seller, shall pay termination charges based upon expenses and costs incurred in the production of the goods or in the performance of the services to the date such termination is accepted by Seller including, but not limited to, expenses of disposing of materials on hand or on order from suppliers and the losses resulting from such disposition, plus a reasonable profit. Notwithstanding the foregoing any goods substantially completed or services performed on or prior to such termination shall be accepted and paid for in full by Buyer.

(3) PRICE AND PAYMENT. Prices are subject to increase by Seller based on Seller's prices in effect at the time of shipment in all instances where specified shipment date is later than 30 days from date of order. Unless otherwise specified in the sales contract or Seller's applicable price list, prices are EXWORKS. Seller's point of shipment, and the terms of payment are NET 30 days from the date of invoice. If the sales contract is for more than one unit of goods, the goods may be shipped in a single lot or in several lots at the discretion of Seller. In such event each such shipment shall be paid separately and Buyer shall be responsible for all transportation charges. Seller may require full or partial payment or payment guarantee in advance of shipment whenever, in its opinion, the financial condition of Buyer so warrants. Payment by credit card may be subject to a service charge.

(4) PAST DUE INTEREST. Amounts not paid when due shall be subject to past due interest at the rate of 18% per year or the highest rate permitted by law, whichever is less.

(5) RISK OF LOSS. The risk of loss or the goods or any part thereof shall pass to the buyer upon delivery thereof by Seller to the carrier. Buyer shall have sole responsibility for processing and collection of any claim of loss against the carrier.

(6) TAXES. Prices do not include taxes. Buyer shall pay Seller, in addition to the price of the goods, any applicable excise, sales, use or other tax (irrespective of how it is designated) imposed upon the sale, production, delivery or use of the goods ordered to the extent required or not forbidden by law to be collected by Seller from Buyer, whether or not so collected at the time of the sale, unless valid exemption certificates acceptable to the taxing authorities are furnished to Seller before the date of invoice.

(7) DELIVERY. Promises of delivery from stock are subject to prior sale. Delivery dates are not guaranteed but are estimated on the basis of immediate receipt by Seller of all information to be furnished by Buyer and the absence of delays, direct or indirect, resulting from or contributed to by circumstances beyond Seller's reasonable control. Seller shall in good faith endeavour to meet estimated delivery dates but shall not be liable to Buyer for any damages as a result of any delay caused or contributed to by circumstances beyond Seller's reasonable control.

(8) DEDUCTIONS AND RETURNS. A Return Material Authorization (RMA) must be obtained before returning merchandise for credit. Returns are subject to 20% or more restocking charges unless otherwise agreed upon at the time RMA is issued. All returns are subject to inspection of merchandise and any defects in the units will be charged back to the Buyer at the cost of parts and labour. Credit deductions will not be honoured unless covered by a credit memorandum. Goods shipped to the Buyer may be returned to Seller for credit only upon the Seller's prior written consent (such consent to be in the sole discretion of Seller) and upon terms specified by Seller, including prevailing restocking, freight, and handling charges. Buyer assumes all risk of loss for such returned goods until actual receipt thereof by Seller. Seller representatives are not authorized to accept, returned goods or to grant allowances or adjustments with respect to Buyer's account. We don't accept returns of special products developed under customer requirements, as well as lightbars or prisoner transport kits. Federal Signal Vama only accepts product returns shown at product guide, general price list or spare parts list, and for a period of 2 years starting from the product manufacturing date.

(9) INSPECTION. Buyer shall inspect the goods immediately upon the receipt thereof. All claims for any alleged defect in Seller's performance under this sales contract, capable of discovery upon reasonable inspection, must be fully set forth in writing and received by Seller within thirty days of Buyer's receipt of the goods. Failure to make any such claim within said thirty-day period shall constitute a waiver of such claim and an irrevocable acceptance of the goods by Buyer.

(10) LIMITED WARRANTY. Federal Signal Vama, S.A.U warrants each new product to be free of defects in material and labor cost, under normal use and service, for a period of two years from the manufacturing date unless different enterprise communication supports (product bulletins, product guides, price lists, email communications, etc.) stated otherwise. All products have been subjected to abuse, misuse, extraordinary work conditions, inadequate maintenance or installation, or its use, maintenance or installation are different from user's manual are excluded of this warranty. Lamps, flash tubes, or batteries are not covered under warranty as well. During this warranty period, the obligation of Federal is limited to repairing or replacing, as Federal may elect, any part or parts of such product which after examination by Federal discloses to be defective in material and/or workmanship. The customer will return by RMA the defective part for analysis and verification in a period of one month maximum. Federal reserves the right to charge the product and transport if the defective parts after examination by Federal don't discloses to be defective in material and/or workmanship, or in the case of not receiving the defective product part for analysis when this product has been replaced in warranty. Only in case of reparation o substitution of any product part is impossible, or when the product can't recover its function or former quality through the reparation or substitution, Federal Signal Vama S.A.U. could refund the purchase price paid for its distributors or professional customers to them. Except for specific circumstances, reparations under this warranty have to be done by Federal Signal Vama S.A.U.'s authorised Service Centres. If this reparation can't be done at authorised Federal Signal Vama S.A.U Service Centres and the product has to be repaired in other place, the distributor or professional customer has to paid all Federal Signal Vama S.A.U or SAT personnel's travel expenses and living allowances. This warranty covers all expenses relating to assembly and disassembly, and labour of the defective part, according to current price list communicated by Federal Signal Vama S.A.U. If distributor or professional customer decides to send to Federal Signal Vama S.A.U. in order to repair it, this warranty covers shipment expenses of the repaired or substituted part by regular shipment from Federal Signal Vama S.A.U. to the distributor or professional customer. Shipment expenses of supposedly defective part from distributor or professional customer to Federal Signal Vama S.A.U. have to be paid by distributor or professional customer. Repaired or substituted parts have got a (3) three months warranty or they have got the remaining warranty time from the part applied, if this is greater. Federal Signal Vama S.A.U. not offers any other warranty, whether explicit or implicit, including (but not limited) any implicit warranty for a commercial or suitable specific purpose. Under any circumstance Federal Signal Vama S.A.U. has to be responsible for possible benefit losses or direct damages resulting from defective material or manufacturing products. This commercial warranty is applicable without prejudice to current customer protection or legal warranties laws.

(11) PATENTS. Seller shall hold Buyer harmless, to the extent herein provided, against any rightful claim of any third person stating that the goods, under the same conditions as they left the factory, infringe any United States and/or European Union patent. However, if the Seller followed Buyer's instructions in that respect, the Buyer shall hold Seller harmless from any claim arising from the compliance with such instructions. Seller's acceptance in this paragraph to hold Buyer harmless shall not apply to any infringement consisting of the use of goods manufactured by Seller as a part of any combination with goods manufactured by Buyer or others. In the event of any claim of infringement in respect of any goods manufactured by Seller and the subsequent prohibition of use, Seller, if unable within a reasonable time to secure for Buyer the right to continue using such goods, either by suspension of the injunction, by providing for Buyer a license, or through other ways, shall either replace such goods with non-infringing goods or modify such goods so that they become non-infringing or accept the return of the prohibited goods and refund the purchase price paid by Buyer less allowance for any period of effective use. Except as in this paragraph provided, Seller makes no warranty that the goods will be delivered free of the rightful claim of any third person by way of infringement or the like and Buyer's remedies will be limited to those provided in this paragraph.

(12) ASSIGNMENT AND DELEGATION. No right or interest in this sales contract shall be assigned by Buyer without Seller's prior written consent, and no delegation of any obligation owed, or of the performance of any obligation, by Buyer shall be made without Seller's prior written consent. Any attempted assignment or delegation shall be void and totally ineffective for all purposes unless made in conformity with this paragraph 9, 10 and 11 hereof, and if effective shall be subject to all limitations of this sales contract.

(13) SEVERABILITY. If any term, clause or provision contained in the sales contract is declared or held invalid by a court of competent jurisdiction, such declaration or holding shall not affect the validity of any other term, clause or provision herein contained.

(14) INSTALLATION. Installation shall be provided and shall be paid for by Buyer unless otherwise specifically stated on the sales contract.

(15) GOVERNING LAW AND LIMITATIONS. The formation and performance of the sales contract shall be governed by the laws of Spain.

Any action for breach of the sales contract or any covenant or warranty contained herein must be commenced within the term of one year after breach of agreement has occurred.

(16) MINIMUM ORDER. With the aim to increase our customer service level and efficiency, we will establish a minimum customer order amount of 75 €. We would not be able to manage orders below that amount. Do not hesitate to contact our customer service for further information.

MAIN WARNING LIGHTS

| | | |
|---|-----------------------------|-----------|
| ➤ | Lightbars..... | 6 |
| ➤ | Mini lightbars..... | 30 |
| ➤ | LED beacons..... | 32 |
| ➤ | Strobe beacons..... | 38 |
| ➤ | Halogen beacons..... | 39 |
| ➤ | Others..... | 40 |

NEW



QUASAR Series

FEDERAL SIGNAL VAMA offers the **New Integrated Warning system QUASAR**, a revolutionary Solaris technology lighting system completely integrated into the roof and with modular technology, provides high visibility through 360 degrees of emergency vehicle with high light power, increasing visibility and reducing risks. The lights integration into the roof give the vehicle aerodynamics and modernity.

- MODULAR TECHNOLOGY

Modular system perfectly adapted to emergency professionals, where LED lights, sign options, alley and/or front lights, LED light colour, RAL section colour, directional warning lights, rear recording and displaying camera, etc. could be chosen.

- FRONT SECTION R65 T-CATEGORY CLASS 2 APPROVED

Front section according to R65 Regulation T-Category, class 2, in blue and amber colours. Furthermore, front and rear sections are according together with R65 Regulation T-Category, class 2, as well, for same LED light colours.

- BICOLOUR AND TRICOLOUR LIGHT

Bicolour lights for priority lights and tricolour lights for auxiliary lights to meet end user needs.

- ULTRA-LOW PROFILE

Its low profile, lower than 150 mm., reduces aerodynamic resistance allowing a better emergency vehicle grip, a better low height spaces access and a unique design.



- SPLIT ROOF

Independent front and rear sections, so they could be ordered separately, providing high versatility to the system, according customer needs.

- EXCLUSIVE DESIGN

Integrated Quasar System design is for the exclusive use of Federal Signal Vama according to European Union Design Certificate.

- LOW MAINTENANCE COST

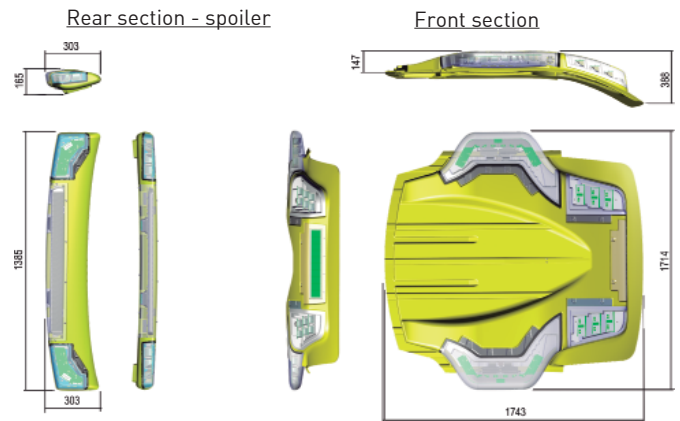
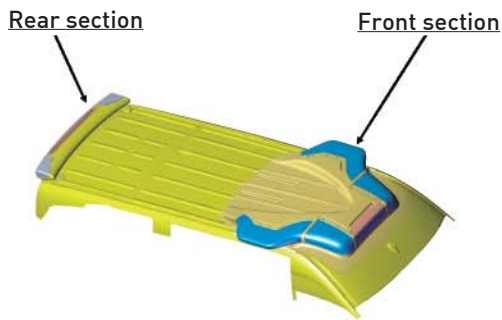
Removable, waterproof optical systems, allowing fast module replacement to any incident that may occur, reducing maintenance cost and increasing vehicle availability.

- VENTILATION SYSTEM

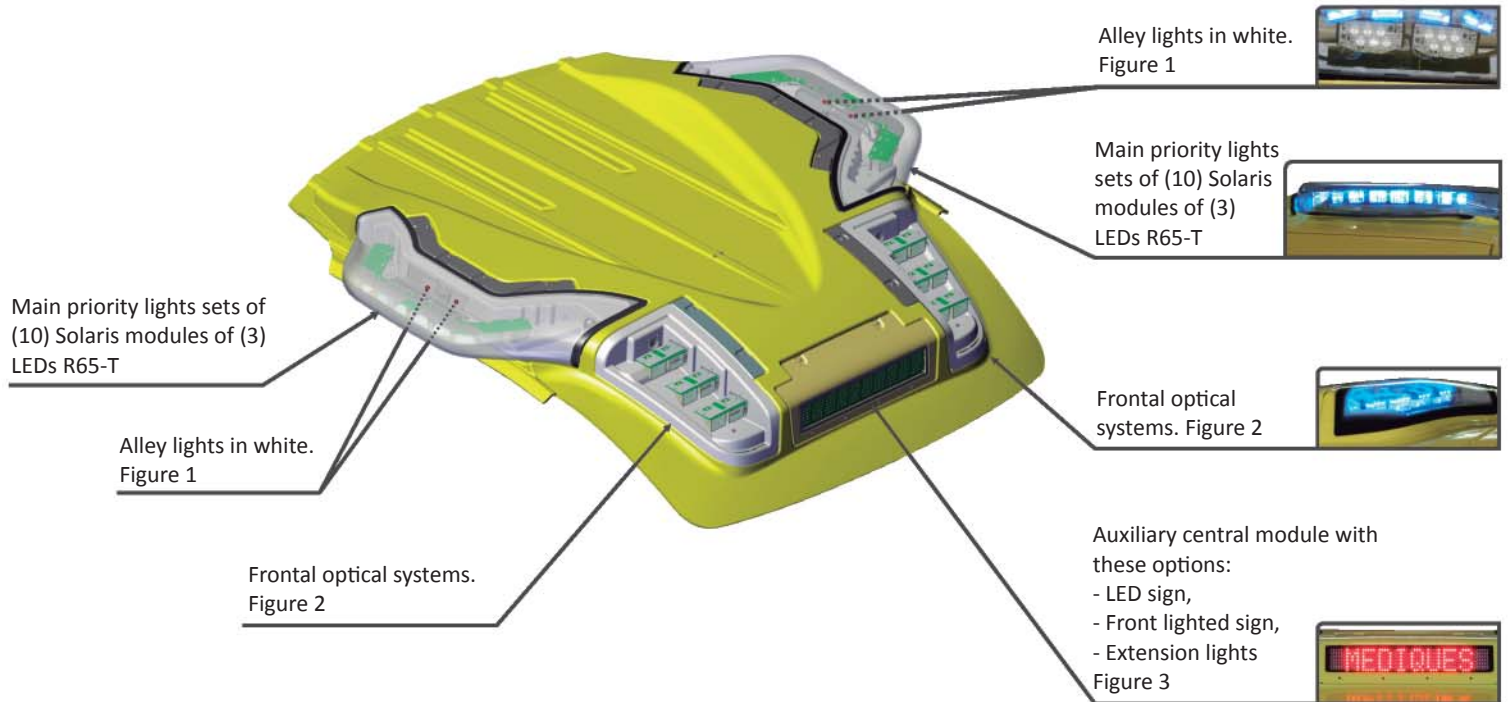
A fan system prevents inside lens condensation, assuring full light output emission.

- LEDS SOLARIS LIGHTS

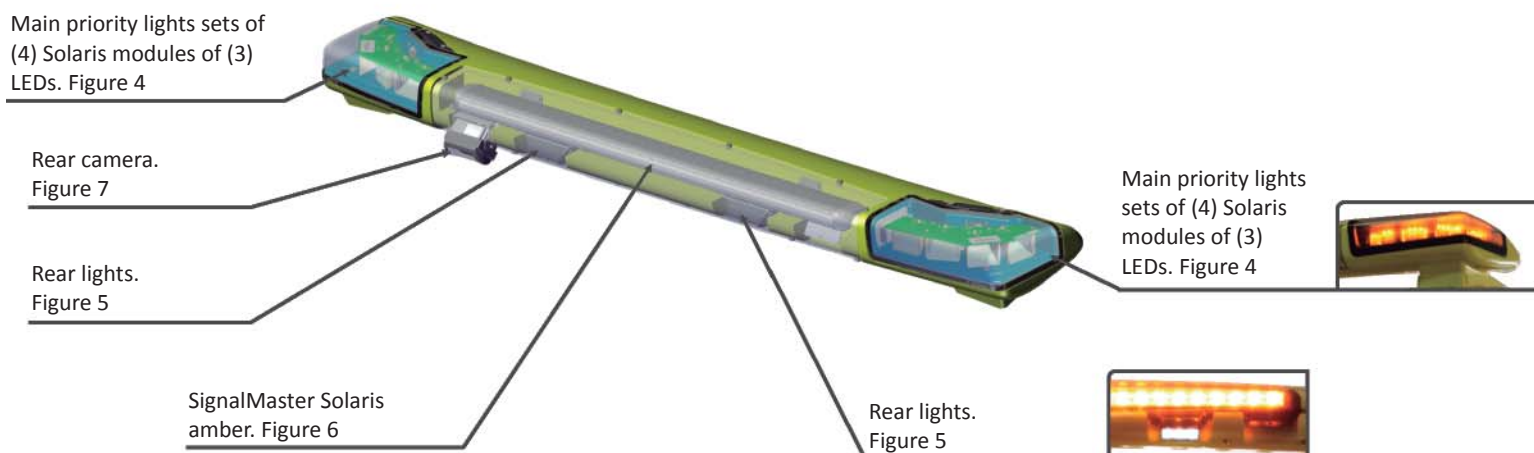
Traditional light systems spread the light in a random direction, LED Solaris technology reflects a strong light beam where it is needed most, on a wide angle, avoiding dark spots.



QUASAR SYSTEM - FRONT SECTION



QUASAR SYSTEM - REAR SECTION - SPOILER



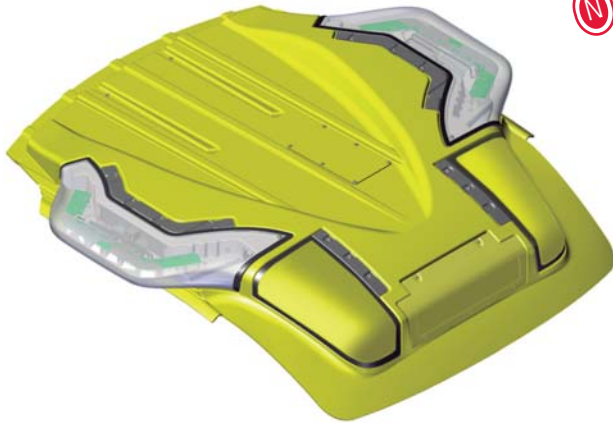
THE FRONT AND REAR SECTIONS CAN BE PURCHASED SEPARATELY.

Available for MERCEDES SPRINTER and VOLKSWAGEN CRAFTER 2015 whose wheelbase is 3,665 or 4,325 mm and it has got high roof. Other vehicles please consult.

MOD. DESCRIPTION

EURO

QUASAR BASIC SYSTEM - FRONT SECTION



| | | |
|---|---|----------|
| QS-BASFR | Front section from Quasar emergency warning system, with (2) main priority lights sets of (10) Solaris modules of (3) LEDs for front section. Available in amber, blue or red colours. SINGLE-COLOUR . Amber and blue main priority lights approved according R65 norm T category all around 360° of the vehicle, without adding any additional warning lighth. | 7.620,00 |
| Amber or red priority lights with silver base, and blue priority lights in blue base. | | |
| Available for MERCEDES SPRINTER and VOLKSWAGEN CRAFTER 2015 whose wheelbase is 3,665 or 4.325 mm and it has got high roof. Other vehicles please consult. | | |
| (*) Specify RAL colour of the basic system Quasar base when ordering. | | |

ADDITIONAL LIGHTING OPTIONS



Figure 1. Alley lights lower view.

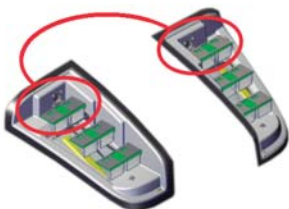


Figure 2. Frontal optical systems.

| | | |
|------------------|--|--------|
| QSL-1C-AD | BICOLOUR priority lights option. | 270,00 |
| QSFL-2 | (4) alley light kit (2 for right side and 2 for left side) for the vehicle. They illuminate the area under main priority lights. | 372,00 |
| QSFDI-M | (2) SINGLE-COLOUR* LED lights set with 3 LEDs for frontal optical systems. In amber, blue, red or white colours | 228,00 |
| QSFDI-B | (2) BICOLOUR* LED lights set with 3 LEDs for frontal optical systems. In amber, blue, red and/or white colours | 282,00 |
| QSFD1-T | (2) TRICOLOUR* LED lights set with 3 LEDs for frontal optical systems. In amber, blue, red and/or white colours. | 336,00 |

(*) Three sets of (2) modules maximum for each frontal optical system.

CENTRAL FRONT SECTION OPTIONS

Select a single option for the central front section.



Figure 3.



Figure 3.



Figure 3.

| | | |
|----------------|---|--------|
| QSL | (1) Programmable LED sign for central front section - LSG700 | 795,00 |
| QSCI | (1) Front lighted sign with text for central front section | 236,40 |
| QSNL-2M | (2) LED blue, amber, red or white lights, synchronized with main priority lights, independently controlled or in steady burn mode for central front section | 378,00 |
| QSNL-4M | (4) LED blue, amber, red or white lights, synchronized with main priority lights, independently controlled or in steady burn mode for central front section | 588,00 |

MOD.

DESCRIPTION

EURO

QUASAR BASIC SYSTEM - REAR SECTION - SPOILER

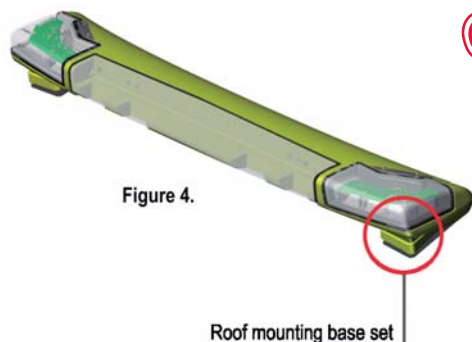


Figure 4.



QS-BASPS

(1) Rear section spoiler from Quasar emergency warning system, with (2) main priority lights sets of (4) Solaris modules of (3) LEDs for rear section. Available in amber, blue or red colours. **SINGLE-COLOUR.** (See Figure 4).

3.312,22

Amber and blue main priority lights approved according R65 norm T category together with vehicle front section. Amber or red priority lights with silver base, and blue priority lights in blue base.

Available for MERCEDES SPRINTER and VOLKSWAGEN CRAFTER 2015 whose wheelbase is 3,665 or 4,325 mm and it has got high roof. Other vehicles please consult.

(*) Specify RAL colour of the basic system Quasar base when ordering.



QS-APOYO-PS

(1)Roof mounting base set, please consult available vehicle models.

231,60

REAR SECTION OPTIONS



QSP-1C-AD

BICOLOUR priority lights option

109,20



QSNLPS-2M

(2) LED blue, amber, red or white lights, synchronized with main priority lights, independently controlled or in steady burn mode for rear section (See figure 5).

294,00



QSSML

(1) Signalmaster Solaris low-profile directional warning light, with (4) flash patterns (right, left, centre-out and center-out flashing mode) (See figure 6).

560,00

Recording and displaying options

Rear camera displaying images



QSDXT-RC

(1) Left side rear camera for rear section

444,00



4520093-02

(1) 10,2" Display and management screen

1.584,00



4520140

(1) Camera and touchscreen connector

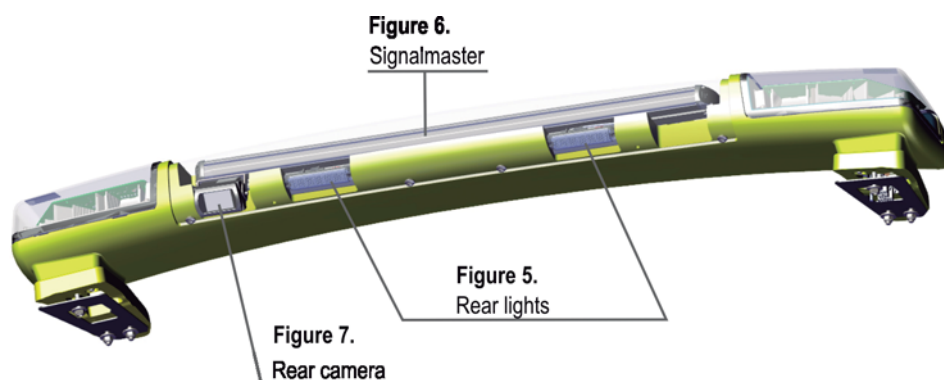
8,25

Rear camera recording and displaying images



(1) Atenea FEDVISION basic system. High definition video and audio recording system. It manages and stores video images and audio through user-defined approaches, and it allows a pre-recording mode and remote video streaming visualization.

See
Atenea
System
Price List



| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

ANALOG CONTROL system

| | | |
|---------|--|---|
| 8216112 | | LCD700 Control head w/ LCD back-lit screen to display messages. (Please specify language when ordering) |
| 2004103 | | GO 112 Touch Screen Console, wall mounting |
| 2004104 | | GO 112 Touch Screen Console, foot mounting |
| 2004106 | | GO 112 Central Unit M |
| 2004107 | | GO 112 Central Unit L |
| 2004108 | | GO 112 Central Unit XL |

Acoustic options

| | | |
|---------|-----------|---|
| 2021047 | AL-252N | 100W Speaker, round horn, neodymium driver, metal L- bracket (1) (Please specify the international tones when ordering) |
| 2020256 | AS-320DIG | 100W Siren amplifier, (3) tones, remote control, P.A., (1) light output, (1) auxiliar output, wiring harness, 12V |

CAN BUS Controllers

| | | |
|------------|----------|---|
| BCT3000-03 | BCT3000 | BCT3000, Control Head for lights, sirens and LED Signs (no P.A.) |
| BCT2004-01 | BCT2004 | BCT2000 Series control head, 4 control keys. |
| BCT2006-01 | BCT2006 | BCT2000 Series control head. 6 control keys. |
| BCT2010-01 | BCT2010 | BCT2000 Series control head. 10 control keys. |
| BCT2015-01 | BCT2015 | BCT2000 Series control head. 15 control keys. |
| BCT2021-01 | BCT2021 | BCT2000 Series control head. 21 control keys. |
| 8216160 | BCT500CB | BCT500CB Series control head. 13 control keys (public address included) |

Converter ANALOG-CAN BUS

| | | |
|---------|--|---|
| 8235978 | | CANBUS Control box (Activation of functions via direct cable by positive) |
| 8299753 | | SOLARIS CANBUS control head connection kit (not necessary when the system does not have a lightbar) |

Acoustic options

| | | |
|---------|---------------------|---|
| 2021047 | AL-252N | 100W Speaker, round horn, neodymium driver, metal L- bracket (1) (Please specify the international tones when ordering) |
| 2020269 | AS320DIG CAN BUS | 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500CB Series control heads. P.A not included |
| 8235984 | | Public address kit with remote control. Volume and microfone functions control (for control head BCT3000) 12V |





Option 360° camera
TRAFFIC VIEW



TRAFFIC STORM Series

Configurable lightbars.

Low profile lightbar with ROC Solaris technology and foldable led sign specially designed for applications where the signal through a text message or voice is essential.

Two levels of light allow multiple combinations of lights and colours, thereby optimizing the internal capacity of the lightbar without losing any option for auxiliary signalling.

It is equipped with one or two powerful foldable Led signs for front and/or rear legend.

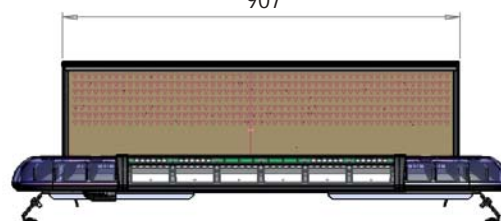
The lightbar being Can Bus controlled, it can activated multiple programmable functions just by pressing a single button on the keypad.

Traffic Storm Series (priority lights in blue or amber) is approved for the European Regulation R65 and is according to European Directive 2004/10/EC on Electromagnetic Compatibility.

| | |
|---|-------------------------------------|
| Voltage: | 12V |
| Standby consumption: | 0,3Amp |
| Main warning lights, total average consumption: | 3,2A in flash, 0,5A in cruise light |
| Front modules (white light), average consumption: | 1A for module |
| Lateral modules (white light), average consumption: | 0,5A for module |
| Supplementary modules (amber light), average consumption: | 1A for module |
| Lighted sign, average consumption: | 0,4A for module |
| Complete rear and front foldable LED sign. LED Panel: 630 LEDs. SignalMaster: 288 LEDs | 3,2A for panel + 1A SignalMaster |

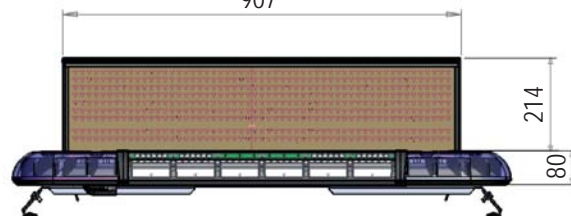
Frontal View

907



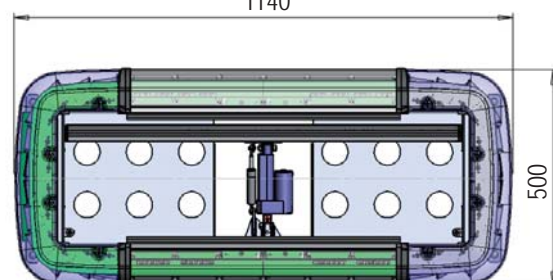
Rear View

907



Upper View

1140



Traffic Storm dimensions (mm)



| REF. | MOD. | DESCRIPTION |
|--|--|---|
| Options - Priority lights | | |
| | TF-SL | 44" Basic lightbar, (20) Solaris modules of (3) LEDs, blue light or amber, wiring harness, UN R65 approved class 2 |
| N | TF-SL13 | 53" Basic lightbar, (20) Solaris modules of (3) LEDs, blue light or amber, wiring harness, UN R65 approved class 2 (*) Mounting kit is not included in price and must be ordered separately |
| | Options - Lateral Section - Alley light | |
| | TF-FL | (4) Solaris modules of (3) LEDs, white light Options - Front & Center Section - Lower Level |
| | TF-FF | (2) Solaris modules of (6) LEDs, white light, steady burn and/or flashing. |
| | TF-LE | (2) Solaris modules of (6) LEDs, blue light, priority lights extension. |
| | TF-LP | (2) Solaris modules of (6) LEDs, red light, flashing |
| | TF-CI | (2) Solaris modules of (6) LEDs, white light, lighted sign without text* * The text message must be ordered separately. |
| Options - Rear & Center Section - Lower Level | | |
| | TF-FPT | (2) Solaris modules of (6) LEDs, white light, steady burn and/or flashing. |
| | TF-LE | (2) Solaris modules of (6) LEDs, blue light, priority lights extension. |
| | TF-A/SM | (2) Solaris modules of (6) LEDs, amber light, flashing or SignalMaster (directional lighting system). |
| | TF-CI | (2) Solaris modules of (6) LEDs, white light, lighted sign without text Options - Front & Center Section - Upper Level |
| | TF-LP-S | (2) LED modules, red light, flashing Options - Rear & Center Section - Upper Level |
| | TF-A/SM-S | (2) LED modules, amber light, flashing or SignalMaster (directional lighting system). Options - Traffic View |
| | TF-TV | (1) Traffic View 360° camera |
| 4520137 | | 3D Joystick: Traffic View camera control. Multi protocol support. Could be integrated into Atenea System |
| 4520093-02 | | 10" Monitor for Traffic View camera images display. Could be integrated into Atenea System (*) Foldable LED sign incompatible option Options Foldable LED Sign * Please contact with our sales department for Traffic Storm without foldable led sign availability |
| | TF-CLF | (1) LSG900, foldable LED Sign, red light, 200 programmable messages from the user with normal and/or mirror view and scrolling. |
| | TF-CLP | (1) LSG900, foldable LED Sign, red light, rear signalisation, integrated SignalMaster (directional lighting system), 200 programmable messages from the user with normal view and scrolling. |
| | TF-CLF/P | (1) Front LED Sign, red light, front and rear signalisation, 200 programmable messages from the user with normal and/or mirror view(front) and scrolling. (*) Traffic View camera incompatible option Mount Accessories |
| | TF-CT | Roof connector, 19-ways (obligatory) |
| 8234176 | TF-FP | Permanent mounting kit (recommended) |
| | TF-FB | Metal mounting kits on bars |
| N | 4004536 | Cover for 1100mm. (44") Control head |
| | BCT3000 | Control head for Traffic Storm series ¹ 10 buttons for emergency and auxiliary systems. Delayed public address. Voice player/recorder (1 message) ² TCAN BUS technology with LCD screen. Voice and text messages can be previewed Volume control for public address and voice player. SignalMaster control. USB connection. ¹ Contact our sales department for available models. ² BCT3000 enables to pre-programm diferent voice messages. For further information, contact our sales department. |
| AS320 DIG CAN BUS siren amplifier | | |
| 2020268 | AS320DIG 12V | 100W siren amplifierfor BCT3000. Features: Horn-ring connection. Radio repeat. Relay output (10A) for auxiliary lights synchronized with priority lights. Realy output (1A) for tachograph. Please contact your Sales Dept. for availability and models. Only can be installed with BCT3000 control head. |
| 2020270 | AS320DIG 24V | 100W siren amplifierfor BCT3000. Features: Horn-ring connection. Radio repeat. Relay output (10A) for auxiliary lights synchronized with priority lights. Realy output (1A) for tachograph. Please contact your Sales Dept. for availability and models. Only can be installed with BCT3000 control head. |
| Public address | | |
| 8235984 | AS320-PA CB | Public address kit with remote control. Volume and microfne functions control (for control head BCT3000) 12V Programming Accessories |
| 2025473 | S2ME | SmartSign 2 Message Editor, for editing and downloading messages from PC. Only available for LSG900 programmable LED sign in Traffic Storm lightbars series. (*) All Federal Signal Vama CAN BUS lightbars are compatible with FEDEMERGENCY System from Atenea Integrated Vehicle Solutions. For more information see ATENEA Catalogue |



VALOR Series



Valor lightbar is the first and only non-linear, low profile LED lightbar. A lightbar that increases visibility, optimizes performance, and reduces risk to any emergency situation. SPECTRALUX™ provides a fully programmable range of color combinations for optimum warning capability to flood light performance.

- SAFETY AT THE CRITICAL ANGLES

Valor V-shape was engineered to outperform at 45-degree and 90-degree angles, critical for intersection clearing.

- LEDs SOLARIS LIGHTS

Solaris LED reflector design to significantly maximize the LED light source for full light coverage.

- SPECTRALUX™ MULTICOLOR LED TECHNOLOGY

Provides the ability for a LED light head to change color. LEDs can change between red, blue, amber or white.

- ROC TECHNOLOGY

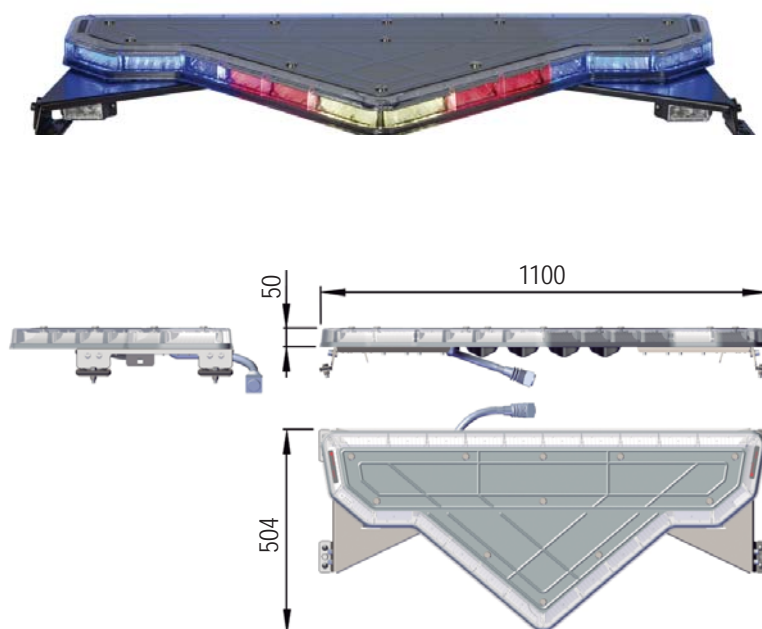
Lineal circuit board-to-board connection which reduce the number of electrical connections in a lightbar.

- UNIQUE DESIGN

Valor lightbar design is FEDERAL SIGNAL use exclusively due to European Union Community Design registration 001925753-0001.

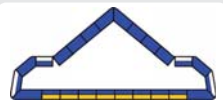
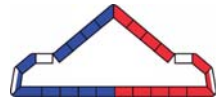
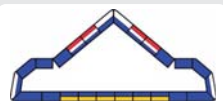
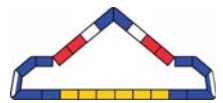
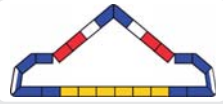

- TWO LEVEL LIGHTS

New mounting brackets system allows to install white TAKE DOWNS and ALLEY lights in a second level that do not interfere with the main lights.



Valor lightbar dimensions in mm.

| | |
|-------------------------------------|---|
| Voltage: | 11,5Vdc to 14,5Vdc - Typical: 13,8Vdc |
| Temperature of use: | -40°C to 65°C |
| Current draw: | (at 13,8Vdc) Standby mode: 250mA (no lights connected) Steady mode: add 1000mA by module R65 mod: add 300mA by module = 3A, the complete R65 |
| LED colour: | blue, amber, red and white |
| Technology: | SOLARIS SPECTRALUX |
| Lens colour: | Clear |
| Dimensions: | VALR44 - 1110 mm x 50 mm x 504 mm |
| Weight (without mounting brackets): | 11,6 kgs. |
| Weight (with mounting brackets): | 16 kgs. |

| REF. | MOD. | DESCRIPTION |
|---|---|---|
| Preselected models: | | |
| VALR44-2674993E |  | <p><u>Valor Series Lightbar 44", composed by:</u></p> <ul style="list-style-type: none">* Main lights: 24 Blue LEDs Solaris modules* Secondary lights:<ul style="list-style-type: none">- 2 white TAKE DOWN LEDs Solaris modules- 2 white ALLEY LIGHTS LEDs Solaris modules- 8 amber rear LEDs Solaris modules (Signalmaster function)* 19 ways roof connector <p>Color configuration by module:</p> <ul style="list-style-type: none">* 12 blue modules* 4 blue and white modules* 8 blue and amber modules |
| VALR44-2675002E |  | <p><u>Valor Series Lightbar 44", composed by:</u></p> <ul style="list-style-type: none">* Main lights: 10 Blue LEDs Solaris modules (left) and 10 Red LEDs Solaris modules (right)* Secondary lights:<ul style="list-style-type: none">- 2 white TAKE DOWN LEDs Solaris modules- 2 white ALLEY LIGHTS LEDs Solaris modules* 19 ways roof connector <p>Color configuration by module:</p> <ul style="list-style-type: none">* 10 blue modules* 10 red modules* 2 white modules* 1 blue and white module* 1 red and white module |
| VALR44-2633966E |  | <p><u>Valor Series Lightbar 44", composed by:</u></p> <ul style="list-style-type: none">* Main lights: 24 Blue LEDs Solaris modules* Secondary lights:<ul style="list-style-type: none">- 6 white TAKE DOWN LEDs Solaris modules- 2 white ALLEY LIGHTS LEDs Solaris modules- 4 red front LEDs Solaris modules (stop function)- 6 amber LEDs Solaris modules in the rear (Signalmaster function)* Cruise light* 19ways roof connector <p>Color configuration by module:</p> <ul style="list-style-type: none">* 10 blue modules* 4 blue and white modules* 6 blue and amber modules* 4 blue, red and white modules |
| VALR44-PMM |  | <p><u>Valor Series Lightbar 44", composed by:</u></p> <ul style="list-style-type: none">* Main lights: 12 Blue LEDs Solaris modules* Secondary lights:<ul style="list-style-type: none">- 2 white TAKE DOWNS LEDs Solaris modules- 2 white ALLEY LIGHTS LEDs Solaris modules- 4 red front LEDs Solaris modules (stop function)- 6 amber rear LEDs Solaris modules (Signalmaster function)* Cruise light* 19 ways roof connector* Prewired for auxiliary lights on mounting kit (auxiliary lights sold separately) <p>Color configuration by module:</p> <ul style="list-style-type: none">* 10 blue modules* 4 red modules* 2 white modules* 6 amber modules* 2 blue and white modules |
| VALR44-PL |  | <p><u>Valor Series Lightbar 44", composed by:</u></p> <ul style="list-style-type: none">* Main lights: 12 Blue LEDs Solaris modules* Secondary lights:<ul style="list-style-type: none">- 2 white TAKE DOWNS LEDs Solaris modules- 2 white ALLEY LIGHTS LEDs Solaris modules- 4 red front LEDs Solaris modules (stop function)- 6 amber rear LEDs Solaris modules (Signalmaster function)* Cruise light* 19 ways roof connector <p>Color configuration by module:</p> <ul style="list-style-type: none">* 10 blue modules* 4 red modules* 2 white modules* 6 amber modules* 2 blue and white modules |
| VALR44-0001E |  <p>* Controlled with the control head BCT500CB-GR</p> | <p><u>Valor Series Lightbar 44", composed by:</u></p> <ul style="list-style-type: none">* Main lights: 24 Blue LEDs Solaris modules* Secondary lights:<ul style="list-style-type: none">- 2 white TAKE DOWN LEDs Solaris modules- 2 white ALLEY LIGHTS LEDs Solaris modules- 2 red rear LEDs Solaris modules* Cruise lights* 19 ways roof connector <p>Color configuration by module:</p> <ul style="list-style-type: none">* 24 blue modules* 4 blue/white modules* 2 blue/red modules |
| Auxiliary lights for mounting kits | | |
| IMPAXX-FF-WH | (2) Impaxx, Solaris LEDs lights in white, clear dome, without flasher, multitension 10-30v, to be installed in mounting brackets as Take Down light | |
| IMPAXX-FL-WH | (2) Impaxx, Solaris LEDs lights in white, clear dome, without flasher, multitension 10-30v, to be installed in mounting brackets as Alley light | |
| Converter ANALOG-CANBUS | | |
| 8235978-06 | CANBUS Control box for Valor | |
| 8235631 | Mini connection box MF8-TF8 | |
| Control heads | | |
| BCT2015-12 | BCT2015 | 15-BUTTON CONTROL BOX, for Valor Series |
| BCT2021-12 | BCT2021 | 21-BUTTON CONTROL BOX, for Valor Series |
| 8216160GR | BCT500CB-GR | Control box for VALR44-0001E valor lightbar |
| 100W Siren amplifier | | |
| 2020269 | AS320DIG CAN BUS | 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500CB Series control heads. P.A not included |
| 2020271 | AS320-24DIG CAN BUS | 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 24V. Compatible only with BCT2000 and BCT500CB Series control heads. P.A not included |
| Public address | | |
| 8235984 | Public address kit with remote control. Volume and microfone functions control (for control head BCT2000) 12V | |
| Mounting Options | | |
| 8234204 | VALR-FT | Permanent mounting kit |
| 8234205 | VALR-FP | Hook-on mounting kit (hook-on not included) |
| A-CT19 | 19 ways roof connector for Valor | |
| (*) All Federal Signal Vama CAN BUS lightbars are compatible with FEDEMERGENCY Sistem from Atenea Integrated Vehicle Solutions. For more information see ATENEA Catalogue | | |



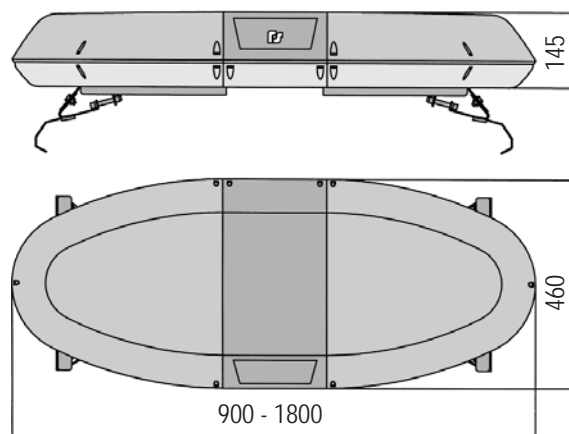
VISTA Series

Lightbars with a modern design and two light levels (upper and lower level) and an extreme broad range of set-up options for visual and acoustic emergency signalling.

Priority lights are available with three different technologies for various applications:

The **Vista Solaris** series stands out for its Solaris Led priority lights, whose light emission is made by module assembly composed of 3 leds of 3 watts and a semiparabolic reflector of metallized polycarbonate, all arranged around the perimeter of a horizontal plate of ROC technology print circuit, which eliminates the conventional wiring inside the lightbar.

It also has a wide range of lighting and acoustic options, like Takedown and Alley lights, LED steady burn and/or flashing modules, auxiliary lights, SmartSign programmable LED signs, LED SignalMasters, Integrated control systems, siren amplifiers, and 100W loudspeakers.



Vista Series dimensions (mm).

| | |
|--------------------|--|
| Voltage: | 12 or 24 V |
| Dimensions: | 900 - 1800 x 460 x 145 mm |
| Available lengths: | 36" (900 mm) - without speaker 44" (1100 mm), 53" (1350 mm) 62" (1600 mm), 71" (1800 mm) |
| LED colours: | blue, amber, red and white |

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

Specify All Options System

| | |
|---------|---|
| X01-X03 | 36" (900 mm) Lightbar, all-light, wiring harness |
| X11-X13 | 44" (1100 mm) Lightbar, all-light, wiring harness |
| X21-X23 | 53" (1350 mm) Lightbar, all-light, wiring harness |
| X31-X33 | 62" (1600 mm) Lightbar, all-light, wiring harness |
| X41-X43 | 71" (1800 mm) Lightbar, all-light, wiring harness |
| X12-X14 | 44" (1100 mm) Lightbar, speaker, wiring harness |
| X22-X24 | 53" (1350 mm) Lightbar, speaker, wiring harness |
| X32-X34 | 62" (1600 mm) Lightbar, speaker, wiring harness |
| X42-X44 | 71" (1800 mm) Lightbar, speaker, wiring harness |

(*) Mounting kit included in price. Hook-on brackets purchased separately

Options - Priority lights - Upper Level

Solaris LEDs

| | |
|-------|---|
| X-SL | (26) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved), ambar or red light |
| X-SL2 | 2 CAN BUS LED Solaris crowns with parabolic reflector, blue (UN 65 approved), ambar (UN 65 approved) or red light |

Options - Center Section - Upper Level

| | |
|----------|---|
| X-CIO/1 | (1) Lighted opal sign, on central module, 1100mm lightbars |
| X-CIO/2 | (2) Lighted opal sign, on central modules, 1300mm lightbars |
| X-CIOL/1 | (1) LEDs lighted opal sign, on central module, 1100mm lightbars |
| X-CIOL/2 | (2) LEDs lighted opal sign, on central modules, 1300mm lightbars |
| X-AD | (1) Adhesive message for lighted sign (front or rear) |
| X-VB | (1) Installation of VisiBeam in a Vista Series lightbar. (Light not included) |

Options - Center Section - Upper Level

| | |
|-------------------|---|
| AS320 DIG CAN BUS | 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500-CB Series control heads |
|-------------------|---|

Options - Secondary Lights - Lower Level (specify colour)

| | |
|-------|---|
| X-SLE | (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light |
| X-FPL | (2) Work lights, w/ lens |

(*) The function for each Solaris module must be especified when the lightbar and control head are ordered.

(**) Please contact your Sales Dept. for availability of configurations and versions.

Public address

| | | |
|---------|-------------|--|
| 8235984 | AS320-PA CB | Public address kit with remote control. Volume and microfne functions control (for control head BCT2000) 12V |
|---------|-------------|--|

CAN BUS Control Head

| | | |
|------------|----------|---|
| BCT2004-01 | BCT2004 | BCT2000 Series control head, 4 control keys. |
| BCT2006-XX | BCT2006 | BCT2000 Series control head. 6 control keys. |
| BCT2010-XX | BCT2010 | BCT2000 Series control head. 10 control keys. |
| BCT2015-XX | BCT2015 | BCT2000 Series control head. 15 control keys. |
| BCT2021-XX | BCT2021 | BCT2000 Series control head. 21 control keys. |
| 8216160XX | BCT500CB | BCT500CB Series control head. 13 control keys (public address included) |

(*) Please contact your Sales Dept. for availability.

Converter CAN BUS - ANALOG

| | | |
|---------|--|---|
| 2006036 | | Inputs box to convert a CAN BUS lightbar in an analog system (the functions are activated through positive cable) |
|---------|--|---|

Mount Accessories

| | | |
|---------|---------|---|
| 8234144 | X-FP | Permanent mounting kit |
| 8234137 | | Hook-on mounting bracket (hook-on not included) |
| | X-FB | Metal mounting kits on bars (contact our sales department for available models) |
| | X/CT-23 | Roof connector, 23- ways |

| | | |
|---------|--|-------------------------|
| 4004536 | | Cover for 1100mm. (44") |
|---------|--|-------------------------|

(*) All Federal Signal Vama CAN BUS lightbars are compatible with FEDEMERGENCY System from Atenea Integrated Vehicle Solutions. For more information see ATENEA Catalogue



ARJENT Series



Federal Signal Vama presents **ARJENT Solaris Series**, a low profile LED aerodynamic design lightbar, equipped with the most advanced LED technology, the Solaris technology, inspired by the sun's rays providing exceptional wide angle of coverage.

- 360° LIGHT BEAM DISTRIBUTION

Its advanced optical design and the elliptical shape of Arjent provide 360° coverage and significantly greater off-axis warning than traditional linear lightbars eliminating dark spots.

- SOLARIS TECHNOLOGY

Optical System with parabolic reflector composed by 3 Last generation LEDs.

- ROC TECHNOLOGY (Reliable Onboard Circuitry)

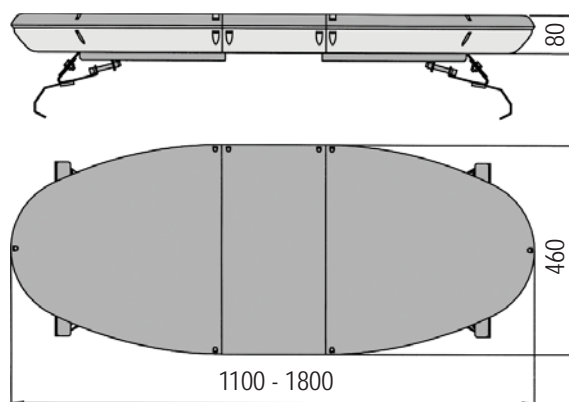
ROC technology eliminates 85% of potential failure points in the lightbar, reducing repair costs and increasing the hours your emergency vehicles stay on the road. ROC incorporates a printed circuit board in one assembly to reduce the amount of electrical connections found in a typical lightbar.

- CANBUS

Communication systems between lightbar, siren (AS-320) and the controller head (BCT500 or BCT2000). This system minimizes wiring installation and allows customizing the lightbar without removing it of the vehicle.

- BICOLOUR OPTION

Latest bicolour LEDs generation available upon request.



Arjent Series dimensions (mm).

| | |
|---|--|
| Voltage: | 10-30V |
| Operating temperature: | -20 to +50° C |
| Current draw (average) per module in flash mode: | 0.4 Amp (12V) / 0.25 Amp (24V) |
| Current draw (average) per module in cruise light mode: | 0.05 Amp (12V) / 0.03 Amp (24V) |
| Current draw per module in steady burn: | 0.4A (12V) / 0.25A (24V) |
| Colours of LEDs: | Amber, Blue and Red |
| Colours of lenses: | Base: Clear / Cover: Amber, Blue and Red |
| Dimensions: | 1100 - 1800 x 460 x 80 mm |
| Weight: | According to model |

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

Specify All Options System

| | |
|-----------|---|
| AJ11-AJ13 | 44" (1100 mm) Lightbar, all-light, wiring harness |
| AJ21-AJ23 | 53" (1350 mm) Lightbar, all-light, wiring harness |
| AJ31-AJ33 | 62" (1600 mm) Lightbar, all-light, wiring harness |
| AJ41-AJ43 | 71" (1800 mm) Lightbar, all-light, wiring harness |

(*) Mounting kit is not included in price and must be ordered separately

Priority Lights

Solaris LEDs

| | |
|----------|--|
| AJ-SL | (16) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved) amber (UN R65 approved) or red light. |
| AJ-SL BI | (16) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved) amber (UN R65 approved) or red light. BICOLOUR |

Options - Secondary Lights - Lower Level (specify colour)

| | |
|--------|---|
| AJ-SLE | (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, amber, red and white light |
|--------|---|

(*) The function for each Solaris module must be specified when the lightbar and control head are ordered.

(**) Please contact your Sales Dept. for availability of configurations and versions.

Acoustic options - Center Section - Upper Level

| | | |
|---------|---------------------|---|
| 2020269 | AS320-12DIG CAN BUS | 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500CB Series control heads. Public address not included |
| 2020271 | AS320-24DIG CAN BUS | 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 24V. Compatible only with BCT2000 and BCT500CB Series control heads. Public address not included |

Public address

| | | |
|---------|-------------|--|
| 8235984 | AS320-PA CB | Public address kit with remote control. Volume and microphone functions control (for control head BCT2000) 12V |
|---------|-------------|--|

CAN BUS Control Head

| | | |
|------------|----------|---|
| BCT2004-01 | BCT2004 | BCT2000 Series control head. 4 control keys. |
| BCT2006-XX | BCT2006 | BCT2000 Series control head. 6 control keys. |
| BCT2010-XX | BCT2010 | BCT2000 Series control head. 10 control keys. |
| BCT2015-XX | BCT2015 | BCT2000 Series control head. 15 control keys. |
| BCT2021-XX | BCT2021 | BCT2000 Series control head. 21 control keys. |
| 8216160XX | BCT500CB | BCT500 Series control head. 13 control keys (public address included) |

(*) Please contact your Sales Dept. for availability.

Mount Accessories

| | | |
|---------|----------|---|
| | AJ-FB | Integrated search light for Arjent Series lightbar 12V |
| | AJ-FB-24 | Integrated search light for Arjent Series lightbar 24V |
| 8234144 | AJ-FP | Permanent mounting kit |
| 8234137 | AJ-FT | Hook-on mounting bracket (hook-on not included) |
| | AJ-FB | Metal mounting kits on bars (contact our sales department for available models) |
| | A-CT19 | Roof connector, 19-ways |
| 4004536 | | Cover for 1100mm. (44") |

Converter CAN BUS - ANALOG

| | | |
|---------|--|---|
| 2006036 | | Inputs box to convert a CAN BUS lightbar in an analog system (the functions are activated through positive cable) |
|---------|--|---|

(*) All Federal Signal Vama CAN BUS lightbars are compatible with FEDEMERGENCY System from Atenea Integrated Vehicle Solutions. For more information see ATENEA Catalogue



LEGEND Series

The **Legend** model stands out for a popular, low-profile lightbar. This lightbar system is made of 3rd generation Solaris LEDs and integrates the ROC (Reliable Onboard Circuitry) technology, which eliminates approximately 85% of the potential failure points in a typical lightbar. The optimized Solaris LED lights maximize the warning signals at 360°.

All Legend lightbars contain an advanced micro-processor which provides three modes of operation, a library of flash patterns, adjustable Alley and Takedown lights, front/rear cut-off, dimming, and intersection warning.

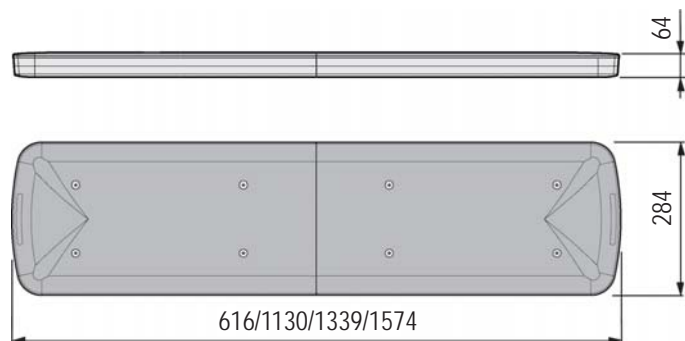
Legend can be easy reconfigured in minutes, right on the vehicle, without removing and rewiring individual light modules. ROC boards are also individually labelled to make the reconfiguration easy.

Legend can be configured with secondary warning lights: Takedown and Alley lights, and Solaris SignalMasters*.

Bicolour option, latest bicolour LEDs generation available upon request.



Legend Series dimensions (mm).



* SignalMaster 8-modules on 1100 lightbar.
SignalMaster 11-modules on 1340 lightbar.

| | |
|-----------------------|---|
| Voltage: | 10-30V |
| Dimensions: | 24", 45", 53", 61", 70" (616, 1130, 1339, 1547, 1753 x 284 x 64 mm) |
| Solaris LEDs colours: | blue, amber, red, green, clear |

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

Specify All Options System

| | | |
|--|----------|--|
| | LGD-B45" | 45" (1130 mm) Legend Lightbar, wiring harness |
| | LGD-B53" | 53" (1339 mm) Legend Lightbar, wiring harness |
| | LGD-B61" | 61" (1547 mm) Legend Lightbar, wiring harness |
| | LGD-B70" | 70" (1753 mm) Legend Lightbar, wiring harness |
| | | (*) Mounting kit is not included in price and must be ordered separately |

Priority Lights

| | | |
|--|-----------|---|
| | LGD-SL | (16) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved) amber (UN 65 Approved) or red light (UN 65 approved) |
| | LGD-SL BI | (16) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved) amber (UN 65 Approved) or red light (UN 65 approved) BICOLOUR |

Lighting Options

| | | |
|--|--------|--|
| | LGD-SL | (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, amber, red and white light* |
|--|--------|--|

* The function for each Solaris module in the lower level must be specified when the lightbar is ordered.

(**) Please contact your Sales Dept. for availability of configurations and versions.

100W Siren amplifier

| | | |
|---------|---------------------|---|
| 2020269 | AS320DIG CAN BUS | 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible with with BCT2000 and BCT500CB control heads series. Public address not included |
| 2020271 | AS320-24DIG CAN BUS | 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 24V. Compatible with with BCT2000 and BCT500CB control heads series. Public address not included |

Public address

| | | |
|---------|-------------|--|
| 8235984 | AS320-PA CB | Public address kit with remote control. Volume and microphone functions control (for control head BCT2000) 12V |
|---------|-------------|--|

Control Heads

| | | |
|------------|----------|---|
| BCT2004-01 | BCT2004 | BCT2000 Series control head. 4 control keys. |
| BCT2006-XX | BCT2006 | BCT2000 Series control head. 6 control keys |
| BCT2010-XX | BCT2010 | BCT2000 Series control head. 10 control keys |
| BCT2015-XX | BCT2015 | BCT2000 Series control head. 15 control keys |
| BCT2021-XX | BCT2021 | BCT2000 Series control head. 21 control keys |
| 8216160XX | BCT500CB | BCT500 Series control head. 13 control keys (public address included) |

(*) Please contact your Sales Dept. for availability.

Mounting options

| | | |
|---------|-----------|---|
| | LGD-FB | Integrated search light for Legend Series lightbar 12V* |
| | LGD-FB-24 | Integrated search light for Legend Series lightbar 24V* |
| 8234174 | LGD/FP | Permanent mounting kit |
| | AJ-FB | Metal mounting kits on bars (contact our sales department for available models) |
| | A-CT19 | Roof connector, 19-ways |

| | | |
|---------|--|-------------------------|
| 4004536 | | Cover for 1100mm. (44") |
|---------|--|-------------------------|

(*) The inclusion of integrated search light at Legend lightbar doesn't allow to install auxiliary lights below this integrated search light.

Converter CAN BUS - ANALOG

| | | |
|---------|--|---|
| 2006036 | | Inputs box to convert a CAN BUS lightbar in an analog system (the functions are activated through positive cable) |
|---------|--|---|

(*) All Federal Signal Vama CAN BUS lightbars are compatible with FEDEMERGENCY System from Atenea Integrated Vehicle Solutions. For more information see ATENEA Catalogue



PHOENIX Series

Revolutionary compact and versatile lightbar, designed for high-priority, complementary and acoustic signalling. The smoothed design of the lateral lenses provides better aerodynamics and watertightness.

- **Phoenix ROC Solaris** series is formed by a high-efficiency PC board with integrated microprocessor, 15 high-luminosity LED diodes of the latest generation, placed on the multivoltage (10-30V) PC board and a parabolic reflector that maximises the luminosity of the LEDs with bicolour LED options.

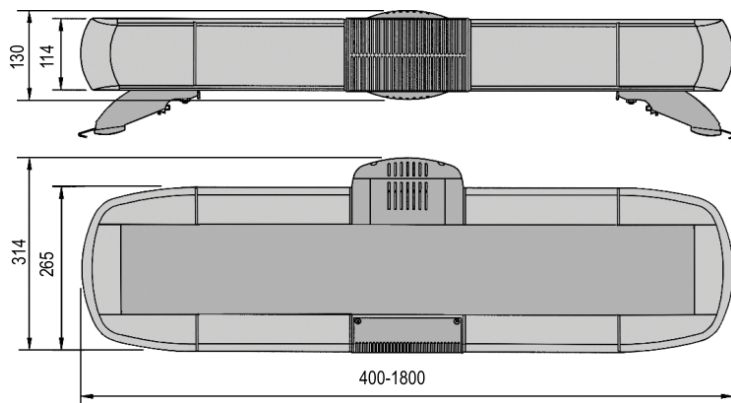
- **Phoenix Strobe** series has high-power strobe lights and power supply integrated in the lightbar. Available with directional and omnidirectional strobes.

- **Phoenix Halogen** series is made of high-luminosity and efficiency independent or synchronised rotating halogen lights.

These three types provide an extremely wide range of set-up options to meet the most demanding needs and requirements.

Lighting options: Takedown and Alley lights, Solaris LED modules, additional halogen or strobe units, SmartSign programmable LED sign, and SignalMasters with Solaris LED or halogen modules.

Acoustic options: 30 W compact sirens, 100W speakers, siren amplifiers and Integrated Control Systems.



Phoenix Series dimensions (mm).

| | |
|----------------------|---|
| Voltage | 12 or 24 V |
| Dimensions: | 400 - 1800 x 265 x 114 mm (without speaker) 400 - 1800 x 314 x 130 mm (with speaker) |
| Available lengths: | 400 mm Mini lightbar 800, 900, 1000, ... - 1800 mm" |
| Solaris LED colours: | blue, amber, red, white |
| Speaker colours: | white or black |



| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

ROC Solaris Series

Mini lightbars - Standard lengths: 400mm - 700mm

| | |
|--------------|---|
| MPXS-2S1N | Basic Minilightbar, standard length, (2) rings of (15) high-intensity LEDs in (1) level with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red (UN 65 approved) light, bitension, wiring harness |
| MPXS-2S2N | Basic Minilightbar, standard length, (4) rings of (15) high-intensity LEDs in (2) levels with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red (UN 65 approved) light, bitension, wiring harness |
| MPXS-2S1N BI | Basic Minilightbar, standard length, (2) BICOLOUR rings of (15) high-intensity LEDs in (1) level, blue (UN 65 approved), amber (UN 65 approved) and/or red (UN 65 approved) light, bitension, wiring harness. |

(*) Mounting kit is not included in price and must be ordered separately

Specify All Options System - Standard lengths: 701mm - 1200mm

| | |
|----------|--|
| PXS-2S1N | Basic lightbar, standard length, (2) rings of (15) high-intensity LEDs in (1) level with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red (UN 65 approved) light, bitension, wiring harness |
| PXS-2S2N | Basic lightbar, standard length, (2) rings of (15) high-intensity LEDs in (2) level with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red (UN 65 approved) light, bitension, wiring harness |
| PXS-4S1N | Basic lightbar, standard length, (4) rings of (15) high-intensity LEDs in (1) level with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red (UN 65 approved) light, bitension, wiring harness |
| PXS-4S2N | Basic lightbar, standard length, (4) rings of (15) high-intensity LEDs in (2) level with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red (UN 65 approved) light, bitension, wiring harness |
| PXS-2S1N | Basic lightbar, standard length, (2) BICOLOUR rings of (15) high-intensity LEDs in (1) level, blue (UN 65 approved), amber (UN 65 approved) and/or red (UN 65 approved) light, bitension, wiring harness |

(*) Mounting kit is not included in price and must be ordered separately

PHOENIX Strobe Series

Specify All Options System - Standard lengths: 500mm - 1200mm

| | |
|---------|--|
| PXE-CHL | Basic lightbar, standard length, (2) 360° Strobe heads, w/ basic power supply, wiring harness. Economic version. UN R65 approved |
| PXE-HL | Basic lightbar, standard length, (2) 360° Strobe heads, w/ power supply, wiring harness. UN R65 approved |
| PXE-HL4 | Basic lightbar, standard length, (4) Directional strobe heads, w/ power supply, wiring harness. UN R65 approved |

(*) Mounting kit is not included in price and must be ordered separately

Lighting Options

| | |
|---------------|---|
| PXE-R2 | (2) Extra belt-driven rotators, H1 lamp 12V |
| PXE-R2-24 | (2) Extra belt-driven rotators, H1 lamp 24V |
| PXE-CD81 | (2) Directional strobe heads, w/ power supply |
| PXE-CD82 | (2) Directional strobe heads, w/o power supply |
| PXE-FA702-2ES | (2) Directional strobe heads, with FA702 power supply |

PHOENIX Halogen Series

Specify All Options System - Standard lengths: 500mm - 1200mm

| | |
|-------------|---|
| PXH-Mini | 400mm Lightbar, (1) Belt-driven rotators, wiring harness. UN R65 approved 12V |
| PXH-Mini-24 | 400mm Lightbar, (1) Belt-driven rotators, wiring harness. UN R65 approved 24V |
| PXH-Mini-2 | 400mm Lightbar, (2) Belt-driven rotators, wiring harness. UN R65 approved 12V |
| PXH-Mini-24 | 400mm Lightbar, (2) Belt-driven rotators, wiring harness. UN R65 approved 24V |
| PXH2 | Basic lightbar, standard length, (2) Belt-driven rotators, mirrors, (1) cruise light, wiring harness. UN R65 approved 12V |
| PXH2-24 | Basic lightbar, standard length, (2) Belt-driven rotators, mirrors, (1) cruise light, wiring harness. UN R65 approved 24V |
| PXH4-S | Basic lightbar, standard length, (4) Synchronized belt-driven rotators, (1) cruise light, wiring harness. UN R65 approved 12V |
| PXH4-S-24 | Basic lightbar, standard length, (4) Synchronized belt-driven rotators, (1) cruise light, wiring harness. UN R65 approved 24V |

(*) Mounting kit is not included in price and must be ordered separately

Lighting Options

| | |
|---------------|---|
| PXH-R2 | (2) Extra belt-driven rotators, H1 lamp |
| PXE-R2-24 | (2) Extra belt-driven rotators, H1 lamp 24V |
| PXH-CD81 | (2) Directional strobe heads, w/ power supply |
| PXE-CD82 | (2) Directional strobe heads, w/o power supply |
| PXE-FA702-2ES | (2) Directional strobe heads, with FA702 power supply |

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

Options for PHOENIX Solaris, Strobe and Halogen Series Supplement for lengths

| | |
|------------|--|
| PX-SUPL/P1 | Supplement for lengths between 1300 and 1600 mm |
| PX-SUPL/P2 | Supplement for special lengths (longer than 1600 mm) |
| PX-SUP-SEP | Supplement separators various colors (1 per color) |

Lighting Options

| | |
|------------|---|
| PX-FF | (2) Front or rear lights, H1 lamp |
| PX-LP/FF | (2) LEDs modules (red light) and takedown light (H3 lamp) |
| PX-FL | (2) Fixed alley lights, H1 lamp |
| PX-FPI | (2) Front or rear flashing lights, H1 lamp |
| PX-BTT/LED | (2) Brake/Tail/Turn lights LED |
| PX-LF SLR | (2) modules of (3) high-intensity LEDs with parabolic reflector, steady burn mode, blue, amber, red or white lights |
| PX-LI SLR | (2) modules of (3) high-intensity LEDs with parabolic reflector, flashing mode, blue, amber, red or white lights |
| PX-VB | (1) Visibeam installed upon a Phoenix Series lightbar. Installation included |

Acoustic Options

| | |
|------------|--|
| PX-AL/100N | (1) 100W Speaker, installed |
| PX-SC35 | (1) Integrated 35W Compact Siren with 16 available tones |
| PX-SC35-FG | (1) Integrated 35W Compact Siren with special tones for Germany (approved) and France. |
| PX-AS250 | (1) 100W Siren amplifier (AS250), 3 tones, w/o P.A., splash-proof, installed in lightbar. Speaker not included |

Signs Options

| | |
|-------------|---|
| PX-CI1 | (1) Front or rear lighted sign, optional message |
| PX-CI2 | (1) Front and rear lighted sign, optional message |
| PX-AD | (2) Adhesive messages for lighted sign |
| PX-CIO | (1) Front and rear lighted opal sign, optional message |
| PX-CL71 | (1) LED Sign, (1) or (2) fixed messages |
| PX-CL72 | (1) LED Sign, (3) or (4) fixed messages |
| PC-CIL1-12 | (1) Front or rear LEDs lighted sign, optional message, 12V |
| PC-CIL1-24 | (1) Front or rear LEDs lighted sign, optional message, 24V |
| PX-CIL2-12 | (1) Front and rear LEDs lighted sign, optional message, 12V |
| PX-CIL2-24 | (1) Front and rear LEDs lighted sign, optional message, 24V |
| PX-CIOL1-12 | (1) Front and rear LEDs lighted opal sign, optional message, 12V |
| PX-CIOL1-24 | (1) Front and rear LEDs lighted opal sign, optional message, 24V |
| PX-LSG700 | SmartSign LED sign, 200 programmable messages, 575x195x185mm (LCD700 control head and SmartSign Message Editor not included in price) |

SignalMaster

| | |
|--------------|--|
| PX-H6 | SignalMaster, directional lighting system, (6) halogen lamps, w/o controller, amber |
| PX-H8 | SignalMaster, directional lighting system, (8) halogen lamps, w/o controller, amber |
| PX-H6KS | SignalMaster, directional lighting system, (6) halogen lights, w/ controller, amber |
| PX-H8KS | SignalMaster, directional lighting system, (8) halogen lights, w/ controller, amber |
| PX-SL6 SLR | SignalMaster Solaris, directional lighting system, (6) modules of (3) high-intensity LEDs with parabolic reflector, w/o controller, specify colour red, amber or blue |
| SLR-A | SignalMaster Solaris, directional lighting system, (8) modules of (3) high-intensity LEDs with parabolic reflector, w/o controller, specify colour red, amber or blue |
| PX-SL6KS SLR | SignalMaster Solaris, directional lighting system, (6) modules of (3) high-intensity LEDs with parabolic reflector, with controller, specify colour red, amber or blue |
| PX-SL8KS SLR | SignalMaster Solaris, directional lighting system, (8) modules of (3) high-intensity LEDs with parabolic reflector, with controller, specify colour red, amber or blue |

(*) Control purchased separately. See Signalmaster controllers or Integrated Control Systems

Mount Accesories

| | | |
|---------|----------|---|
| 8234087 | PX-FP/PA | Permanent mounting bracket, high |
| 8234105 | PX-FP/PB | Permanent mounting bracket, low |
| 8234104 | PX-FT | Hook-on mounting kit (hook-on not included) |
| 8234150 | PX-FMG | Magnetic mounting kit MINIPhoenix |
| | PX-CT23 | Roof connector, 23-ways |

| | | |
|---------|--|-------------------------|
| 4004536 | | Cover for 1100mm. (44") |
|---------|--|-------------------------|





4000/3000/2000 Series

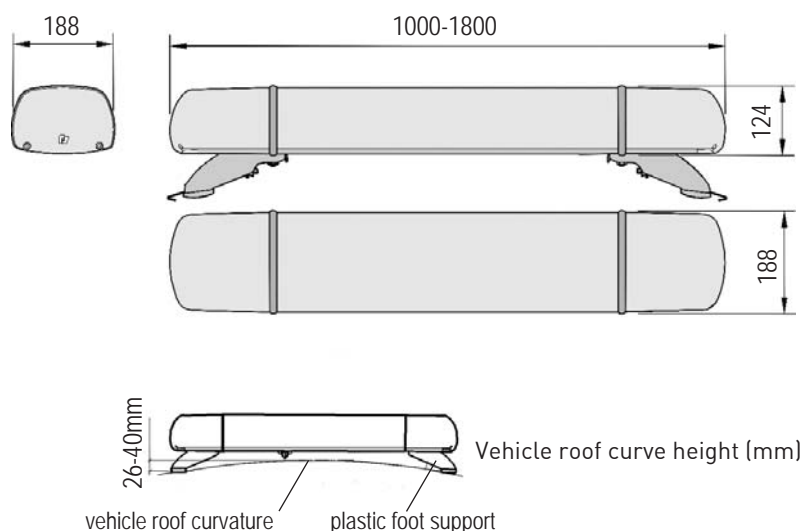
The 4000/3000/2000 Series have a compact, reliable design that combines the features of a high-quality lightbar with low-cost requirements.

- The **4000 Solaris** series stands out for its 24 latest-generation Solaris LED priority lights with advanced optical design, high intensity and reduced consumption.
- The **3000 Strobe** series has two, four or six high-power omnidirectional strobe lights. The power supply is integrated in the lightbar.
- The **2000 Halogen** series is made of high-luminosity single or synchronised rotating halogen priority lights.

The 4000/3000/2000 series come with secondary lighting options including Takedown and Alley lights, Solaris LED modules, additional halogen or strobe units, illuminated signs, SignalMasters, and Brake, turn, tail lights.



4000 Solaris, 3000 and 2000 Series dimensions (mm).



| | |
|----------------------|---|
| Voltage: | 12 or 24 V |
| Dimensions: | 600 - 1800 x 188 x 124 mm Mini lightbar: 463mm Solaris, 363mm rotators |
| Solaris LED colours: | blue, amber, red |



| REF. | MOD. | DESCRIPTION |
|---|-------------|---|
| 4000 Series | | |
| Mini lightbars - Standard lengths: 463mm - 700mm | | |
| MP4-2S1N | | Basic Minilightbar, standard length, (2) rings of (15) high-intensity LEDs in (1) level with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red light, multivoltage, wiring harness |
| MP4-2S2N | | Basic Minilightbar, standard length, (2) rings of (15) high-intensity LEDs in (2) levels with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red light, multivoltage, wiring harness |
| MP4-4S1N | | Basic Minilightbar, maximum 700 mm, (4) rings of (15) high-intensity LEDs in (1) levels with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red light, multivoltage, wiring harness |
| MP4-4S2N | | Basic Minilightbar, maximum 700 mm, (4) rings of (15) high-intensity LEDs in (2) levels with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red light, multivoltage, wiring harness |
|  | MP4-2S1N BI | Basic Minilightbar, standard length, (2) BICOLOUR rings of (15) high-intensity LEDs in (1) level, blue (UN 65 approved), amber (UN 65 approved) and/or red light, multivoltage, wiring harness |
| Specify All Options System - Standard lengths: 800mm - 1300mm | | |
| P4-2S1N | | Basic lightbar, standard length, (2) rings of (15) high-intensity LEDs in (1) level with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red light, multivoltage, wiring harness |
| P4-2S2N | | Basic lightbar, standard length, (2) rings of (15) high-intensity LEDs in (2) levels with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red light, multivoltage, wiring harness |
| P4-4S1N | | Basic lightbar, standard length, (4) rings of (15) high-intensity LEDs in (1) level with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red light, multivoltage, wiring harness |
| P4-4S2N | | Basic lightbar, standard length, (4) rings of (15) high-intensity LEDs in (2) levels with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red light, multivoltage, wiring harness |
|  | P4-2S1N BI | Basic lightbar, standard length, (2) BICOLOUR rings of (15) high-intensity LEDs in (1) level, blue (UN 65 approved), amber (UN 65 approved) and/or red light, multivoltage, wiring harness |
| 3000 Series | | |
| Specify All Options System - Standard lengths : 700mm - 1300mm | | |
| P3000M | | 600 mm minilightbar, (2) 360° strobe heads, wiring harness. UN R65 approved |
| P3000 | | (2) 360° Strobe heads, w/ power supply, wiring harness. UN R65 approved |
| P3000/4E | | (4) 360° Strobe heads, w/ power supply, wiring harness. |
| 2000 Series | | |
| Specify All Options System - Standard lengths : 700mm - 1300mm | | |
| P2000M | | 363 mm minilightbar, (2) belt-driven rotators, wiring harness. UN R65 approved |
| P2000 | | (2) Belt-driven rotators, wiring harness. UN R65 approved, 12V |
| P2000-24 | | (2) Belt-driven rotators, wiring harness. UN R65 approved, 24V |
| P2000/4R SY | | (4) Belt-driven rotators, wiring harness. UN R65 approved, 12V |
| P2000/4R SY-24 | | (4) Belt-driven rotators, wiring harness. UN R65 approved, 24V |
| Options for 4000 Solaris, 3000 and 2000 Series | | |
| Supplement for lengths | | |
| A-SUPL/A1 | | Supplement for lengths between 1400 and 1600 mm |
| A-SUPL/A2 | | Supplement for lengths between 1700 and 1800 mm |
| A-SUP-SEP | | Supplement separators various colors (1 per color) |
| (*) Flat mount kit included in price. Other mounts purchased separately | | |
| Lighting Options | | |
| A-R1 - 12/24V | | (1) Rotator central section, H1 halogen lamp |
| A-FA702-2ES | | (2) Directional strobe heads, with FA702 power supply |
| A-FF | | (2) Takedown lights, H1 halogen lamp |
| A-FL | | (2) Alley lights, H3 halogen lamp |
| A-WL | | (2) Rear work light, H1 halogen lamp |
| A-SML1/A-I | | (2) SML1, halogen lights, w/ flasher, amber |
| A-SML1/R-I | | (2) SML1, halogen lights, w/ flasher, red |
| A-SML1/A | | (2) SML1, halogen lights, w/o flasher, amber |
| A-SML1/R | | (2) SML1, halogen lights, w/o flasher, red |
| A-LF SLR | | (2) modules of (3) high-intensity LEDs with parabolic reflector, steady burn mode, blue, amber, red or white lights |
| A-LI SLR | | (2) modules of (3) high-intensity LEDs with parabolic reflector, flashing mode, blue, amber, red or white lights |
| A-BTT/LED | | (2) Brake/Tail/Turn lights LED |
| A-ESP | | (2) Mirrors |

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

Lighted Signs

| | |
|-----------|--|
| A-CIO-12 | (1) Lighted opal sign w optional message, 12V |
| A-CIO-24 | (1) Lighted opal sign w optional message, 24V |
| CIL1-A-12 | (1) LEDs lighted opal sign w optional message, 12V |
| CIL1-A-24 | (1) LEDs lighted opal sign w optional message, 24V |
| A-AD | (2) Adhesive messages for lighted sign |

SignalMaster

| | |
|-------------|--|
| A-SL6 SLR | SignalMaster Solaris, directional lighting system, (6) modules of (3) high-intensity LEDs with parabolic reflector, w/o controller, specify colour red, amber or blue |
| A-SL8 SLR | SignalMaster Solaris, directional lighting system, (8) modules of (3) high-intensity LEDs with parabolic reflector, w/o controller, specify colour red, amber or blue |
| A-SL6KS SLR | SignalMaster Solaris, directional lighting system, (6) modules of (3) high-intensity LEDs with parabolic reflector, with controller, specify colour red, amber or blue |
| A-SL8KS SLR | SignalMaster Solaris, directional lighting system, (8) modules of (3) high-intensity LEDs with parabolic reflector, with controller, specify colour red, amber or blue (*) Control purchased separately. See Signalmaster controllers or Integrated Control Systems ICS |

Mount Accesories

| | | |
|-----------|-----------|---|
| 8234087 | A-FP/PA | Permanent mounting bracket, low |
| 8234105 | A-FP/PB | Permanent mounting bracket, high |
| 8234104 | A-FT | Hook-on mounting kit (hook-on not included) |
| 8234148 | A-FMG | Magnetic mount, 4000/3000/2000 minilightbars Series |
| 8234150 | A-FMG-12I | Magnetic mount, 4000/3000/2000 minilightbars Series with 12 magnets |
| 8399AA061 | MCH | Cigarette plug |
| | A-CT19 | Roof connector, 23-ways (for 3000/2000 Serie lightbar) |
| | A-CT23 | Roof connector, 19-ways (for 4000 Serie lightbar) |
| 4004536 | | Cover for 1100mm. (44") |







MINI LIGHTBARS MINI LEGEND



Federal Signal Vama develops and introduces the new, low-profile **Legend Solaris 24" Mini lightbar**. It provides a 360-degree coverage and superior off-axis warning and increased up-time for your fleet. On the other hand, Legend Solaris 24" Mini lightbar offers, in minimum space, technological advantages thanks to its special design:

- 360° DEGREE COVERAGE

Solaris technology and ROC design provides exceptional 360 degree coverage, which results in the elimination of any dark spots and superior off-axis warning around the lightbar.

- ROC TECHNOLOGY (Reliable Onboard Circuitry)

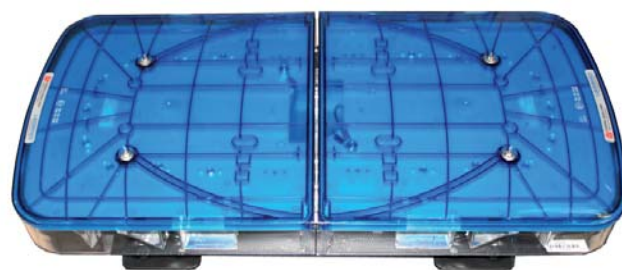
ROC technology eliminates 85% of potential failure points in the lightbar, reducing repair costs and increasing the hours your emergency vehicles stay on the road. ROC incorporates a printed circuit board in one assembly to reduce the amount of electrical connections found in a typical lightbar.

- INCREASED SECURITY

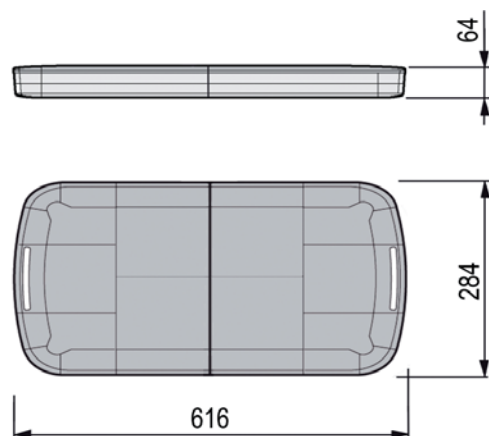
Better grip, stability and security to the vehicle on the road due to its less aerodynamic drag.

- COST SAVINGS

Less fuel consumption thanks to its low-profile and improved aerodynamics. Furthermore, ROC technology reduces repairing costs and it allows more vehicle rotation on the road.



Mini-Legend Solaris dimensions (mm).



| | |
|--------------------------------------|-------------------------------|
| Voltage: | 12/24 V |
| Operating temperature: | -20°C to 50°C |
| Average consumption (flashing mode): | 3.5 Amp (12V) / 2.5 Amp (24V) |
| LEDs colours: | Blue, amber and red |
| Lens colours: | Blue, amber and red |
| Dimensions: | 616 x 284 x 64 mm |
| Weight: | 7.500 g |



| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

Legend 24" mini-lightbar (616 mm), 18 Solaris modules LED lights, non configurable, no CANBUS.

Magnetic mount

| | | |
|---------|-------------|--|
| 2059193 | LGD24 PP FM | Legend Solaris Series lightbar, 616 mm, amber-amber, magnetic mount, cigarette plug, bitension, R65 class 1 approval. |
| 2059154 | LGD24 BB FM | Legend Solaris Series lightbar, 616 mm, blue-blue, magnetic mount, cigarette plug, bitension R65 class 1 and class 2 approval. |
| 2059191 | LGD24 RR FM | Legend Solaris Series lightbar, 616 mm, red-red, magnetic mount, cigarette plug, bitension R65 class 1 and class 2 approval. |
| 2059195 | LGD24 RB FM | Legend Solaris Series lightbar, 616 mm, red-blue, magnetic mount, cigarette plug, bitension. |
| 2059197 | LGD24 RP FM | Legend Solaris Series lightbar, 616 mm, red-amber, magnetic mount, cigarette plug, bitension. |
| 2059199 | LGD24 BP FM | Legend Solaris Series lightbar, 616 mm, blue-amber, magnetic mount, cigarette plug, bitension. |

(*) Maximum speed for this model on the roof of the vehicle 200 km/h

Permanent mount

| | | |
|---------|-------------|--|
| 2059194 | LGD24 PP FP | Legend Solaris Series lightbar, 616 mm, amber-amber, wiring harness, permanent mount, bitension, R65 class 1 approval. |
| 2059155 | LGD24 BB FP | Legend Solaris Series lightbar, 616 mm, blue-blue, wiring harness, permanent mount, bitension, R65 class 1 and class 2 approval. |
| 2059192 | LGD24 RR FP | Legend Solaris Series lightbar, 616 mm, red-red, wiring harness, permanent mount, bitension R65 class 1 and class 2 approval. |
| 2059196 | LGD24 RB FP | Legend Solaris Series lightbar, 616 mm, red-blue, wiring harness, permanent mount, bitension. |
| 2059198 | LGD24 RP FP | Legend Solaris Series lightbar, 616 mm, red-amber, wiring harness, permanent mount, bitension. |
| 2059200 | LGD24 BP FP | Legend Solaris Series lightbar, 616 mm, blue-amber, wiring harness, permanent mount, bitension. |



LM500-D Series

LM500-D Series combines technology warning light and siren Solaris compact LEDs manufactured in ABS with fiberglass and aluminum.

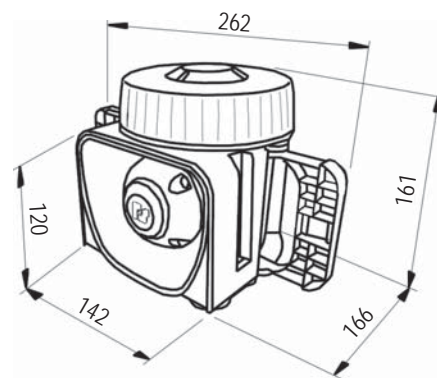
Optical system composed of a microprocessor integrated electronic circuit, 15 high intensity LEDs and a parabolic reflector maximizes light intensity of LEDs and avoids the appearance of black shadows.

His acoustic system consisting of a 30W speaker, with programmed wail tone, with a cigarette lighter socket 3 positions.

A wire mesh filter prevents the ingress of solid particles by the broadcaster of the siren, a drainage system prevents the accumulation of water in the membrane and a rubber gasket prevents water ingress into the electronic circuitry.

LM500-D Solaris, has a magnet system with a set of 4 magnets with silicone anti-scratch protection and 4 cups.

Available in blue, amber or red LED.



LM500-D Solaris Series dimensions (mm).

| | |
|----------------------------|---------------|
| Voltage: | 12 V |
| Light current consumption: | 0.6 Amp |
| Siren current consumption: | 3 Amp |
| Siren output power: | 30W |
| Siren output voltage: | 23 V |
| Operating temperature: | -20°C to 50°C |
| Weight: | 2.28 kg |

REF. MOD. DESCRIPTION

| | | |
|---------|----------|--|
| 2003059 | LM500-DP | Solaris LED warning light blue with integrated 30W siren. Cigarette plug w/ 3 positions for light and siren control, programmable tone, 12V. UN R65 Approval T Category |
| 2003060 | LM500-DP | Solaris LED warning light amber with integrated 30W siren. Cigarette plug w/ 3 positions for light and siren control, programmable tone, 12V. UN R65 Approval T Category |
| 2003061 | LM500-DP | Solaris LED warning light red with integrated 30W siren. Cigarette plug w/ 3 positions for light and siren control, programmable tone, 12V. UN R65 Approval T Category |

(*) Maximum speed for this model on the roof of the vehicle 200 km/h.

(**) For other tones, please contact with the Sales Department.

(***) Magnetic mounting models produced for a temporary use on the roof of the vehicle.



GEMINIS Series

Federal Signal Vama presents the new dual colour warning light Geminis series, a single-coloured and dual-coloured omnidirectional priority light with LEDs technology, which allows combining 2 colours between blue-amber, blue-red and red-amber. Furthermore, all the models can be chosen with DIN permanent or magnetic mounting.

All models meet R65 European Regulation Class 2 and are protected against water, according to IPX6 and IPX9K.

- DUAL COLOUR TECHNOLOGY

Thanks to this advanced product range and its improved bicolour technology, the priority light Geminis allows to combine 2 colours from: blue - amber, blue - red and red-amber.

- VERY COMPACT AND LIGHT

To guarantee its usage in an unexpected emergency situation, the magnetic version can be operated within one hand only, allowing a fast and simple setting.

- 360° LIGHT DISTRIBUTION

The applied technology and the special lens impression enables to maximize the beam light distribution in 360° around the vehicle, avoiding dark spots and shadows.

- PHOTOCELL SENSOR

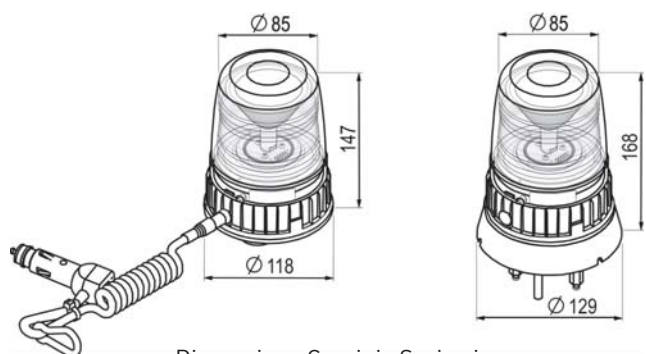
Due to the photocell sensor included inside the Geminis magnetic version, the day/night function is changed automatically. This allows to be permanently adapted to lighting conditions.

- SYNCHRONIZABLE

Geminis series allows the synchronization with other warning lights of the same product range.

- HIGH RESISTANCE

Polycarbonate and impact-resistant lens.



Dimensions Geminis Series in mm.



- PROTECTION AGAINST WATER

Geminis Series complies with IPX6 and IPX9K water protection grades.

- THERMAL PROTECTION

To avoid the overheating of the light due to high sun exposures, they include a thermal protection, a need in areas where the lights are exposed to extreme warm environments.



Magnetic mounting









DIN Permanent mounting

| | 12V | 24V |
|--------------------------|---|---|
| Voltage: | Multi-voltaje (10 - 30V) | Multi-voltaje (10 - 30V) |
| Operating temperature: | -30°C to + 60°C | -30°C to + 60°C |
| Consumption (Maximum): | 5,2 A (blue and amber) 4,4 A (red) | 3,4 A (blue and amber) 2,5 A (red) |
| Consumption (Average): | 1,7 A (blue and amber) 1,5 A (red) | 1,2 A (blue and amber) 0,8 A (red) |
| Cruise mode consumption: | 0,3 A | 0,3 A |
| Colors of LEDs: | Blue, red and amber | Blue, red and amber |
| Color of lenses: | Clear | Clear |
| Dimensions: | Permanent: 168 x 129mm Magnetic: 147 x 118mm | Permanent: 168 x 129mm Magnetic: 147 x 118mm |
| Weight: | Permanent: 1.011 g Magnetic: 1.210 g | Permanent: 1.011 g Magnetic: 1.210 g |
| Mount: | Permanent DIN/ Magnetic | Permanent DIN/ Magnetic |
| N° de Flash Patterns: | 2 (QUAD R65 & S-A R65) | 2 (QUAD R65 & S-A R65) |
| Flash frequency: | 2 Hz | 2 Hz |
| Flash rate (per/min): | 120 | 120 |

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|







Magnetic mounting (*)

| | | |
|---|---------|---|
|  | 2002409 | Warning light, (1) level, (2) flash patterns, blue light, clear lens, magnetic mount and cigarette lighter plug, multi voltage. R65 Class 2 (flash mode) approved. |
|  | 2002411 | Warning light, (1) level, (2) flash patterns, red light, clear lens, magnetic mount and cigarette lighter plug, multi voltage. R65 Class 2 (flash mode) approved. |
|  | 2002410 | Warning light, (1) level, (2) flash patterns, amber light, clear lens, magnetic mount and cigarette lighter plug, multi voltage. R65 Class 2 (flash mode) approved. |
|  | 2002412 | BICOLOUR Warning light, (1) level, (2) flash patterns, blue-red light, clear lens, magnetic mount and cigarette lighter plug, multi voltage. R65 Class 2 (flash mode) approved. |
|  | 2002403 | BICOLOUR Warning light, (1) level, (2) flash patterns, blue-amber light, clear lens, magnetic mount and cigarette lighter plug, multi voltage. R65 Class 2 (flash mode) approved. |
|  | 2002413 | BICOLOUR Warning light, (1) level, (2) flash patterns, amber-red light, clear lens, magnetic mount and cigarette lighter plug, multi voltage. R65 Class 2 (flash mode) approved. |


(*) Maximum speed for this model on the roof of the vehicle 250 km/h.

(**) Magnetic mounting models are produced for a temporary use on the roof of the vehicle.

DIN Permanent mount

| | | |
|---|---------|---|
|  | 2002405 | Warning light, (1) level, (2) flash patterns, blue light, clear lens, DIN permanent mount, multi voltage. R65 Class 2 (flash mode) approved. |
|  | 2002407 | Warning light, (1) level, (2) flash patterns, red light, clear lens, DIN permanent mount, multi voltage. R65 Class 2 (flash mode) approved. |
|  | 2002406 | Warning light, (1) level, (2) flash patterns, amber light, clear lens, DIN permanent mount, multi voltage. R65 Class 2 (flash mode) approved. |
|  | 2002404 | BICOLOUR Warning light, (1) level, (2) flash patterns, blue-red light, clear lens, DIN permanent mount, multi voltage. R65 Class 2 (flash mode) approved. |
|  | 2002402 | BICOLOUR Warning light, (1) level, (2) flash patterns, blue-amber light, clear lens, DIN permanent mount, multi voltage. R65 Class 2 (flash mode) approved. |
|  | 2002408 | BICOLOUR Warning light, (1) level, (2) flash patterns, amber-red light, clear lens, DIN permanent mount, multi voltage. R65 Class 2 (flash mode) approved. |

Accessory

| | | |
|---|---------|-----------------------------------|
|  | 8299997 | Connector Kit for permanent mount |
|---|---------|-----------------------------------|



LM800 / LP800 Series

New LP/LM800 SOLARIS warning lights, with Solaris LED reflector technology of Federal Signal Vama provide excellent results as priority lights on emergency and undercover vehicles. It can be installed either permanently (LP models) and temporally using strong magnets and suction cups (LM model). Other features are:

360° LIGHT BEAM DISTRIBUTION

Solaris technology and its special spreader lens maximizes light beam distribution through 360° around vehicle, avoiding dark spots.

- EVERY NEED SOLUTIONS

Beacon lights with 1 or 2 levels of 15 Solaris LED rings with blue, amber or red lights, permanent mount for emergency vehicles, or magnetic mount for undercover ones, etc.

- HIGH STRENGTH HOUSING

Durable shockproof polycarbonate lens with reinforced polyamide base. With IP protection IPX9K.

- SYNCRONIZABLE

LP800 Series could be synchronized with other Federal Signal Vama vehicle priority lights (LP400).



LM800



LP800

| | LM800 | LP800 |
|-------------------------|---|--|
| Voltage: | 12-24V | 12-24V |
| Operating temperature: | -20°C to +50°C | -20°C to +50°C |
| Current draw (average): | 1 A (blue and red) 0.6 A (amber) | 1 Amp (blue and red) 0.6 Amp (amber) |
| LED colours: | Blue, red and amber | Blue, red and amber |
| Lens colours: | Blue, amber or red | Blue, amber, red or clear |
| Dimensions: | 140 mm (diam - dome) 164 mm (diam - base) 120 mm (height) | 140 mm (diam - dome) 164 mm (diam - base) 95 mm (height) |
| Weight: | 1200 gr (1 level) 1300 gr (2 levels) | 590 g (1 level) 700 g (2 levels) |

REF. MOD. DESCRIPTION

Magnetic mounting (*)

| | | |
|---------|---------------|--|
| 2003039 | LM800 Solaris | (1) level, (2) flash patterns, light amber, amber lens, magnetic mount and cigarette lighter plug, dual voltage. R65 Class 1 (flash mode) approved. |
| 2003040 | LM800 Solaris | (1) level, (2) flash patterns, blue light, blue lens, magnetic mount and cigarette lighter plug, dual voltage. R65 Class 1 (flash mode) approved. |
| 2003041 | LM800 Solaris | (1) level, (2) flash patterns, red light, red lens, magnetic mount and cigarette lighter plug, dual voltage. |
| 2003043 | LM800 Solaris | (2) levels, (2) flash patterns, light amber, amber lens, day / night, magnetic mount and cigarette lighter plug, dual voltage. R65 Class 2 (flash mode) approved. |
| 2003044 | LM800 Solaris | (2) levels, (2) flash patterns, blue light, blue lens, day / night, magnetic mounting and cigarette lighter plug, dual voltage. R65 Class 2 (flash mode) approved. |
| 2003042 | LM800 Solaris | (2) levels, (2) flash patterns, red light, red lens, magnetic mount and cigarette lighter plug, dual voltage. (*) Maximum speed for magnetic mount model on the roof of the vehicle to 200km / h. (**) Magnetic mounting models produced for a temporary use on the roof of the vehicle. |

Permanent mount

| | | |
|---------|---------------|--|
| 2003034 | LP800 Solaris | (1) level, (8) flash patterns, light amber, amber lens, day / night and cruise light, permanent mount, dual voltage. R65 Class 1 (flash mode) approved. |
| 2003026 | LP800 Solaris | (1) level, (8) flash patterns, blue light, blue lens, day / night and cruise light, permanent mount, dual voltage. R65 Class 1 (flash mode) approved. |
| 2003035 | LP800 Solaris | (1) level, (8) flash patterns, red light, red lens, day / night and cruise light, permanent mount, dual voltage. |
| 2003036 | LP800 Solaris | (2) levels, (8) flash patterns, light amber, amber lens, day / night and cruise light, permanent mount, dual voltage. R65 Class 2 (flash mode) approved. |
| 2003038 | LP800 Solaris | (2) levels, blue light-amber, clear lens, permanent mount, dual voltage. R65 Class 1 (flash mode) approved. |
| 2003027 | LP800 Solaris | (2) levels, (8) flash patterns, blue light, blue lens, day / night and cruise light, permanent mount, dual voltage. R65 Class 2 (flash mode) and Class 1 (rotative mode) approved. |
| 2003037 | LP800 Solaris | (2) levels, (8) flash patterns, red light, red lens, day / night and cruise light, permanent mount, dual voltage. |

Accessory

| | | |
|---------|----------|--------------------|
| 8232795 | BD-LP800 | DIN base for LP800 |
|---------|----------|--------------------|



LM400 / LP400 Series

New low profile LED beacons, which feature high luminosity, compact and aerodynamic design.

The Solaris Technology is formed by a high-efficiency PC board with integrated microprocessor, 15 high-luminosity LED diodes of the latest generation, integrated on the PC board and a parabolic reflector that maximises LEDs luminosity.

The **LM400 Solaris** model features a magnetic mounting kit with 2 magnets (with anti-scratch silicone) and 2 suction cups. It includes a cigarette lighter plug for easy power source connection.

This LED beacon is ideal for undercover police vehicles.

The **LP400 Solaris** is fitted out with a permanent mount and a rubber gasket improve for perfect adaptation to the roof.

The LP400 enables to connect two lights synchronized. Available colours in blue, red, amber and green.



LM400



LP400

| | LM400 | LP400 |
|--|--|--|
| Voltage: | 12V or 10-30V | 12V or 10-30V |
| Operating temperature: | -20°C to +50°C | -20°C to +50°C |
| Current draw (average) in rotator mode: | 1 Amp (blue, red and green) 0.6 Amp (amber) | 1 Amp (blue, red and green) 0.6 Amp (amber) |
| Current draw (average) in flashing mode: | 1 A (blue, red and green) 0.6 A (amber) | 1 A (blue and red) 0.6 A (amber) |
| Light technology: | Solaris | Solaris |
| LED colours: | Blue, red, amber, green | Blue, red and amber |
| Lens colours: | Blue or clear | Blue, clear or red |
| Dimensions: | 140 mm (diam - dome) 147 mm (diam - base) 80 mm (height) | 140 mm (diam - dome) 147 mm (diam - base) 60 mm (height) |
| Weight: | 616 g | 395 g |

| REF. | MOD. | DESCRIPTION |
|---|---------|--|
| Magnetic mounting: | | |
| 2002389 | LM400SL | LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue LEDs, magnetic mounting and cigarette lighter plug, 12V, R-65 approved. |
| 2002392 | LM400SL | LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs latest generation, high luminosity, amber LEDs, clear lens, magnetic mounting and cigarette lighter plug, 12V, R-65 approved. |
| 2002391 | LM400SL | LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, red LEDs, clear lens, magnetic mounting and cigarette lighter plug, 12V, R-65 approved. |
| 2002401 | LM400SL | LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, red LEDs, red lens, magnetic mounting and cigarette lighter plug, 12V. |
| 2002397 | LM400SL | LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, green LEDs, clear lens, magnetic mounting and cigarette lighter plug, 12V. |
| 2003017 | LM400SL | LED beacon, (2) flash pattern (rotator/flash), (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue LEDs, magnetic mounting and cigarette lighter plug, 10-30V, R-65 approved. |
| 2003018 | LM400SL | LED beacon, (2) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, amber LEDs, amber lens, magnetic mounting and cigarette lighter plug, 10-30V, R-65 approved. |
| 2003020 | LM400SL | LED beacon, (2) levels of light intensity (day/night), (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue LEDs, magnetic mounting and cigarette lighter plug, 10-30V, R65 class 2 approved. |
| 2003053 | LM400SL | LED beacon, (15) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, blue LEDs, magnetic mounting and cigarette lighter plug, 10-30V, R-65 approved. |
| 2003024 | LM401SL | LED beacon, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue LEDs, magnetic mounting and cigarette lighter plug, 10-30V, R65 approved, with selector for 360° or 180°. |
| Magnetic mounting BICOLOUR model | | |
| (N) 2003076 | LM400SL | LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, blue/amber BICOLOUR LEDs, magnetic mounting, 10-30V, R-65 approved. (*) Maximum speed for magnetic mount model on the roof of the vehicle to 200km / h. (**) Magnetic mounting models produced for a temporary use on the roof of the vehicle. |
| Permanent mount: | | |
| 2002390 | LP400SL | LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, blue LEDs, permanent mount, 12V, R-65 approved. |
| 2002393 | LP400SL | LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, amber LEDs, clear lens, permanent mount, 12V, R-65 approved. |
| 2002394 | LP400SL | LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, red LEDs, clear lens, permanent mount, 12V, R-65 approved. |
| 2003016 | LP400SL | LED beacon, (8) flash patterns, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, blue LEDs, blue lens, permanent mount, 10-30V, R-65 approved. |
| 2003019 | LP400SL | LED beacon, (8) flash pattern and rotating effect, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, amber LEDs, amber lens, permanent mount, 10-30V, R-65 approved. |
| 2003029 | LP400SL | LED beacon, (2) levels of light intensity (day/night), (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue LEDs, permanent mount, 10-30V, R65 class 2 approved. |
| 2003030 | LP400SL | LED beacon, (8) flash patterns, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, red LEDs, red lens, permanent mount, 10-30V, R-65 approved. |
| Permanent mount BICOLOUR model | | |
| (N) 2003069 | LP400SL | LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, blue/amber BICOLOUR LEDs, permanent mount, 10-30V, R-65 approved. |

TRIDENT Series

Federal Signal Vama presents the new **Trident Solaris** beacon family including high-performance, durable also a quick & easy installation beacons for effective hazard warning and search lights.

The Trident Solaris models are suitable for priority warning, or they can be combined with lightbars to increase the emergency lighting efficiency. The lens is manufactured in durable shockproof polycarbonate and the base is made from reinforced polyamide.

The Trident Solaris family consists of Solaris LED and search lights.

The Solaris technology means born under the ultimate influence of sun. Solaris provides an exceptional light beam with superior off-axis warning and eliminates any dark spots.



| | |
|------------------------|---|
| Voltage: | 10-30 V |
| Operating temperature: | -20°C to 50°C |
| Average consumption: | Blue or red with 1 level 1 Amp (12V) Amber with 1 level: 0.6 Amp |
| Leds colours: | Blue, amber, red |
| Lenses colours: | Blue, amber, red |
| Dimensiones: | 180 x 305 x 155 mm |
| Weight: | 1100 g (2 levels) |

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

Trident II Solaris

| | | |
|---------|---------------|---|
| 2010476 | TRIDENT II SL | (1) level, 15 high-intensity LEDs with parabolic reflector, high intensity and cruise light, blue LEDs, permanent mount, multivoltage. R65 Approved |
| 2010475 | TRIDENT II SL | (1) level, 15 high-intensity LEDs with parabolic reflector, high intensity and cruise light, amber LEDs, permanent mount, multivoltage. |
| 2010474 | TRIDENT II SL | (1) level, 15 high-intensity LEDs with parabolic reflector, high intensity and cruise light, red LEDs, permanent mount, multivoltage. |
| 2010499 | TRIDENT II SL | (2) level, 15+15 high-intensity LEDs with parabolic reflector, (2) levels of light intensity (day/night) and cruise light, blue LEDs, permanent mount, multivoltage. R65 Approved Class 2 |
| 2010501 | TRIDENT II SL | (2) level, 15+15 high-intensity LEDs with parabolic reflector, high intensity and cruise light, amber LEDs, permanent mount, multivoltage. |
| 2010500 | TRIDENT II SL | (2) level, 15+15 high-intensity LEDs with parabolic reflector, high intensity and cruise light, red LEDs, permanent mount, multivoltage. |

(*) Base mounting kit for Trident II must ordered (see accessories).

Trident II Search Light







| | | |
|---------|-----------------|---|
| 2010538 | TRIDENT II FB | 55W search light, home position feature, permanent mount, 12V (remote control head must be ordered separately). |
| 2010600 | TRIDENT-FB LEDS | TRIDENT II LED search light, permanent mount, 12V (remote control head must be ordered separately) |

(*) Base mounting kit for Trident II must ordered (see accessories).

Trident II Standard installation system




| | | |
|---------|--|----------------------------------|
| 2010546 | | Base mounting kit for Trident II |
|---------|--|----------------------------------|

Trident III Solaris (*)

| | | | |
|---|---------|----------------|--|
|  | 2010728 | TRIDENT 3 LEDS | TRIDENT 3 with Solaris LED, blue light, 1 level, right side, permanent mount, bitension (remote control must be requested separately) for ALFA ROMEO GIULIETTA model. Base mounting kit already included |
|  | 2010729 | TRIDENT 3 LEDS | TRIDENT 3 with Solaris LED, blue light, 1 level, left side, permanent mount, bitension (remote control must be requested separately) for ALFA ROMEO GIULIETTA model. Base mounting kit already included |
|  | 2010741 | TRIDENT 3 LEDS | TRIDENT 3 with Solaris LED, blue light, 1 level, right side, permanent mount, bitension (remote control must be requested separately) for JEEP RENEGADE model. Base mounting kit already included |
|  | 2010742 | TRIDENT 3 LEDS | TRIDENT 3 with Solaris LED, blue light, 1 level, left side, permanent mount, bitension (remote control must be requested separately) for JEEP RENEGADE model. Base mounting kit already included |
|  | 2010743 | TRIDENT 3 LEDS | TRIDENT 3 with Solaris LED, blue light, 1 level, right side, permanent mount, bitension (remote control must be requested separately) for FIAT GRANDE PUNTO model. Base mounting kit already included |
|  | 2010744 | TRIDENT 3 LEDS | TRIDENT 3 with Solaris LED, blue light, 1 level, left side, permanent mount, bitension (remote control must be requested separately) for FIAT GRANDE PUNTO model. Base mounting kit already included |

(*) For other Trident III Series base mounting kits, please consult

Trident III Search Light

| | | | |
|---|---------|-------------------|---|
|  | 2010701 | TRIDENT 3 FB LEDS | TRIDENT 3, LED search light, permanent mount, 12V (remote control head must be ordered separately) for ALFA ROMEO GIULIETTA |
|  | 2010703 | TRIDENT 3 FB LEDS | TRIDENT 3, LED search light, permanent mount, 12V (remote control head must be ordered separately) for JEEP RENEGADE |
|  | 2010745 | TRIDENT 3 FB LEDS | TRIDENT 3, LED search light, permanent mount, 12V (remote control head must be ordered separately) for FIAT GRANDE PUNTO |

(*) For other Trident III Series base mounting kits, please consult

Trident II & III Accessory

| | | |
|---------|------------------|--|
| 8216151 | MC-TRIDENT II FB | Remote control head with spiral cable, 12V |
|---------|------------------|--|

LE106 Series

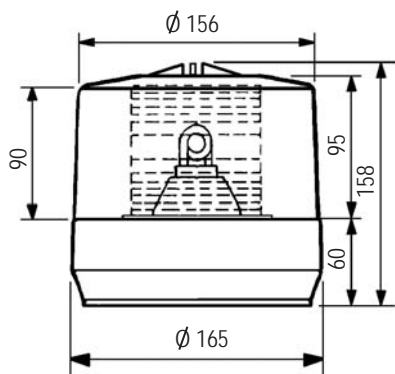
This series stands out for its high-efficiency strobe warning lights with Xenon lamps and bivoltage power supplies with a flash frequency of 120 fpm.

The beacon has a double lens system for light dispersion, colour and protection. The inner Fresnel lens distributes the light. The outer lens in different colours protects the unit and serves as waterproof cover.

The **LE106 series** consists of the following models:

- **LE106DCH:** Strobe beacon with lamp failure detection, low intensity, synchronised function option, optional cruise light and permanent mount.
- **LE106CH/MAG:** Strobe beacon with magnetic mount, suction pads and cigarette plug.
- **LE106HE:** Best value strobe beacon with permanent mount.

It is possible to install these beacons either on surface or on a DIN tube with connector.



LE106 Series dimensions (mm).



| | |
|----------------------|------------------------------|
| Voltage: | Bitension (12 / 24 V) |
| Average consumption: | 12V: 2.3 Amp 24V: 1.4 Amp |
| Strobe lamp: | 35 W |
| Dimensions: | 165 (diameter) x 158 mm |
| Weight: | 800 g |



BD-106 Base adapter



M-106 Adapter base joint, slopy surfaces (angles up to 4°).



AD-015 Adapter base joint, slopy surfaces (angles up to 4°).



JB-015 Adapter base joint, curved surfaces.

| REF. | MOD. | DESCRIPTION |
|---------|--------------|--|
| 2002349 | LE-106HE | Strobe beacon, double lens, permanent mount, blue, bitension. UN R65 approved |
| 2002350 | LE-106HE | Strobe beacon, double lens, permanent mount, amber, bitension. UN R65 approved |
| 2002388 | LE-106HE | Strobe beacon, double lens, permanent mount, red, bitension |
| 2002314 | LE-106DCH | Strobe beacon, double lens, 15J, failure detection, synchro, w/ power supply, permanent mount, blue, bitension. UN R65 approved |
| 2002319 | LE-106DCH | Strobe beacon, double lens, 15J, failure detection, synchro, w/ power supply, permanent mount, amber, bitension. UN R65 approved |
| 2002312 | LE-106CH | Strobe beacon, double lens, 15J, w/ power supply, permanent mount, blue, bitension. UN R65 approved |
| 2002311 | LE-106CH | Strobe beacon, double lens, 15J, w/ power supply, permanent mount, amber, bitension. UN R65 approved |
| 2002337 | LE-106CH/MAG | Strobe beacon, double lens, 15J, w/ power supply, magnetic mount, blue, bitension. UN R65 approved |
| 2002338 | LE-106CH/MAG | Strobe beacon, double lens, 15J, w/ power supply, magnetic mount, red, bitension |

Mount Accesories

| | | |
|---------|--------|--|
| 8232386 | BD-106 | DIN 14620 Mount kit, LE-106 |
| 9133996 | AI-106 | Adaptor ring for roof inclination, LE-106DCH |
| 8232387 | BD-015 | Base adapter, DIN pipe mount ISO4148, LR-015 and LE-106HE |
| 9133980 | JB-015 | Adapter base joint for LR-015 and LE-106HE |
| 9133997 | AD-015 | Adapter base joint for LR-015 and LE-106HE on slopy surfaces (angles up to 4°) |
| 9133924 | M-106 | Adapter base joint for LE-106DCH |



LR015 Series

Rotating beacon with silent belt-driven transmission. The carefully developed design means that the vibrations caused by the motor are isolated, enabling the low noise level of the **LR015** to be attained. A round rubber joint is assembled between the base and the vehicle for ensuring the correct adaptation of the unit with the curves in the vehicle.

It is possible to install this beacon either on surface or on a DIN tube with connector.



BD-015 Base adapter



M-106 Adapter base joint, slopy surfaces (angles up to 4°).



AD-015 Adapter base joint, slopy surfaces (angles up to 4°).



JB-015 Adapter base joint, curved surfaces.

| | |
|----------------------|----------------------------------|
| Voltage: | 12 or 24 V |
| Halogen lamp: | H1 of 55 W (12 V) or 70 W (24 V) |
| Average consumption: | 4.6 Amp (12 V), 2.3 Amp (24 V) |
| Dimensions: | O 165 x 153 mm |
| Weight: | 900 g |

| REF. | MOD. | DESCRIPTION |
|-------------------------|--------|---|
| 2001319 | LR-015 | 150 FPM Belt-driven rotator beacon, 150mm, 55W halogen lamp, permanent mount, blue, 12V. UN R65 approved |
| 2001321 | LR-015 | 150 FPM Belt-driven rotator beacon, 150mm, 70W halogen lamp, permanent mount, blue, 24V. UN R65 approved |
| 2001318 | LR-015 | 150 RPM Belt-driven rotator beacon, 150mm, 55W halogen lamp, permanent mount, amber, 12V. UN R65 approved |
| 2001320 | LR-015 | 150 FPM Belt-driven rotator beacon, 150mm, 70W halogen lamp, permanent mount, amber, 24V. UN R65 approved |
| Mount Accesories | | |
| 8232387 | BD-015 | Base adapter, DIN pipe mount ISO4148, LR-015 and LE-106HE |
| 9133980 | JB-015 | Adapter base ring for LR-015 and LE-106HE on slopy surfaces (angles up to 4°) |
| 9133997 | AD-015 | Adapter base joint for LR-015 and LE-106HE |



IWS modules Integrated Warning System

IWS Integrated Warning System for emergency vehicles, a powerful light solution with several last generation Solaris LED modules distributed all over vehicle perimeter, providing an exceptional 360° degrees coverage around this vehicle at any emergency situation.

- SOLARIS TECHNOLOGY

Composed by modules of 3 latest-generation Solaris LEDs with parabolic reflector, high intensity and low consumption.

- COMPACT

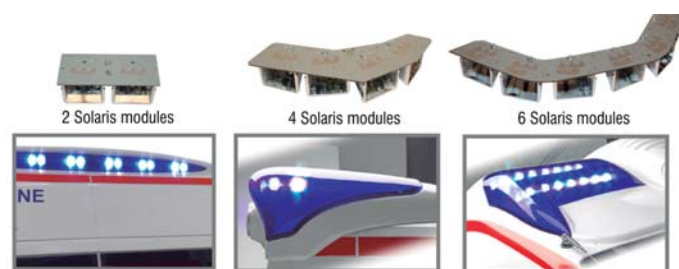
Its compact low profile design allows installation in limited spaces.

- LONG LIFE

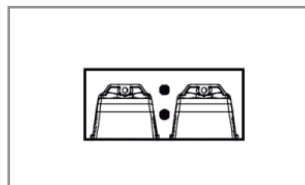
Federal Signal Vama's LED technology guarantees a long warning light life, helps to reduce maintenance costs, and increases vehicle rotation.

- EVERY NEED SOLUTIONS

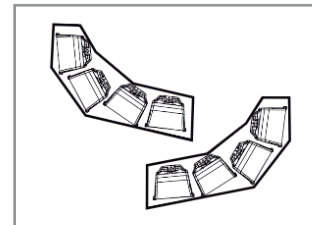
Easy to install and with a wide range of solutions: day/night mode, cruise light, multivoltage references, blue, amber, red or white LEDs, with or without flasher, etc.



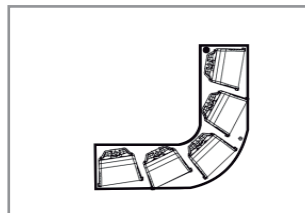
Sets of 2 modules Solaris



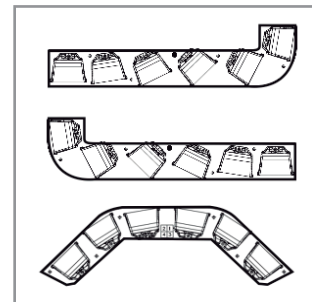
Sets of 4 modules Solaris



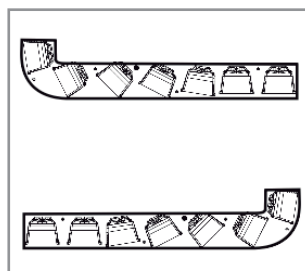
Sets of 5 modules Solaris



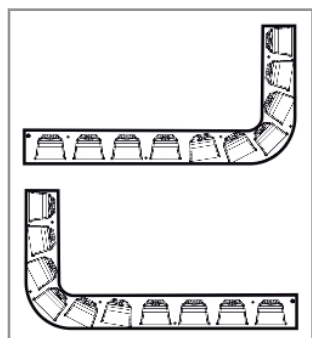
Sets of 6 modules Solaris



Sets of 7 modules Solaris



Sets of 10 modules Solaris





| REF. | MOD. | DESCRIPTION | |
|-------------|------|--|----------------------|
| | | Sets of 2 modules Solaris | dimensions mm |
| 8299895B | | Set of 2x3LED modules in blue and bitension with cruise lights and day/night functions. | 132x58x40 |
| 8299844B | | 6 Sets of 2x3LED modules in blue and bitension with cruise lights and day/night functions. | 132x58x40 |
| 8235975W | | Set of 2x3LED modules in white and 12V. | 132x58x40 |
| 8299895R | | Set of 2x3LED modules in red and bitension with cruise lights and day/night functions. | 132x58x40 |
| 8299936A | | Set of 2x3LED modules in amber and bitension with cruise lights. | 132x58x40 |
| 8299936R | | Set of 2x3LED modules in red and bitension with cruise lights. | 132x58x40 |
| | | Sets of 4 modules Solaris | |
| 8299849B | | Set of 4x3LED modules in blue and bitension (rear-right / front-left) with cruise lights and day/night functions. | 159x203,40x40 |
| 8299849A | | Set of 4x3LED modules in amber and bitension (rear-right / front-left) with cruise lights and day/night functions. | 159x203,40x40 |
| 8299849R | | Set of 4x3LED modules in red and bitension (rear-right / front-left) with cruise lights and day/night functions. | 159x203,40x40 |
| 8299850B | | Set of 4x3LED modules in blue and bitension (rear-left / front-right) with cruise lights and day/night functions. | 159x203,40x40 |
| 8299850A | | Set of 4x3LED modules in amber and bitension (rear-left / front-right) with cruise lights and day/night functions. | 159x203,40x40 |
| 8299850R | | Set of 4x3LED modules in red and bitension (rear-left / front-right) with cruise lights and day/night functions. | 159x203,40x40 |
| | | Sets of 5 modules Solaris | |
| 8299816B | | Set of 5x3LED modules in blue and 12V. 90° shape | 206x206x40 |
| 8299935A | | Set of 5x3LED modules in amber and 12V. 90° shape | 206x206x40 |
| 8299935R | | Set of 5x3LED modules in red and 12V. 90° shape | 206x206x40 |
| | | Sets of 6 modules Solaris | |
| 8299821B | | Set of 6x3LED modules in blue and bitension (rear-left / front-right) with cruise lights and day/night functions. | 390x96x40 |
| 8299822B | | Set of 6x3LED modules in blue and bitension (rear-right / front-left) with cruise lights and day/night functions. | 390x96x40 |
| 8299815BBIT | | Set of 6x3LED modules in blue and bitension. "U" shape | 393,42x124,34x40 |
| | | Sets of 7 modules Solaris | |
| 8299843B | | Set of 7x3LED modules in blue and bitension (rear-right / front-left) with cruise lights and day/night functions. | 458x96x40 |
| 8299842B | | Set of 7x3LED modules in blue and bitension (rear-left / front-right) with cruise lights and day/night functions. | 458x96x40 |
| | | Sets of 10 modules Solaris | |
| 8299825B | | Set of 10x3LED modules in blue and bitension (rear-right / front-left) with cruise lights and day/night functions. | 489x249x40 |
| 8299826B | | Set of 10x3LED modules in blue and bitension (rear-left / front-right) with cruise lights and day/night functions. | 489x249x40 |
| | | Rectangular module with collimator | |
| 8299938B | | (1) Rectangular module with 8 LEDs in blue, bitension with cruise light and day/night function. | |
| 8299938A | | (1) Rectangular module with 8 LEDs in amber, bitension with cruise light and day/night function. | |
| 8299938R | | (1) Rectangular module with 8 LEDs in red, bitension with cruise light and day/night function. | |
| 8299986R | | (1) Rectangular module, 3 red LEDs, bitension, cruise light, day/night mode. | |
| 8299987R | | (1) Rectangular module, 3 red LEDs, bitension, cruise light, day/night mode. | |
| 8299988R | | (3) Rectangular modules, 3 red LEDs, bitension, cruise light, day/night mode. | |
| 8299989R | | (3) Rectangular modules, 3 red LEDs, bitension, cruise light, day/night mode. | |
| 8299990R | | (4) Rectangular modules, 3 red LEDs, bitension, cruise light, day/night mode. | |
| 8299991R | | (4) Rectangular modules, 3 red LEDs, bitension, cruise light, day/night mode. | |

Mount Accesories

| | | |
|---------|--------|---|
| 2006035 | MLP-F4 | External flasher for 4 lights, (8) flash patterns (flash UN R65 included), multivoltage |
| 2006030 | MLP-F8 | External flasher for 8 lights, (8) flash patterns (flash UN R65 included), multivoltage |

(*) For A R65 regulations in these emergency lights, they must be approved together with the lenses and the type of vehicle installation.



SUPPLEMENTAL WARNING LIGHTS

| | |
|-----------------------------------|----|
| ➤ Directional LEDs lights..... | 44 |
| ➤ Directional warning lights..... | 54 |
| ➤ LED signs..... | 56 |

NANOLED Series

Federal Signal Vama introduces the new **Nanoled series**, the new and revolutionary ultra compact warning lights comprising of 6 LEDs. Thanks to its small size, light weight, easy installation and great light intensity, the Nanoled series break with standard products existing in the market, revealing a versatile installation and increasing security in emergency situations.

Nanoled series incorporate 6 multivoltage LED lights (10-30V), providing higher light intensity and improving energy efficiency. Its LED lights assure a long operational life, reducing maintenance costs and increasing vehicle's life.

Its range includes single colour and dual colour lights, both available with a variety of flash patterns, to correctly satisfy the different market needs.

- EXTREMELY COMPACT

Especially designed to be lighter and more compact than ever.

- THE HIGHEST INTENSITY

The 6 LED lights included in the Nanoled series improve energy efficiency and light intensity, providing more security in vehicles when there is an emergency situation.

- SINGLE COLOUR OR DUAL COLOUR LIGHTS

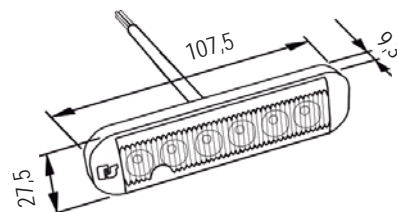
Its range includes single colour (same colour for all 6 LEDs) or dual colour lights (3 LEDs in each colour).

- LONG OPERATIONAL LIFE

Federal Signal Vama's LED technology guarantees a long operational life for this supplemental warning light, reducing maintenance costs and vehicle's life.

- EASY AND VERSATILE INSTALLATION

Thanks to its reduced dimensions, weight and mounting accessories availability, its installation is very easy.



Nanoled dimensions in mm.

- SOLUTION FOR ANY MARKET NEEDS

As a result of having several light colours and due to its versatility, Nanoled series lights can be integrated in the grill, inside or outside the vehicle, in the trunk or in the vehicle's rear part.

- WATER PROTECTION

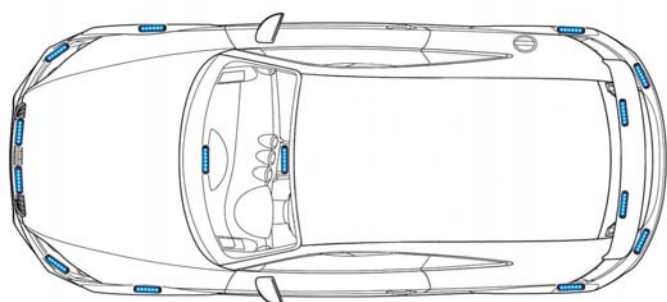
Follow protection certification IPX9K IPX6.

- CONNECTION SIMPLICITY

Nanoled's installation only requires one cable and its installation is made from vehicle's outside part.

- SYNCHRONIZABLE











Nanoled series allows simultaneous or alternative synchronization up to 12 lights.



Several installation possibilities

| | |
|--------------------------------|-----------------------------------|
| Voltage: | Multivoltaje (10-30V). |
| Number of LEDs: | 6 (single colour or dual colour). |
| Consumption 12V: | Flash pattern: 0.75 Amp. |
| Consumption 24V: | Flash pattern: 0.45 Amp. |
| Flash pattern (single colour): | 7 |
| Flash pattern (dual colour): | 16 |
| Operating temperature: | -40 to 80°C. |
| Dimensions (with bezel): | 107,5 x 27,5 x 9,3mm. |
| Dimensions (without bezel): | 104 x 24 x 9,3 mm. |
| Weight: | 42 gr. |



| REF. | MOD. | DESCRIPTION |
|--|---------|---|
| 2010718 | Nanoled | Nanoled, LED directional light, amber/amber, clear lens, with flasher, multivoltage 10-30V. UN R65 class 1 approved. |
| 2010709 | Nanoled | Nanoled, LED directional light, amber/amber, clear lens, with flasher, multivoltage 10-30V. UN R65 class 2 approved. |
| 2010712 | Nanoled | Nanoled, LED directional light, white/amber, clear lens, with flasher, multivoltage 10-30V. |
| 2010710 | Nanoled | Nanoled, LED directional light, blue/amber, clear lens, with flasher, multivoltage 10-30V. |
| 2010705 | Nanoled | Nanoled, LED directional light, blue /blue, clear lens, with flasher, multivoltage 10-30V. UN R65 class 1 approved. |
|  2010705-02 | Nanoled | Nanoled, LED directional light, blue/blue, clear lens, with flasher, multivoltage 10-30V. UN R65 class 1 approved with cruise light |
| 2010707 | Nanoled | Nanoled, LED directional light, blue /blue, clear lens, with flasher, multivoltage 10-30V. UN R65 class 2 approved. |
| 2010713 | Nanoled | Nanoled, LED directional light, blue/white, clear lens, with flasher, multivoltage 10-30V. |
| 2010708 | Nanoled | Nanoled, LED directional light, blue/red, clear lens, with flasher, multivoltage 10-30V. |
| 2010717 | Nanoled | Nanoled, LED directional light, red/red, clear lens, with flasher, multivoltage 10-30V. UN R65 class 1 approved. |
| 2010711 | Nanoled | Nanoled, LED directional light, red/red, clear lens, with flasher, multivoltage 10-30V. UN R65 class 2 approved. |
| 2010723 | Nanoled | Nanoled, LED directional light, amber/red, clear lens, with flasher, multivoltage 10-30V. |
| 2010714 | Nanoled | Nanoled, LED directional light, red/white, clear lens, with flasher, multivoltage 10-30V. |
| 2010706 | Nanoled | Nanoled, LED directional light, white/white, clear lens, with flasher, multivoltage 10-30V. |
| Nanoled with independent light control 3+3 | | |
|  2010746 | Nanoled | Nanoled, LED directional light, 3 blue + 3 amber LEDs clear lens, with flasher, multivoltage 10-30V. UN R65 class 1 approved with independent light control |
|  2010732 | Nanoled | Nanoled, LED directional light, 3 blue + 3 white LEDs, clear lens, with flasher, multivoltage 10-30V, with independent light control |
|  2010733 | Nanoled | Nanoled, LED directional light, 3 blue + 3 red LEDs, clear lens, with flasher, multivoltage 10-30V, with independent light control |
|  2010734 | Nanoled | Nanoled, LED directional light, 3 amber + 3 red LEDs, clear lens, with flasher, multivoltage 10-30V, with independent light control |
|  2010735 | Nanoled | Nanoled, LED directional light, 3 red + 3 white LEDs, with flasher, multivoltage 10-30V, with independent light control |
|  2010736 | Nanoled | Nanoled, LED directional light, 3 white + 3 amber LEDs, with flasher, multivoltage 10-30V, with independent light control |
| Area lighting Nanoled | | |
| 2010727 | Nanoled | Nanoled, directional area LED light white-white/clear lens, no flasher, multivoltage |
| Mount Accesories | | |
| 2010721 | Nanoled | Cromed Bezel (optional) |
| 8232851 | Nanoled | Simple "L" mounting accessory |
| 8232852 | Nanoled | Double "L" horizontal mounting accessory |
| 8232853 | Nanoled | Double "L" vertical mounting accessory |
| 8232854 | Nanoled | Swivelling mounting accessory |
|  8232893 | Nanoled | Hood support with adhesive or screwed bracket |
|  8232894 | Nanoled | Hood support with metal bracket |
| 8232863 | Nanoled | Grille support for VW Crafter |
| 8232864 | Nanoled | Grille support for Renault Master |
| 8232865 | Nanoled | Right Grille support for Sprinter |
| 8232866 | Nanoled | Left Grille support for Mercedes Sprinter |
| 8232868 | Nanoled | Grille support for Mercedes Vito |
|  8232867 | Nanoled | 2 racks grill support for VW T6 |
| 8232870 | Nanoled | 3 racks grill support for VW T6 |

(*) All models include a black bezel.

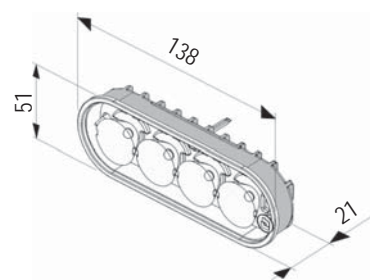
MICROLED PLUS Series

MicroLed Plus is an ultra-compact high intensity LED light inspired on MicroLed Sputnik. Its new design incorporates the latest technological advances and provides improved high-luminosity, high dissipation capacity and watertightness. Jointed with the external flasher MLP-F4 MicroLED Plus complies with the European Regulation R65, category X.

The MicroLed Plus, formed by 4 3W Sputnik LEDs is a steady burn light, which can be connected to different FSV products, like controllers ICS, siren-amplifiers, Intelli flashers, FA3 flashers, etc. Its small size makes this light the flattest on the market, facilitating the installation on any surfaces. The external flasher MLP offers connection up to 4 or 8 MicroLeds Plus, 8 flash patterns and 2 channels. This flasher unit could be controlled by external switches.

The MicroLed Plus and the MLP-4F/MLP-8F flasher are multivoltage models, which provide the greater versatility.

2 mounting kits and different colour versions are available.



MicroLed Plus dimensions (mm).

| | |
|--------------------------------------|----------------------------------|
| Voltage: | Multivoltage (10-30 V) |
| Average consumption (Flashing mode): | 1.6 Amp (12 V) 0.8 Amp (24 V) |
| Dimensions: | 138 x 51 x 21 mm |

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

Spreader lens models

| | | |
|---------|---------------|---|
| 2010419 | MicroLed Plus | MicroLed Plus, Sputnik LED directional light, blue light, blue lens, w/o flasher, cruise light, multivoltage. UN R65 approved |
| 2010420 | MicroLed Plus | MicroLed Plus, Sputnik LED directional light, blue light, clear lens, w/o flasher, cruise light, multivoltage. UN R65 approved |
| 2010421 | MicroLed Plus | MicroLed Plus, Sputnik LED directional light, white light, amber lens, w/o flasher, cruise light, multivoltage. UN R65 approved |
| 2010422 | MicroLed Plus | MicroLed Plus, Sputnik LED directional light, amber light, clear lens, w/o flasher, cruise light, multivoltage |
| 2010423 | MicroLed Plus | MicroLed Plus, Sputnik LED directional light, red light, red lens, w/o flasher, cruise light, multivoltage |
| 2010424 | MicroLed Plus | MicroLed Plus, Sputnik LED directional light, red light, clear lens, w/o flasher, cruise light, multivoltage |
| 2010520 | MicroLed Plus | MicroLed Plus interior or scene light with two light intensity (high and low), white light, clear spreader lens, multivoltage |

Smooth lens models

| | | |
|---------|---------------|--|
| 2010427 | MicroLed Plus | MicroLed Plus, Sputnik LED directional light, blue light, blue lens, w/o flasher, cruise light, multivoltage |
| 2010428 | MicroLed Plus | MicroLed Plus, Sputnik LED directional light, blue light, clear lens, w/o flasher, cruise light, multivoltage |
| 2010425 | MicroLed Plus | MicroLed Plus, Sputnik LED directional light, white light, amber lens, w/o flasher, cruise light, multivoltage |
| 2010426 | MicroLed Plus | MicroLed Plus, Sputnik LED directional light, amber light, clear lens, w/o flasher, cruise light, multivoltage |
| 2010429 | MicroLed Plus | MicroLed Plus, Sputnik LED directional light, red light, red lens, w/o flasher, cruise light, multivoltage |
| 2010430 | MicroLed Plus | MicroLed Plus, Sputnik LED directional light, red light, clear lens, w/o flasher, cruise light, multivoltage |
| 2010521 | MicroLed Plus | MicroLed Plus interior or scene light, white light, clear smooth lens, multivoltage |

MicroLED Plus-V - vertical mount

| | | |
|---------|-----------------|---|
| 2010433 | MicroLed Plus-V | MicroLed Plus-V, Sputnik LED directional light, blue light, blue lens, w/o flasher, cruise light, multivoltage. UN R65 approved |
| 2010434 | MicroLed Plus-V | MicroLed Plus-V, Sputnik LED directional light, blue light, clear lens, w/o flasher, cruise light, multivoltage. UN R65 approved |
| 2010431 | MicroLed Plus-V | MicroLed Plus-V, Sputnik LED directional light, white light, amber lens, w/o flasher, cruise light, multivoltage. UN R65 approved |
| 2010432 | MicroLed Plus-V | MicroLed Plus-V, Sputnik LED directional light, amber light, clear lens, w/o flasher, cruise light, multivoltage |
| 2010435 | MicroLed Plus-V | MicroLed Plus-V, Sputnik LED directional light, red light, red lens, w/o flasher, cruise light, multivoltage |
| 2010436 | MicroLed Plus-V | MicroLed Plus-V, Sputnik LED directional light, red light, clear lens, w/o flasher, cruise light, multivoltage |



| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

Installation Accesories

| | | |
|---------|--------|--|
| 2006035 | MLP-F4 | External flasher for MicroLed Plus, (8) flash patterns (UN R65 flash included), multivoltage |
| 2006030 | MLP-F8 | External flasher for (8) lights, (8) flash patterns (UN R65 flash included), multivoltage |

Mount Accesories (Choose one kit when order)

| | | |
|----------|---------|---|
| 2010437 | MLP-SUP | Surface mount kit, (1) joint, MicroLed Plus |
| 2010438 | MLP-EMP | Flush mount kit, (1) joint, MicroLed Plus |
| 81522023 | | Set square, 4 Microled Plus, Seat Altea XL |
| 81522024 | | Fixation platen, 1 Microled Plus |
| 81522241 | | Set square, 2 Microled Plus, Renault Megane V.09 |
| 81522242 | | Set square, 4 Microled Plus, Renault Megane Scenic V.09 |
| 81522285 | | Set square, 4 Microled Plus, Renault Expert V.09 |



81522023 Set square, 4 Microled Plus,
Seat Altea XL



81522024 Fixation platen, 1 Microled Plus



81522241 Set square, 2 Microled Plus,
Renault Megane V.09



81522242 Set square, 4 Microled Plus,
Renault Megane Scenic V.09



81522285 Set square, 4 Microled Plus,
Renault Expert V.09





MICROLED Advance Series

Microled Advance supplemental warning LED light offers additional security on emergency situations, and could be installed in almost every place of all emergency vehicle types: rear deck, rearview mirrors, grilles, bumpers, etc. Its main features are:

- HIGH INTENSITY

An ultimate technology LED lights and lenses provide efficient distribution of warning power. Microled Advance offers maximum optical performance with minimal amperage draw.

- LONG LIFE

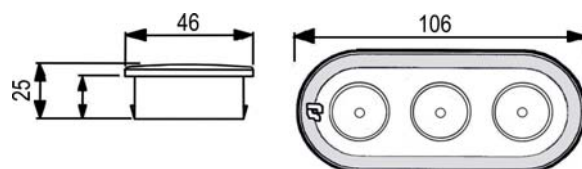
Federal Signal Vama's LED technology guarantees a long warning light life, helps to reduce maintenance costs, and increases vehicle rotation.

- EVERY NEED SOLUTIONS

Easy to install and with a wide range of solutions: multivoltage references, blue, amber, red or clear lenses, with or without flasher, etc.

- WATERPROOF HOUSING

High density silicone rear sealed, avoiding dust and / or water penetration inside the circuit board. IP protection grade IP9K.



MicroLed Advance dimensions (mm).

| | W/O FLASHER | WITH FLASHER | R65 |
|--------------------------------------|------------------------------|---|--|
| Voltage: | Multivoltage (10-30V) | Multivoltage (10-30V) | Multivoltage (10-30V) |
| Number of LEDs: | 3 x 2 W | 3 x 2 W | 3 x 2 W |
| Average consumption: | 0.2 Amp (Ref. 2010589, 0.4A) | 0.4 Amp | 0.4 Amp |
| Average consumption (flashing mode): | 0.2 Amp | 0.4 Amp (blue, white and green) 0.2 Amp (amber, red) | 0.4 Amp (blue, amber) 0.3 Amp (red) |
| Flash patterns: | 8 or steady burn | 8 + steady burn | R65 + 7 + steady burn |
| Weight: | 80 g | 80 g | 80 g |
| Dimensions: | 106 x 46 x 25 mm | 106 x 46 x 25 mm | 106 x 46 x 25 mm |



| REF. | MOD. | DESCRIPTION |
|---|------------------|--|
| Spread R65 lens | | |
| 2010595 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, white light, amber spread lens, multivoltage |
| 2010596 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, blue spread lens, multivoltage |
| 2010597 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, clear spread lens, multivoltage |
| 2010598 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, red light, clear spread lens, multivoltage |
| 2010599 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, red light, red spread lens, multivoltage |
| Smooth lens w/o flasher | | |
| 2010584 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, amber light, clear smooth lens, w/o flasher, multivoltage |
| 2010589 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, amber light, amber smooth lens, w/o flasher, multivoltage* |
| 2010585 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, clear smooth lens, w/o flasher, multivoltage |
| 2010586 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, red light, clear smooth lens, w/o flasher, multivoltage |
| 2010587 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, green light, clear smooth lens, w/o flasher, multivoltage |
| 2010636 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, white light, clear smooth lens, w/o flasher, multivoltage |
| * An external flasher is needed | | |
| Smooth and fresnel V15 lens w/ flasher | | |
| 2010573 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, amber light, amber smooth lens, w/flasher, multivoltage |
| 2010580 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, amber light, amber Fresnel V15 lens, w/flasher, multivoltage |
| 2010574 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, amber light, clear smooth lens, w/flasher, multivoltage |
| 2010581 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, amber light, clear Fresnel V15 lens, w/flasher, multivoltage |
| 2010570 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, blue smooth lens, w/flasher, multivoltage |
| 2010578 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, blue Fresnel V15 lens, w/flasher, multivoltage |
| 2010571 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, clear smooth lens, w/flasher, multivoltage |
| 2010579 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, clear Fresnel V15 lens, w/flasher, multivoltage |
| 2010576 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, red light, clear smooth lens, w/flasher, multivoltage |
| 2010583 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, red light, clear Fresnel V15 lens, w/flasher, multivoltage |
| 2010575 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, red light, red smooth lens, w/flasher, multivoltage |
| 2010582 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, red light, red Fresnel V15 lens, w/flasher, multivoltage |
| 2010577 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, green light, clear smooth lens, w/flasher, multivoltage |
| 2010572 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, white light, clear smooth lens, w/flasher, multivoltage |
| 2010590 | MicroLed Advance | Microled Advance LED directional light, master/slave, 3 LEDs of 2W, white light, clear Fresnel V15 lens, w/flasher, multivoltage |
| Installation Accesories | | |
| 2006035 | MLP-F4 | External flasher for (4) lights, (8) flash patterns (UN R65 flash included), multivoltage |
| 2006030 | MLP-F8 | External flasher for (8) lights, (8) flash patterns (UN R65 flash included), multivoltage |
| Mount Accesories* | | |
| 2010230 | | Surface mount kit, (2) joints, (surface mount) |
| 2010231 | | Flush mount kit, (2) joints, (flush mount) |
| 2010279 | | L Bracket for permanent mounting |
| 81523056 | | Fixation platen, 1 Microled Advance** |
| * Choose a mounting kit when ordering. | | |
| ** Should be folded by the installer. | | |

IMPAXX Series

The Impaxx LED lights Series provide, with the Solaris exclusive technology from Federal Signal Vama, an excellent luminosity on emergency situations, intersections, etc. It has several flash patterns synchronized with other Impaxx lights. Furthermore, Impaxx Series has more advantages:

- EASY, VERSATILE INSTALLATION

Specially designed to be quickly mounted, with a minimum manipulation. Thanks to its compact dimensions, it could be installed on every part of the vehicle. All models are multivoltage (10-30 V).

- COST SAVINGS

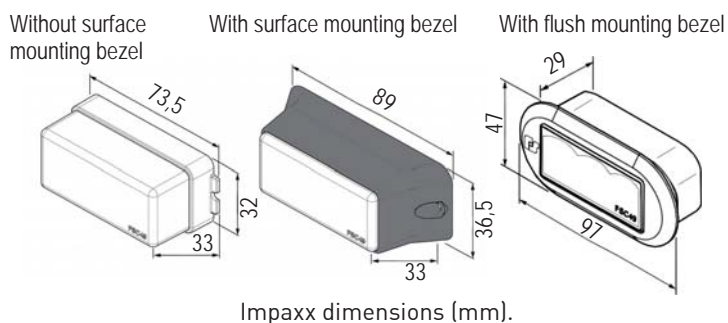
Less installations costs. High reliability and durability provide low maintenance costs.

- WATERPROOF HOUSING

Resistant to weather conditions. With IP protection IP6K9K.

- LOW AMP DRAW AND LONG LIFE

Optimizes vehicle battery performance.



| | |
|----------------------|--|
| Voltage: | 10-30 V |
| Average consumption: | 0.4 Amp (12V), 0.25 Amp (24V) R65: 0.6 Amp (12V), 0.4 Amp (24V) |
| Flash patterns: | 23 |
| Weight: | 140 g |
| Dimensions: | 89 x 33 x 36.5 mm |

| REF. | MOD. | DESCRIPTION |
|--|--------|---|
| Spreader lens models R65 homologated* | | |
| IPX320-BH | IMPAXX | Impaxx, blue LED and clear lens, with integrated flasher, multivoltage 10-30V. |
| IPX322-BH | IMPAXX | Impaxx, blue LED and blue lens, with integrated flasher, multivoltage 10-30V. |
| IPX320-AH | IMPAXX | Impaxx, amber LED and clear lens, with integrated flasher, multivoltage 10-30V. |
| IPX322-AH | IMPAXX | Impaxx, amber LED and amber lens, with integrated flasher, multivoltage 10-30V. |
| Spreader lens* | | |
| IPX300-A | IMPAXX | Amber LED and clear lens, with integrated flasher, multivoltage 10-30V. |
| IPX300-B | IMPAXX | Blue LED and clear lens, with integrated flasher, multivoltage 10-30V. |
| IPX300-G | IMPAXX | Green LED and clear lens, with integrated flasher, multivoltage 10-30V. |
| IPX300-R | IMPAXX | Red LED and clear lens, with integrated flasher, multivoltage 10-30V. |
| IPX300-W | IMPAXX | White LED and clear lens, with integrated flasher, multivoltage 10-30V. |
| IPX302-A | IMPAXX | Amber LED and amber lens, with integrated flasher, multivoltage 10-30V. |
| IPX302-B | IMPAXX | Blue LED and blue lens, with integrated flasher, multivoltage 10-30V. |
| IPX302-R | IMPAXX | Red LED and red lens, with integrated flasher, multivoltage 10-30V. |
| Smooth lens* | | |
| IPX310-A | IMPAXX | Amber LED and clear lens, with integrated flasher, multivoltage 10-30V. |
| IPX310-B | IMPAXX | Blue LED and clear lens, with integrated flasher, multivoltage 10-30V. |
| IPX310-R | IMPAXX | Red LED and clear lens, with integrated flasher, multivoltage 10-30V. |
| IPX310-W | IMPAXX | White LED and clear lens, with integrated flasher, multivoltage 10-30V. |
| IPX312-A | IMPAXX | Amber LED and amber lens, with integrated flasher, multivoltage 10-30V. |
| IPX312-B | IMPAXX | Blue LED and blue lens, with integrated flasher, multivoltage 10-30V. |
| IPX312-R | IMPAXX | Red LED and red lens, with integrated flasher, multivoltage 10-30V. |
| Mount Accesory | | |
| IPXM-1 | IMPAXX | Chrome bezel for surface mounting. |
| 2010653 | IMPAXX | Ruber bezel for built-in mounting |
| 81523427 | IMPAXX | Mounting plate "L" |

* Mounting black bezel included on all models.

LD116 Advance Series

Federal Signal Vama presents the upgraded version of LEDs compact lights for **LD116 Advance Series**, the most modular light of our lights especially designed for emergency vehicles.

- HIGH INTENSITY

Latest generation Advance Technology LEDs, provides light output and longest lifetime.

- A SOLUTION FOR EVERY NEED

The wide range of mounting kits makes this compact light very flexible, offering solutions all over the vehicle perimeter.

- APPROVALS

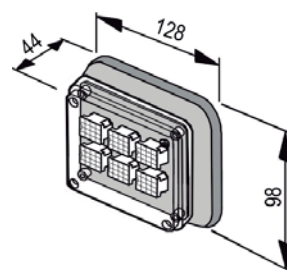
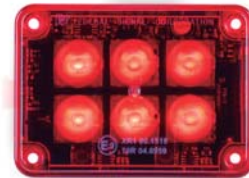
According to R65 and R10 European Regulations.

- WATERPROOF HOUSING

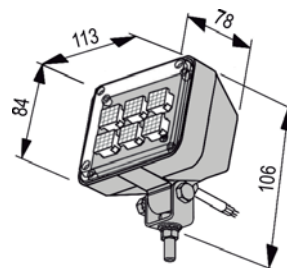
High-density silicone rear sealed avoiding dust and/or water penetration inside the circuit board IP9K Approved.

- LONG LIFE

Federal Signal Vama's LED technology guarantees a long warning light life, helps to reduce maintenance costs, and increases vehicle rotation.



LD116 Advance dimensions (mm)
Surface mounting kit.



LD116 Advance dimensions (mm)
Swivel mounting kit.

| | |
|------------------------|-----------------------|
| Operating voltage: | Multivoltage (10–30V) |
| Operating temperature: | -20° / +50° |
| Dimensions: | 109x79x22,5 mm |

| REF. | MOD. | DESCRIPTION |
|-----------|-----------|---|
| 2010674CR | LD116 ADV | Directional Advance LED light, amber LED, amber lens, w/flasher and cruise light, multivoltage, R65 Class 1 approved. |
| 2010673CR | LD116 ADV | Directional Advance LED light, blue LED, blue lens, w/flasher and cruise light, multivoltage, R65 Class 1 approved. |
| 2010675CR | LD116 ADV | Directional Advance LED light, red LED, red lens, w/flasher and cruise light, multivoltage, R65 Class 1 approved. |

Accessories

| | | |
|---------|-----------|-------------------------------------|
| 2010263 | LD116-SB | Surface mounting kit, black colour |
| 2010262 | LD116-SC | Surface mounting kit, chrome colour |
| 2010264 | LD116-SWB | Swivel mounting kit, black colour |

Optional Accessories

| | | |
|---------|--------|--|
| 9022209 | | Wiring harness 3x0,75 (sold in meter, the lenght required has to mentioned in the order) |
| 8216090 | SW-521 | Swith 2 positions ON-OFF with key protector |

QUADRAFLARE Advance

Federal Signal Vama introduces new, large **Quadraflare Advance** LED lights, specially designed for emergency vehicles, such as ambulance and fire fighting vehicles.

- HIGH INTENSITY

An ultimate technology LED lights and lenses provide efficient distribution of warning power. Quadraflare Advance offers maximum optical performance with minimal amperage draw.

- EVERY NEED SOLUTIONS

Available in blue, amber, red, white or green lights, multivoltage, R65 approved (Class 1 and Class 2) and with or without flasher (8 flashing modes).

- SYNCRONIZED

Quadraflare Advance without flasher could be synchronized with other Federal Signal Vama vehicle products (MLP, Intelli-Flash intermittent relays, ICS2000 Series intelligent controllers).

- APPROVED

Quadraflare Advance satisfy UN R65 and UN R10 approvals from United Nations Economic Commission for Europe. (UNECE). With IP protection IPX9K.



| | |
|----------------------|--|
| Voltage: | Multivoltage (10 - 30 V) |
| Average consumption: | 1 Amp (12 V, fixed mode) 0.5 Amp (12 V, flash mode) 0.1 Amp (12 V & 24 V, cruise light mode) |
| LEDs colours: | Blue, amber, red, green, white |
| Lens colours: | Blue, amber, red, green, clear |
| Dimensions: | Light: 167 x 38 x 107 mm Mounting kit: 211 x 48 x 132 mm |

- INCREASED SECURITY

New Negative Temperature Coefficient (NTC) regulates light intensity, avoiding heat disfunction on supplemental warning light.

| REF. | MOD. | DESCRIPTION |
|---|---------------------|---|
| Quadraflare Advance WITHOUT flasher | | |
| 2010617 | Quadraflare Advance | Directional Advance LED light, blue LEDs, clear lens, w/o flasher, multivoltage. R65 Class 2 approved. |
| 2010618 | Quadraflare Advance | Directional Advance LED light, blue LEDs, blue lens, w/o flasher, multivoltage. R65 Class 2 approved. |
| 2010619 | Quadraflare Advance | Directional Advance LED light, amber LEDs, amber lens, w/o flasher, multivoltage. R65 Class 1 approved. |
| 2010620 | Quadraflare Advance | Directional Advance LED light, amber LEDs, clear lens, w/o flasher, multivoltage. R65 Class 1 approved. |
| 2010623 | Quadraflare Advance | Directional Advance LED light, red LEDs, red lens, w/o flasher, multi-voltage. R65 Class 2 approved. |
| 2010624 | Quadraflare Advance | Directional Advance LED light, red LEDs, clear lens, w/o flasher, multivoltage. R65 Class 2 approved. |
| 2010461-01 | Quadraflare Advance | Directional Advance LED light, white LEDs, clear lens, w/o flasher, multivoltage. |
| Installation Accessories for references without flasher | | |
| 2006035 | MLP-F4 | External flasher (4) lights, (8) flash patterns, multivoltage. |
| 2006030 | MLP-F8 | External flasher (8) lights, (8) flash patterns, multivoltage. |
| Quadraflare Advance WITH flasher | | |
| 2010610 | Quadraflare Advance | Directional Advance LED light, blue LEDs, blue lens, w/flasher, multi-voltage. R65 Class 2 approved. |
| 2010609 | Quadraflare Advance | Directional Advance LED light, blue LEDs, clear lens, w/flasher, multi-voltage. R65 Class 2 approved. |
| 2010611 | Quadraflare Advance | Directional Advance LED light, amber LEDs, amber lens, w/flasher, multi-voltage. R65 Class 1 approved. |
| 2010612 | Quadraflare Advance | Directional Advance LED light, amber LEDs, clear lens, w/flasher, multi-voltage. R65 Class 1 approved. |
| 2010616 | Quadraflare Advance | Directional Advance LED light, red LEDs, clear lens, w/flasher, multi-voltage. R65 Class 2 approved. |
| 2010615 | Quadraflare Advance | Directional Advance LED light, red LEDs, red lens, w/flasher, multi-voltage. R65 Class 2 approved. |
| 2010607 | Quadraflare Advance | Directional Advance LED light, white LEDs, clear lens, w/flasher, multi-voltage. |
| Installation Accessories (Choose (1) Mounting kit when ordering) | | |
| QL64MC | Quadraflare | Surface mounting kit with chrome ring and gasket |
| QL64MB | Quadraflare | Surface mounting kit with black ring and gasket |

Motorcycle Kit LD400 / LD410 Solaris and CO400 Solaris

Federal Signal Vama presents its new **LD400** and **CO400** series, a priority warning LED kit for police motorcycles R-65 approved.

The **LD400 Solaris** consist on 2 front low profile light heads which distribute the light beam at a horizontal angel of 120 degrees. The revolutionary reflector optical design provides a powerful lighting.

The light source of the **CO400 Solaris** telescopic pole is formed by the brand-new Solaris system.

- EASY MAINTAINANCE AND INSTALLATION

There is no need for an external power supply, and all necessary electrical connections are provided.

- WATERPROOF HOUSING AND CONNECTOR

IPX9K approved for LD400 LED lights.

- LIGHTNESS AND SHOCK RESISTANT

Thanks to its polycarbonate reflector and lenses and fiberglass support.

- LOW AMP DRAW AND LONG LIFE

LED technology assures long warning light life, and helps to reduce vehicle maintenance costs.



LD400



CO400 Solaris

| | LD400 | LD410 | CO400 Solaris |
|---|---------------------------------------|---------------------------------|---|
| Voltage: | 12V | 12V | 12V |
| Average consumption in flashing mode: | blue: 0,25A amber and red: 0.25Amp | blue: 0.20Amp | blue and red: 1 Amp amber: 0.6 Amp |
| N° of LED diodes: | 5 LEDs Solaris | 4 LEDs Solaris 1 LED Solaris | Omnidirectional parabolic reflector with 15 LEDs |
| Weight: | 220 g | 220 g | 1580 g (CO400) 1240 g (CO421) |
| Dimensions (without mounting brackets): | 90 x 50 x 150 mm | 90 x 50 x 150 mm | 140 x 650 - 1515 mm (3-section pole) 140 x 550 - 760 mm (2-section pole) |

| REF. | MOD. | DESCRIPTION |
|--|-----------------|---|
| LD400 - LD410 SOLARIS Front Light with flasher integrated | | |
| 2010630 | LD400-D Solaris | Solaris LED directional light (right side), (5) LEDs, blue light, blue lens, cruise light, swivel mount, 12V. UN R65 approv. Class 1 |
| 2010631 | LD400-I Solaris | Solaris LED directional light (left side), (5) LEDs, blue light, blue lens, cruise light, swivel mount, 12V. UN R65 approv. Class 1 |
| 2010644 | LD400-D Solaris | Solaris LED directional light (right side), (5) LEDs, red light, red lens, cruise light, swivel mount, 12V |
| 2010645 | LD400-I Solaris | Solaris LED directional light (left side), (5) LEDs, red light, red lens, cruise light, swivel mount, 12V |
| 2010642 | LD400-D Solaris | Solaris LED directional light (right side), (5) LEDs, amber light, amber lens, cruise light, swivel mount, 12V |
| 2010643 | LD400-I Solaris | Solaris LED directional light (left side), (5) LEDs, amber light, amber lens, cruise light, swivel mount, 12V |
| 2010632 | LD410-D Solaris | Solaris LED directional light (right side), (4) LEDs blue light and (1) LED red light "Stop Light" function, swivel mount, 12V. UN R65 approved Class 1 |
| 2010633 | LD410-I Solaris | Solaris LED directional light (left side), (4) LEDs blue light and (1) LED red light "Stop Light" function, swivel mount, 12V. UN R65 approved Class 1 |
| CO400 SOLARIS Telescopic Mast with flasher integrated | | |
| 2005388 | CO400 Solaris | Omnidirectional Solaris LED head, telescopic pole mount in (3) sections, (15) LEDs, blue light, blue spreader lens, cruise light, 12V. UN R65 approved |
| 2005389 | CO400 Solaris | Omnidirectional Solaris LED head, telescopic pole mount in (3) sections, (15) LEDs, amber light, amber spreader lens, cruise light, 12V. UN R65 approved |
| 2005390 | CO400 Solaris | Omnidirectional Solaris LED head, telescopic pole mount in (3) sections, (15) LEDs, red light, red spreader lens, cruise light, 12V. UN R65 approved |
| 2005430 | CO421 Solaris | Omnidirectional Solaris LED head, telescopic pole mount in (2) sections, (15) LEDs, blue light, blue spreader lens, cruise light, 12V. UN R65 approved |
| MC300 Series | | |
| 4004233-01 | MC300 | Motorcycle Control allows to control all the functions of lights and siren of the 400 Solaris Series: priority warning lights (LD400 Solaris and CO400 Solaris, "Stop Light" function, cruise light and continuous siren |
| 4004352 | MC300/A | Motorcycle Control allows to control all the functions of lights and siren of the 400 Solaris Series: priority warning lights (LD400 Solaris and CO400 Solaris, "Stop Light" function, cruise light, continuous siren and power limiter |
| Mount Accesories | | |
| 8216098 | BA-6 | Kit silent blocks telescopic pole, only available for poles in 3 sections. |
| 82441524-03 | LD400-CBLDO | Adapter wiring from LD350/LD360 to LD400/LD410 |
| 82441589 | 82441589 | Motorbike wiring kit (LD410- CO400, SCS1000-D and control head) |
| 82441588 | 82441588 | Motorbike wiring kit (LD400- CO400, SCS1000-D and control head) |

SIGNALMASTER SOLARIS



Federal Signal Vama presents the new ultra-low profile **SignalMaster Solaris** directional warning light. It offers an excellent results as an emergency light, thanks to its several flash patterns (day / night effect, fast / slow, scroll) to satisfy all needs. Its main features are:



- HIGH INTENSITY

The built-in Solaris technology onto SignalMaster directional warning light has exponentially increased light intensity compared to similar products on the market.

- EVERY NEED SOLUTIONS

SignalMaster Solaris has got 4 different flash patterns (right, left, centre-out sequences and middle-out flashing mode), and day / night*, slow / fast* and scroll function with a non-stop effect on a CAN BUS version.

- ULTRA-LOW PROFILE

Its low profile gives it less aerodynamic drag with less fuel consumption and better vehicle tire grip, for an increased security. Further more, it has an attractive design without losing any functionality and it allows easier installation in any vehicle.

- WATERPROOF HOUSING

Highly prepared to fight against most adverse weather conditions, thanks to its IP protection IPX9K.

* Features available on analogical version with SMC5 multifunction controller.

| | |
|----------------------|---|
| Voltage: | 10-30 V |
| Average consumption: | <u>0.3 Amps each LED modules (12V)</u> <u>10V 30V</u> SMLED 6/8: 2.6 Amp 1.3 Amp SMLED 6/8 KS: 2.6 Amp 1.3 Amp SMLED 8/11 CB: 1.8 Amp 1.3 Amp |
| Dimensions: | 6-modules: 800 x 32 x 68 mm 8-modules: 1070 x 32 x 68 mm 8-CB modules: 800 x 32 x 68 mm 11-CB modules: 1070 x 32 x 68 mm |
| Weight: | 6-modules: 705 g 8/11-modules: 940/995 g |

SignalMaster GEN I





SignalMaster Solaris



Analogical and KS SignalMaster have fully interchangeable electrical connections for easy installation.

| REF. | MOD. | DESCRIPTION |
|--|--------------|--|
| Analogical SignalMaster | | |
| 2010560 | SMLED6 SL CT | Directional lighting system, (6) Solaris LED modules, roof connector, amber, multivoltage |
| 2010561 | SMLED8 SL CT | Directional lighting system, (8) Solaris LED modules, roof connector, amber, multivoltage |
| <u>Installation accesories</u> | | |
| 82441451 | | Analogical SMLED wiring, roof connector, 5M |
| 82441445 | | Analogical SMLED wiring, roof connector, 10M |
| 2010601 | SMLED6 SL CM | Directional lighting system, (6) Solaris LED modules, 15M wiring harness included, amber, multivoltage (1) |
| 2010602 | SMLED8 SL CM | Directional lighting system, (8) Solaris LED modules, 15M wiring harness included, amber, multivoltage (1) |
| <u>Control Heads for analogical SignalMaster</u> | | |
| ICS2009ST-12 | ICS2009 | Control system with 4 more outputs fully protected against polarity reversal, overloading and short-circuits. Control head with 9 backlight keys included, 12/24V. |

KS ECO SignalMaster

| | | | |
|---|---------|----------------|--|
|  | 2010646 | SMLED6 -ECO SL | Directional lighting system, (6) Solaris LED modules, KS control head included, waterproof connector, amber, bitension |
|  | 2010647 | SMLED8 -ECO SL | Directional lighting system, (8) Solaris LED modules, KS control head included, waterproof connector, amber, bitension |

KS SignalMaster

| | | |
|--------------------------------|--------------|---|
| 2010562 | SMLED6-KS CM | Directional lighting system, (6) Solaris LED modules, KS control head, 20cm wiring harness included, waterproof connector, amber, bitension |
| 2010563 | SMLED8-KS CM | Directional lighting system, (8) Solaris LED modules, KS control head, 20cm wiring harness included, waterproof connector, amber, bitension |
| <u>Installation accesories</u> | | |
| 82441446 | | SMLED KS/CB wiring, wiring harness, 5M |
| 82441447 | | SMLED KS/CB wiring, wiring harness, 10M |
| 82441476 | | SMLED KS/CB wiring, wiring harness, 15M |
| 2010568 | SMLED6-KS CT | Directional lighting system, (6) Solaris LED modules, KS control head, roof connector, amber, bitension |
| 2010569 | SMLED8-KS CT | Directional lighting system, (8) Solaris LED modules, KS control head, roof connector, amber, bitension |
| <u>Installation accesories</u> | | |
| 82441453 | | SMLED KS wiring, roof connector, 10M |

CANBUS SignalMaster (2)

| | | |
|--------------------------------|---------------|---|
| 2010564 | SMLED8-CB SL | Directional lighting system, (8) continuous LED mode, CAN BUS, amber, multivoltage |
| 2010565 | SMLED11-CB SL | Directional lighting system, (11) continuous LED mode, CAN BUS, amber, multivoltage |
| <u>Installation accesories</u> | | |
| 82441446 | | SMLED KS/CB wiring, wiring harness, 5M |
| 82441447 | | SMLED KS/CB wiring, wiring harness, 10M |
| 82441476 | | SMLED KS/CB wiring, wiring harness, 15M |

(1) Without waterproof connector.

(2) CANBUS SignalMaster must be controlled with a CANBUS control head BCT2000 or BCT500CB.

Accesory

| | |
|---|------------------------------------|
| 8234188 | Kit Silent Blocks SMLED SL Solaris |
| NOTE: All the models must be acquired by its correspondent wiring connection (except 2010601 and 2010602 references). | |



Road Safety Arrow Foldable LED panel

Federal Signal Vama presents **Road Safety Arrow**, a foldable LEDs panel, high-tech, great lighting and designed to provide big visibility, even in fast roads, with vehicles getting closer at a high speed.

Due to its excellent LED light lighting, Road Safety Arrow range has been designed both to help to control traffic when the emergency vehicle is parked, and also when the situation requires to alert and manage traffic from long distances.

- EASY INSTALLATION

All models have a roof standard connector and CANBUS technology, which minimizes vehicle installation.

- FAST PANEL OPENING AND CLOSING SYSTEM

Fast opening/closing system, lasting just 25 seconds to be completely opened / closed.

- SIGNALMASTER

When approaching at operation or at emergency zone, a Signalmaster function reinforces security around perimeter vehicle, adding an excellent light coverage to the LED panel.

- ALERT SOUND SYSTEM WHEN OPENING AND CLOSING THE PANEL

To alert the worker from any panel movement, avoiding risks and increasing security.

- VEHICLE BATTERY CONTROL SYSTEM

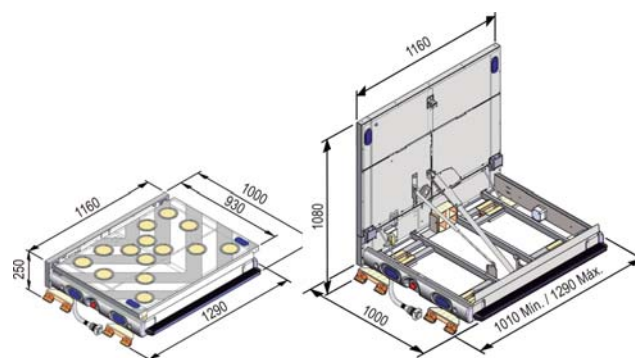
It exists 3 battery states. In the last state, a short whistling sound is emitted every 30 seconds, to warn about the low battery level available.

- EMERGENCY SYSTEM TO OPEN/CLOSE THE PANEL

It incorporates 2 emergency opening / closing buttons, in case the panel should be suddenly interrupted. If necessary it also provides a manual opening system.

- MODERN AND ERGONOMIC DESIGN

Its high quality workmanship and appearance, together with the simetric lights and Microled Advance arrangement, makes Road Safety Road have an attractive design and assures that can be seen efficiently both during the day and at night.



Road Safety Arrow dimensions in mm.

- EXCEPTIONAL LIGHTING

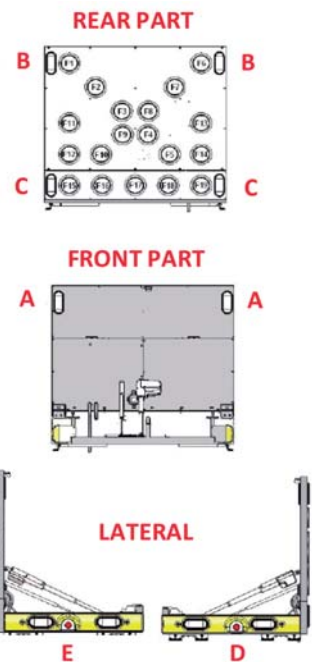
As Road Safety Arrow is compound of 19 lights made of 21 LED lights + 10 Microled Advance along the panel, is one of the most illuminated arrow warning systems that currently exists in the market, clearly magnifying the vehicle's presence (up to 3 Km distance), and therefore, increases security and reduces risk.

| | |
|--|---|
| Power Supply: | 12V |
| Operating temperature: | -20°C to 50°C |
| Maximum opening / closing current: | 8.7 Amp. / 5.7 Amp. |
| Maximum current with all the lights ON (Cross+all blue lights + Signalmaster solaris): | 7.5 Amp |
| Colour of perimetral lights: | Blue or amber |
| Colour of arrow lights: | Amber |
| Colour of reflective stripes: | white - red, white - blue or red - yellow |
| Foldable panel, opening duration time: | 25 seg. |
| Foldable panel, closing duration time: | 25 seg. |
| Weight: | 64 kg without brackets 77,2 Kg with brackets |



ROAD SAFETY ARROW PRESELECTED MODELS:

| ROAD SAFETY ARROW references: | INTEGRATED IN ROAD SAFETY ARROW | | | | | OPTIONAL | |
|-------------------------------------|---------------------------------|--|---|---|--|------------------------------------|--|
| | FOLDABLE PANEL | | PANEL BASE | | | PANEL | PANEL BASE |
| | Right and left arrow, cross | 2 vertical Microleds in front part (A) | 2 vertical Microleds in rear part (B) | 2 vertical Microleds in rear part (C) | 4 horizontal Microleds in lateral part (D) | Reflective stripes in rear part | LED Solaris 11SL CB Signalmaster in front part |
| 2025489-02 | | | | | | ---- | ---- |
| 2025489-02-SM | | | | | | ---- | |
| 2025489-01 | | | | | | ---- | ---- |
| 2025489-01-SM | | | | | | ---- | |
| 2025489BW-02 | | | | | | | ---- |
| 2025489BW-02-SM | | | | | | | |
| 2025489BW-01 | | | | | | | ---- |
| 2025489BW-01-SM | | | | | | | |
| 2025489RW-02 | | | | | | | ---- |
| 2025489RW-02-SM | | | | | | | |
| 2025489RW-01 | | | | | | | ---- |
| 2025489RW-01-SM | | | | | | | |
| 2025489RY-01-SM | | | | | | | |



REF. MOD. DESCRIPTION

Preselected Models

| | |
|-----------------|---|
| 2025489-02 | RSA- Foldable panel with amber arrow and cross LED lights, amber front and rear directional LED lights, amber lateral directional LED lights. |
| 2025489-02-SM | RSA- Foldable panel with amber arrow and cross LED lights, amber front and rear directional LED lights, amber lateral directional LED lights. With 11 LEDs CANBUS Signalmaster. |
| 2025489-01 | RSA- Foldable panel with amber arrow and cross LED lights, blue front and rear directional LED lights, blue lateral directional LED lights. |
| 2025489-01-SM | RSA- Foldable panel with amber arrow and cross LED lights, blue front and rear directional LED lights, blue lateral directional LED lights. With 11 blue LEDs CANBUS Signalmaster. |
| 2025489BW-02 | RSA- Foldable panel with amber arrow and cross LED lights, amber front and rear directional LED lights, amber lateral directional LED lights. With rear blue/white reflective stripes. |
| 2025489BW-02-SM | RSA- Foldable panel with amber arrow and cross LED lights, amber front and rear directional LED lights, amber lateral directional LED lights. With 11 LEDs CANBUS Signalmaster. With rear blue/white reflective stripes |
| 2025489BW-01 | RSA- Foldable panel with amber arrow and cross LED lights, blue front and rear directional LED lights, blue lateral directional LED lights. With rear blue/white reflective stripes |
| 2025489BW-01-SM | RSA- Foldable panel with amber arrow and cross LED lights, blue front and rear directional LED lights, blue lateral directional LED lights. With 11 blue LEDs CANBUS Signalmaster. With blue/white reflective stripes |
| 2025489RW-02 | RSA- Foldable panel with amber arrow and cross LED lights, amber front and rear directional LED lights, amber lateral directional LED lights. With rear red/white reflective stripes. |
| 2025489RW-02-SM | RSA- Foldable panel with amber arrow and cross LED lights, amber front and rear directional LED lights, amber lateral directional LED lights. With 11 LEDs CANBUS Signalmaster. With rear red/white reflective stripes |
| 2025489RW-01 | RSA- Foldable panel with amber arrow and cross LED lights, blue front and rear directional LED lights, blue lateral directional LED lights. With rear red/white reflective stripes |
| 2025489RW-01-SM | RSA- Foldable panel with amber arrow and cross LED lights, blue front and rear directional LED lights, blue lateral directional LED lights. With 11 blue LEDs CANBUS Signalmaster. With red/white reflective stripes |
| 2025489RY-01-SM | RSA- Foldable panel with amber arrow and cross LED lights, blue front and rear directional LED lights, blue lateral directional LED lights. With 11 blue LEDs CANBUS Signalmaster. With red/yellow reflective stripes |

Control Head

| | |
|--------------|---|
| BCT2009-SA01 | BCT2000 Series control head, 9 control keys. |
| 8216160SA01 | BCT500CB Series, 13 control keys, (with public address) |

Permanent mounting kit

| | |
|---------|----------------------------|
| 8234192 | RSA Permanent mounting kit |
|---------|----------------------------|



FSX Sun visor

Federal Signal Vama's **FSX sun visor** provides clear identification for emergency services and highly visible temporary marking for vehicles. Used extensively by various emergency services including Police, Fire, Search and Rescue, Ambulances and Doctors. The **FSX sun visor** is perfect for marking any emergency vehicle that may be out of service, just out on test or for unmarked police cars working within an emergency or rescue service. This sign is discreet and remains unseen when not in use but highly effective when required.

- ANTI-DAZZLE FEATURE

Light output dimming control to avoid emergency officers dazzle inside emergency vehicle.

- EASY INSTALLATION AND USE

Simply slides over existing vehicle's sun-visor and plug it to the cigarette plug.

- NO FIXING BRACKETS OR STICKING

It can be attached to your normal car visor easily without the need for any special tools, permanent brackets or sticking materials.

- EASY REMOVAL AND STORAGE WHEN NOT IN USE

When not in use, simply fold away your vehicle's visor so it is out of sight or if preferred, simply slide off your visor and keep it inside the glove box.

- FLEXIBILITY

Wide selection of texts available. Please consult our sales people and we will see if we can assist you.

- RUGGERISED

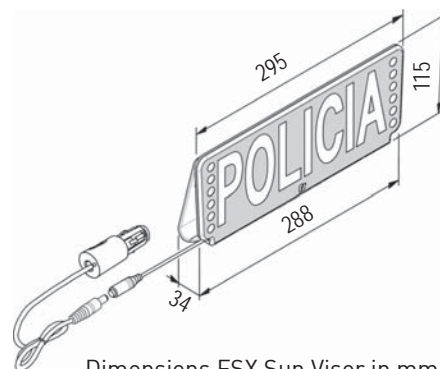
UV stable and shatterproof.

- PATENTED

Approved according to European Utility Patent approval.



High-visibility blue warning lights



Dimensions FSX Sun Visor in mm.

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

| | | |
|------------|--|---|
| 2025545 | | FSX sun visor, with (2) blue LED warning lights, with "POLICE" sign, cigarette plug, 12V/24V |
| 2025545-01 | | FSX sun visor, with (2) blue LED warning lights, with "POLICIA" sign, cigarette plug, 12V/24V |

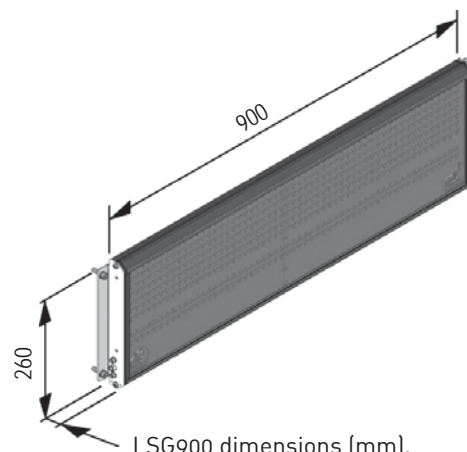
(*) For other texts please consult with our commercial network. Minimum order 10 units.

LSG900 Series

The **LSG900** sign is a programmable LED sign, for up to 200 fully programmable messages. The message length is up to eight lines of ten characters. This new LED sign has a SignalMaster integrated in the lower level.

The sign is controlled through the LCD900 control head, with LCD screen and keys of silicone. It allows, through a simple menu system, select and preview the message before it appears on the LED sign.

With Smartsign Message Editor software you can edit and download 200 messages to the control head. Allows programming of letters, numbers and symbols (arrow, filled square, etc.). It also has an extensive library of most common messages in different countries.



LSG900 dimensions (mm).

| | |
|----------------------------------|---|
| Voltage: | 12 V |
| Number of programmable messages: | 200 |
| Number of lines by message: | 8 |
| Number of characters in display: | 10 |
| Character size: | 125 x 85 mm |
| Matrix size: | 21 x 15 LEDs |
| LED colour: | red / amber |
| LED: | SMD |
| Radiation angle: | +15° |
| Dimensions: | LED Sign: 900 x 260 x 40 mm Control head: 200 x 60 x 33 mm |
| Weight: | Led Sign: 4 Kg Control head: 250 gr |

REF. MOD. DESCRIPTION

LSG900

| | | |
|------------|--------|---|
| 2025446 | LSG900 | LSG900 LED sign for external mounting. Vertical mounting system, 200 Programmable messages, Red LEDs and Signalmaster function. |
| 2025486SE | LSG900 | LSG900 LED sign for external mounting. Waterproof housing. Vertical mounting system, 200 Programmable messages, Amber LEDs. |
| 2025519 | LSG900 | LSG900 LED sign for external mounting. Waterproof housing. Vertical mounting system, 200 Programmable messages, Amber LEDs and Signalmaster function. |
| 8216136-01 | LCD900 | Control head w/ LCD back-lit screen to display messages for LCD900, 200 Programmable messages. |
| 2025336 | SSME | SmartSign Message Editor, for editing and downloading SmartSign programmable LED sign messages from PC. |

SWEDISH CHARACTERS LSG900

| | | |
|------------|------------|--|
| 2025507-01 | LSG900 | LSG900 LED sign for external mounting. Waterproof housing. Vertical mounting system, 200 Programmable messages, Amber LEDs and Signalmaster function. SWEDISH CHARACTERS |
| 2025508-01 | LSG900 | LSG900 LED sign for external mounting. Waterproof housing. Vertical mounting system, 200 Programmable messages, Amber LEDs. SWEDISH CHARACTERS |
| 2025509-01 | LSG900 | LSG900 LED sign for external mounting. Waterproof housing. Vertical mounting system, 200 Programmable messages, Red LEDs and Signalmaster function. SWEDISH CHARACTERS |
| 2025509-02 | LSG900 | LSG900 LED sign for external mounting. Vertical mounting system, 200 Programmable messages, Red LEDs. SWEDISH CHARACTERS |
| BCT3009-03 | BCT3009-03 | Control head w/ LCD back-lit screen to display messages for SWEDISH CHARACTERS LCD900, 200 Programmable messages. |

| | | |
|---------|------|---|
| 2025473 | S2ME | SmartSign Message Editor 2, for editing and downloading SmartSign programmable LED sign messages from PC. |
|---------|------|---|

Accessory

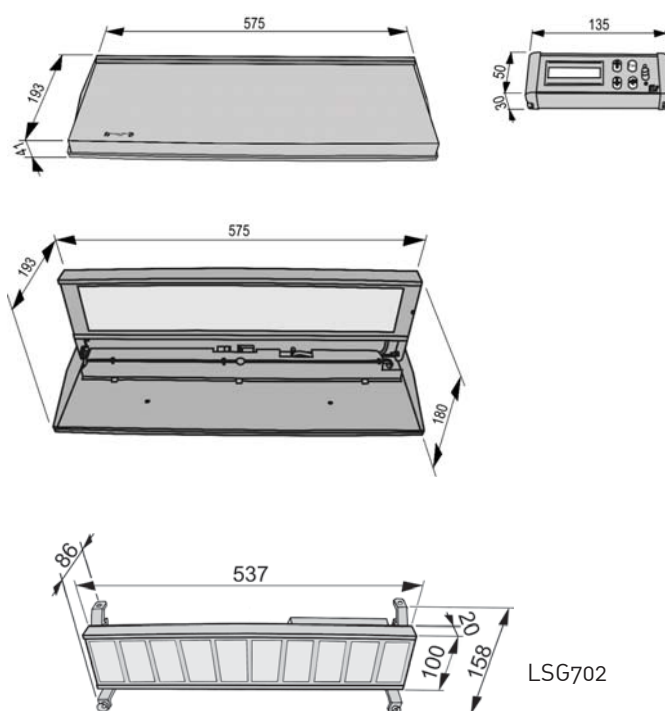
| | | |
|---------|--|-----------------------------|
| 8234178 | | Silent block kit for LSG900 |
|---------|--|-----------------------------|

SMARTSIGN

The **LSG700** sign is a foldable and programmable LED sign, with capacity for 200 totally programmable messages. The length of messages is up to eight lines with ten characters.

It is controlled through **LCD702** control head, with LCD screen and selection keys. It allows, through a simple menu system, to select and previsualize the message before it appears in the LED sign.

Through the SmartSign Message Editor PC software, it is easy to edit and unload the 200 messages to the control head. It allows to program letters, numbers and symbols (arrows, square, etc.). In addition, it has a wide library of the most usual messages in different countries.



SmartSign dimensions (mm).

| | |
|----------------------------------|--|
| Voltage: | 12 V |
| Number of programmable messages: | 200 |
| Number of lines by message: | 8 |
| Number of characters in display: | 10 |
| Character size: | 75 x 44 mm |
| Matrix size: | 7 x 5 LEDs |
| LED colour: | red |
| LED diameter: | 5 mm |
| Radiation angle: | 15° |
| Dimensions: | Screen size: 506 x 86 mm Control head: 50 x 12 mm |
| Weight: | Sign: 2850 g Control head: 140 g |

| REF. | MOD. | DESCRIPTION |
|------------|--------|---|
| 2025310 | LSG700 | (1) Programmable LED sign, 575x195x185 mm, in metal flip up undercover case. 200 Programmable messages by SmartSign Message Editor. LCD700 Control head w/ LCD back-lit screen to display messages. **(SmartSign Message Editor and LCD700 control head purchased separately) |
| 2025377 | LSG702 | (1) Programmable LED sign, 575x195x185 mm, fixed mountig kit with (2) "L" brackets in the upper level and (2) suction pad in the lower level, 200 Programmable messages by SmartSign message Editor, LCD700 control head w/LCD back-lit screen to display messages |
| 8216112XXX | LCD700 | LCD700 Control head w/ LCD back-lit screen to display messages. (Please specify control head language when ordering) |
| 2025336 | SSME | SmartSign Message Editor, for editing and downloading SmartSign programmable LED sign messages from PC. |

LSG702

INTERNAL WARNING LIGHTS

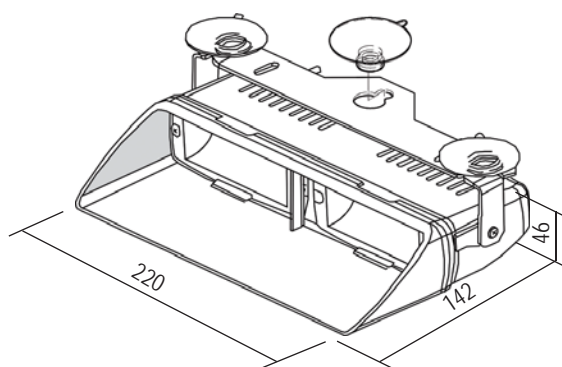
➤ **Internal lights.....62**



VIPER S2 DUAL SOLARIS

Internal LED Warning Light with Solaris LED technology. Thanks to the Solaris LED technology **Viper S2** offers a superior off-axis reflection, forming an impressive block of illumination. Two inboard side reflectors mirror high intensity LED light to the side producing wide-angle off-axis warning. Viper S2 delivers effective compact, lightweight warning light and offers versatile mounting. It can be mounted almost anywhere the emergency vehicle. It includes a surface mounting bracket and suction cups. It also comes equipped with a snap-on flash guard (no screws required). Wire harness lengths is 2,7 m long and includes a cigarette plug.

Viper S2 lights are available in dual head configuration. The Dual has up to 25 flash patterns that are selected by an easy to reach push button switch.



Viper S2 DUAL dimensions (mm).

| | |
|------------------------|--------------------------|
| Voltage: | 12V |
| Average consumption: | 2.2 Amp blue, amber, red |
| Operating Temperature: | -20°C to +50°C |
| Dimensions: | 220 x 46 x 142 mm |
| Weight | 440g |

| REF. | MOD. | DESCRIPTION |
|---|---------------|--|
| VIPER S2 DUAL Solaris | | |
| 2010592 | VIPER S2 DUAL | VIPER S2 DUAL Solaris, blue/blue LED and smooth clear lens, 25 flash patterns, cigarette plug, windshield mount, 12V. |
| 2010593 | VIPER S2 DUAL | VIPER S2 DUAL Solaris, blue/red LED and smooth clear lens, 25 flash patterns, cigarette plug, windshield mount, 12V. |
| 2010591 | VIPER S2 DUAL | VIPER S2 DUAL Solaris, amber/amber LED and smooth clear lens, 25 flash patterns, cigarette plug, windshield mount, 12V. |
| VIPER S2 DUAL Solaris Synchronizable | | |
| 329001-34 | VIPER S2 DUAL | VIPER S2 DUAL Solaris, blue/red LED and smooth clear lens, 25 flash patterns, synchronizable with other lights, windshield mount, 12V. |



VIPER S2 SOLARIS



The new **VIPER S2 LED** lights provide, with the Solaris exclusive technology from Federal Signal Vama, the ideal solution for camouflaged vehicles or reinforce the lighting on emergency vehicles. Viper S2 Solaris is windshield mount. Main advantages are:

- HIGH INTENSITY

Thanks to LED Solaris technology, its spread lens and special light inclination. Molded scalloped facets at the rear of the reflector direct LED light forward to form an impressive block of illumination. Two inboard side reflectors mirror high intensity LED light to the side producing wide-angle off-axis warning. Combined, the Viper S2 delivers the most effective compact, lightweight warning light available.

- USER FRIENDLY

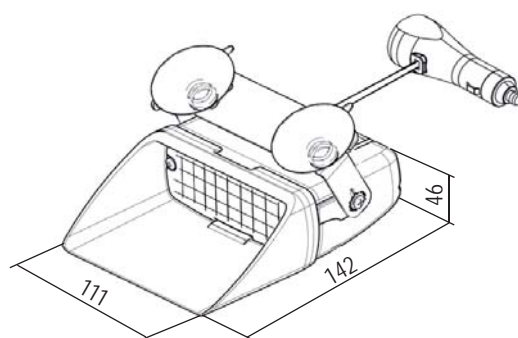
Plug & Play connection, through cigarette plug with a 2,7 m cable. Flash patterns could be changed just pushing a button.

- EASY, VERSATILE INSTALLATION

Specially designed to be quickly mounted, with a minimum manipulation. Thanks to its compact dimensions, it could be installed on every part of the vehicle.

- LOW AMP DRAW AND LONG LIFE

Optimizes vehicle battery performance.



Viper S2 Solaris dimensions (mm).

| | |
|------------------------|-------------------------------------|
| Voltage: | 12V |
| Average consumption: | 1Amp blue and red 0.75 Amp amber |
| Operating temperature: | -20°C to +50°C |
| Dimensions: | 111 x 46 x 142 mm |
| Weight: | 300g |

| REF. | MOD. | DESCRIPTION |
|---------|------------------|--|
| 2010549 | VIPER S2 Solaris | VIPER S2 SINGLE Solaris, blue LED and spreader clear lens, 5 flash patterns, cigarette plug, windshield mount, 12V, R65 approval. |
| 2010548 | VIPER S2 Solaris | VIPER S2 SINGLE Solaris, amber LED and spreader clear lens, 5 flash patterns, cigarette plug, windshield mount, 12V, R65 approval. |
| 2010550 | VIPER S2 Solaris | VIPER S2 SINGLE Solaris, red LED and spreader clear lens, 5 flash patterns, cigarette plug, windshield mount, 12V. |



AREA LIGHTING

| | | |
|---|--------------------|----|
| ➤ | Search lights..... | 66 |
| ➤ | Scene lights..... | 67 |
| ➤ | Worklights..... | 70 |



VISIBEAM Series

Search light with remote control and high focusing precision. It may be adjusted vertically, 35° below and 105° above the horizontal plane and has a 360° rotation option.

- **Visibeam** includes a remote control unit which is compact and easy to use. It is connected to the light via a telephone type cable. An indicator light on the control reminds the user that the spotlight is on.

- **The Wireless Visibeam** is a combination of wireless remote control and powerful halogen searchlight. The ergonomically designed controller operates at over 30 m and fits comfortably in the palm of the hand. It includes a belt clip for easy storage on an operator's belt or vehicle's sun visor.



VISIBEAM



VISIBEAM WIRELESS

VISIBEAM

| | |
|----------------------|--|
| Voltage: | 12 or 24 V |
| Average consumption: | 55W: 4.2 Amp 65W (24 V): 2.7 Amp 100W: 7.8 Amp |
| Candelas: | 55W: 80000 65W: 90000 100W: 125000 |
| Dimensions: | 165 x 165 x 165 mm |
| Weight: | 900g |

VISIBEAM WIRELESS

| | |
|----------------------|---|
| Voltage: | 12 or 24 V |
| Average consumption: | 100W: 7.8 Amp 65W (24 V): 2.7 Amp |
| Candelas: | 65W: 90000 100W: 125000 |
| Dimensions: | Permanent mount: 165 x 165 x 165 mm Magnetic mount: 165 x 165 x 175 mm |
| Weight: | 900g |

| REF. | MOD. | DESCRIPTION |
|--|----------|---|
| WIRELESS VISIBEAM® SEARCH LIGHT | | |
| 620200A | VB12PM-W | 100W Spotlight, wireless control head, permanent mount, 12V |
| 620201A | VB12MG-W | 100W Spotlight, wireless control head, magnetic mount, 12V |
| 620202A | VB24PM-W | 65W Spotlight, wireless control head, permanent mount, 24V |
| VISIBEAM®, SEARCH LIGHT | | |
| 2101081A | 620102 | 55W Spotlight, remote control head, permanent mount, 12V |
| 2101089A | 620104 | 65W Spotlight, remote control head, permanent mount, 24V |
| 2101082A | 620122 | 100W Spotlight, remote control head, permanent mount, 12V |



LINELED

LineLED Scene light is composed by 6/12 very high efficiency LEDs and has been specially developed for surface mount. Its design allows covering 120° light angle and enables an easy installation at vehicle's body, turning LineLED into an excellent worklight.

With an anodized aluminum body and ABS finishing, this light become a lighter and strong model, with IP protection against dust and water.

- HIGH INTENSITY

The high lighting efficiency of the optical system and LED diodes, provides LineLED Series with a 500/1000 Lumens powerful light intensity.

- EASY INSTALLATION

Straightforward and easy installation thanks to its surface mounting.

- LONG OPERATIONAL LIFE

LED technology guarantees long operational life reducing maintenance costs.

- WATER AND DUST PROTECTION

IP67 direct lighting and IP65 diffused lighting approved.

- WIDE ANGLE

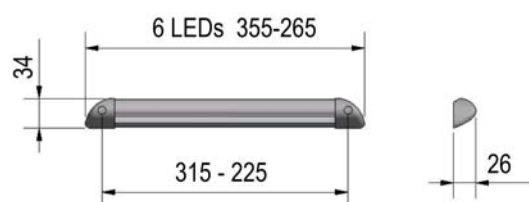
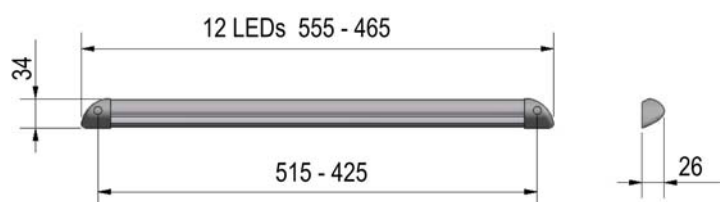
Its wide light output angle (120°) ensures lighting in a wide working area.

- EVERY NEED SOLUTIONS

Available with direct or diffused beam, according to end user needs.



| | 12 LEDs | 6 LEDs |
|------------------------|----------------------------|----------------------------|
| INTENSITY LIGHT OUTPUT | 1000 lm | 500 lm |
| Power: | 13W | 6,5W |
| Operating voltage: | 12/24V | 12/24V |
| Current draw: | 12V = 0,93A 24V = 0,47A | 12V = 0,47A 24V = 0,24A |
| Operating temperature: | -30° -+ 40° | -30° -+ 40° |
| LED angle beam: | 120° | 120° |
| Life time at 85°: | 50.000 hours | 50.000 hours |
| LEDs Colours: | White | White |
| Connection: | Cable | cable |
| Weight: ref. 2101158A | - | 102,5 g |
| Weight: ref. 2101159A | - | 115 g |
| Weight: ref. 2101160A | 177,5 g | - |
| Weight: ref. 2101161A | 190 g | - |



Dimensions LineLED in mm.

REF. MOD. DESCRIPTION

| | | |
|----------|---------|--|
| 2101158A | LineLed | Scene light with 6 high intensity LEDs, 265 x 34 x 26 mm, surface mount with flat base. Direct lighting, IP67. 120° angle. Bitension 12/24V |
| 2101159A | LineLed | Scene light with 6 high intensity LEDs, 355 x 34 x 26 mm, surface mount with flat base. Diffused lighting, IP65. 120° angle. Bitension 12/24V |
| 2101160A | LineLed | Scene light with 12 high intensity LEDs, 465 x 34 x 26 mm, surface mount with flat base. Direct lighting, IP67. 120° angle. Bitension 12/24V |
| 2101161A | LineLed | Scene light with 12 high intensity LEDs, 555 x 34 x 26 mm, surface mount with flat base. Diffused lighting, IP65. 120° angle. Bitension 12/24V |

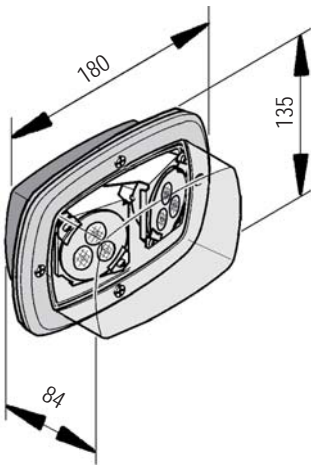
LED FD340/LD GHSCENE

LEDs light for Scene lighting equipped with two 3W LED lamps adjustable horizontally and vertically.

Flush mounting system for greater integration into the vehicle.

LED GHScene includes a chrome trim.

Available in 12V and 24V.



LED FD340/LD GHSCENE dimensions (mm).

| | |
|----------------------|-------------------|
| Voltage: | 12 or 24 V |
| Average consumption: | 0.5 Amp (12V) |
| Power: | 2 x 3W |
| Dimensions: | 135 x 180 x 84 mm |
| Weight: | 533 g |

| REF. | MOD. | DESCRIPTION |
|---------|----------------|--|
| 2005445 | GHSCENE LED | Rectangular directional Scene LED light, 180 x 135mm, (2) 3W LED lamps, flush mount, chrome flange, clear, 12V |
| 2005446 | GHSCENE-24 LED | Rectangular directional Scene LED light, 180 x 135mm, (2) 3W LED lamps, flush mount, chrome flange, clear, 24V |



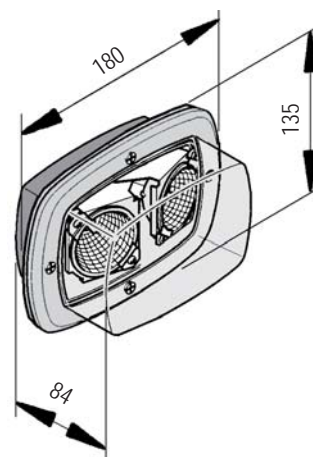
FD340 GHSCENE

Rectangular Directional halogen light with two adjustable 20 W lamps which allows the user to focus light vertically and horizontally for maximum effectiveness.

Each light comes complete with a chrome ring.



| | |
|----------------------|-------------------|
| Voltage: | 12 or 24 V |
| Average consumption: | 3.5 Amp (12V) |
| Power: | 2 x 20W |
| Dimensions: | 135 x 180 x 84 mm |
| Weight: | 500 g |



FD340 GHSCENE dimensions (mm).

| REF. | MOD. | DESCRIPTION |
|---------|------------|---|
| 2005232 | GHSCENE | Rectangular directional Scene light, 180 x 135mm, (2) 20W halogen lamps, flush mount, chrome flange, clear, 12V |
| 2005282 | GHSCENE-24 | Rectangular directional Scene light, 180 x 135mm, (2) 20W halogen lamps, flush mount, chrome flange, clear, 24V |

LEDs Worklights

Federal Signal Vama LED worklights are specially designed for Heavy Duty applications (heavy vehicles, platforms, excavators, tractors, etc.), and can be installed on all types of vehicles. Additionally, its special focus design creates an excellent light distribution to operate whether on close (flood light) or wide (spot light) areas. Furthermore, thanks to die-cast aluminum housing with polycarbonate lens and stainless steel mounting hardware, these worklights are shock resistant and are prepared for working in a high-vibration environments.

| | |
|-----------------|--------------------------------------|
| Voltage: | 10-30V |
| Amperage: | 1.00Amp (12V) / 0.5Amp (24V) |
| Power: | 18W |
| Light output: | 1350 Lumens |
| Viewing angle: | 120° (flood light), 30° (spot light) |
| Certifications: | IP67 against dust and water |



Flood permanent light



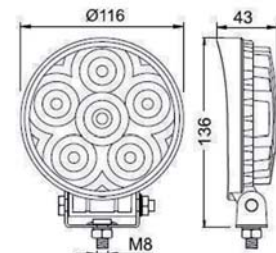
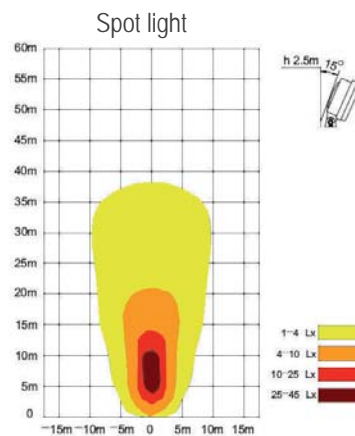
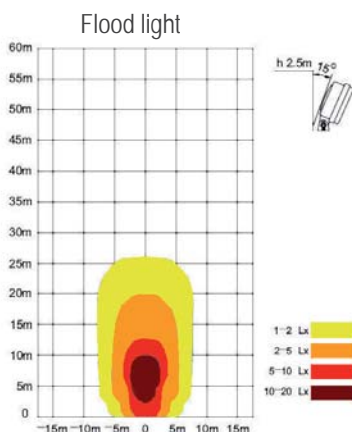
Spot permanent light



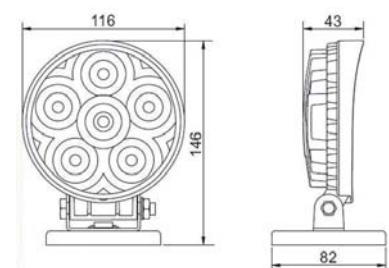
Flood magnetic light



Spot magnetic



Permanent light dimensions (mm)



Magnetic light dimensions (mm)

REF. MOD. DESCRIPTION

Led Work lights, permanent mount

| | |
|----------|--|
| 2010639A | Round worklight, LED, flood, permanent mount, multivoltage |
| 2010659A | Round worklight, LED, spot, permanent mount, multivoltage |

Led Work lights, magnetic mount

| | |
|----------|---|
| 2010638A | Round worklight, LED, flood, magnetic mount, multivoltage |
| 2010660A | Round worklight, LED, spot, magnetic mount, multivoltage |

* All references above have 1 year warranty minimum (parts & labour). For more information, please refer to the price list (Sales conditions-Limited warranty) or contact our sales department.

** Magnetic mounting models produced for a temporary use on the roof of the vehicle.

SIRENS & AUDIBLE WARNING

| | |
|------------------------------------|----|
| ➤ Integrated control systems..... | 72 |
| ➤ Compact sirens..... | 73 |
| ➤ Electronic siren amplifiers..... | 76 |
| ➤ Integrated sirens..... | 80 |
| ➤ Loudspeakers..... | 81 |

ICS2010

ICS2010 is an integrated control system incorporating GEP500, an electronic power management system, and a control head BCT500.

Enables control of all acoustic and luminous emergency signalling devices on the vehicle from a single console (10 relays for light control), including SignalMaster directional warning lights.

All connectors to the GEP500 electronic manager incorporate a LED status lamp with easy-to-replace protective fuses.

One novelty available with the BCT500 control head is a high-speed recording function which makes it possible to load different operating programs. Comes with illuminated silicon keypad and for large fleets special character sets can be supplied.



BCT500:

| | |
|--------------------|---------------------------------|
| Voltage: | 12 V |
| Keypad: | Silicone with conductive tracks |
| Number of keys: | 13 |
| Keypad lighting: | LED backlighting |
| Communication bus: | RS485 |
| Dimensions: | 150 x 43 x 35 mm |
| Weight: | 140 g |

GEP500:

| | |
|-----------------------|--|
| Voltage: | 12 V |
| Output power speaker: | 100 W (1 speaker with 11 ohm) |
| Output relays: | 10 x 10 Amp |
| Auxiliary function: | 1 x 0.75 Amp (Tachograph optional) |
| SignalMaster Control: | 6-modules: 6 x 2.5 Amp 8-modules: 8 x 2.5 Amp |
| Dimensions: | 60 x 140 x 190 mm |
| Weight: | 1800 g |

REF. MOD. DESCRIPTION

ICS2010 integrated control system includes:

| | | |
|---------|------------|--|
| 2020192 | GEP500 | Electronic power management. Integrate the systems for the control of the luminous and acoustic devices of emergency. 100W sirena amplifier s/16 programs, pogramable, SignalMaster controler, 10 relays |
| 8216103 | BCT500-STD | Control head. Enables the control of all functions assigned to the GEP500 through 13 backlit keys, PTT for public address and volume control. Standard model: wail, yelp and hi-lo. *Other models, please contact with Sales Dpt. |

ASX Series

Federal Signal Vama presents one of the most compact sirens in the market, regarding its weight and dimensions, **ASX series**, which it also produces a clean and powerful sound. It meets R10 European Regulation, it is bitension, protected against water and dust and due to its different models, ASX is a product highly adaptable to any market need.

Wide product range available for every need, following different countries and application regulations. Consult at the end of this document the different models available.

- COMPACT

Due to the siren reduced dimensions, it can be installed in all type of police, fire and ambulance vehicles.

- EASY TO INSTALL

ASX series installation only requires one cable, which is already provided with waterproof connectors. Therefore, its installation is very simple.

- HERMETIC, WATERPROOF AND DUST RESISTANT

Both the siren and the speaker are prepared to be placed in any position regardless of weather conditions. Siren has IP66 and IP69K protection grade, speaker has IP66 and connector has IP67.

- SOLUTION FOR ANY MARKET NEED

Thanks to the different siren available models according to both its technology and tones, plus the 2 different wiring sizes, ASX Series is suitable for all markets and needs.

- HIGH EFFICIENCY

Especially designed to operate at a constant temperature, made to avoid overheating.



Siren

Speaker

- NEODYMIUM MOTOR

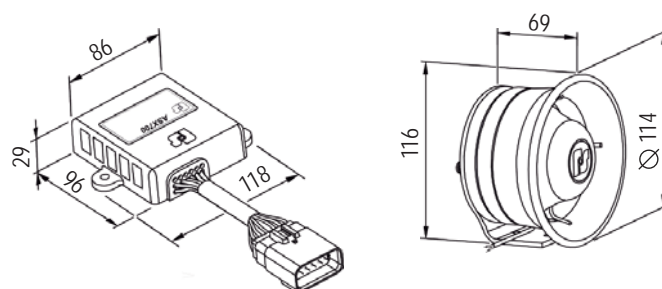
The speaker has a Neodymium motor, which offers higher acoustic pressure (117 dB) than other market products. This increases siren product life and raises its efficiency.

- IMPACT-RESISTANT CASE

Its structure is made of polycarbonate and it is reinforced with UV protection, achieving to dispel the heat and avoid color loss due to the long sun exposures.

- EUROPEAN REGULATION COMPLIANCE

The siren meets R10 European Regulation.



Siren and speaker dimensions in mm.

Siren

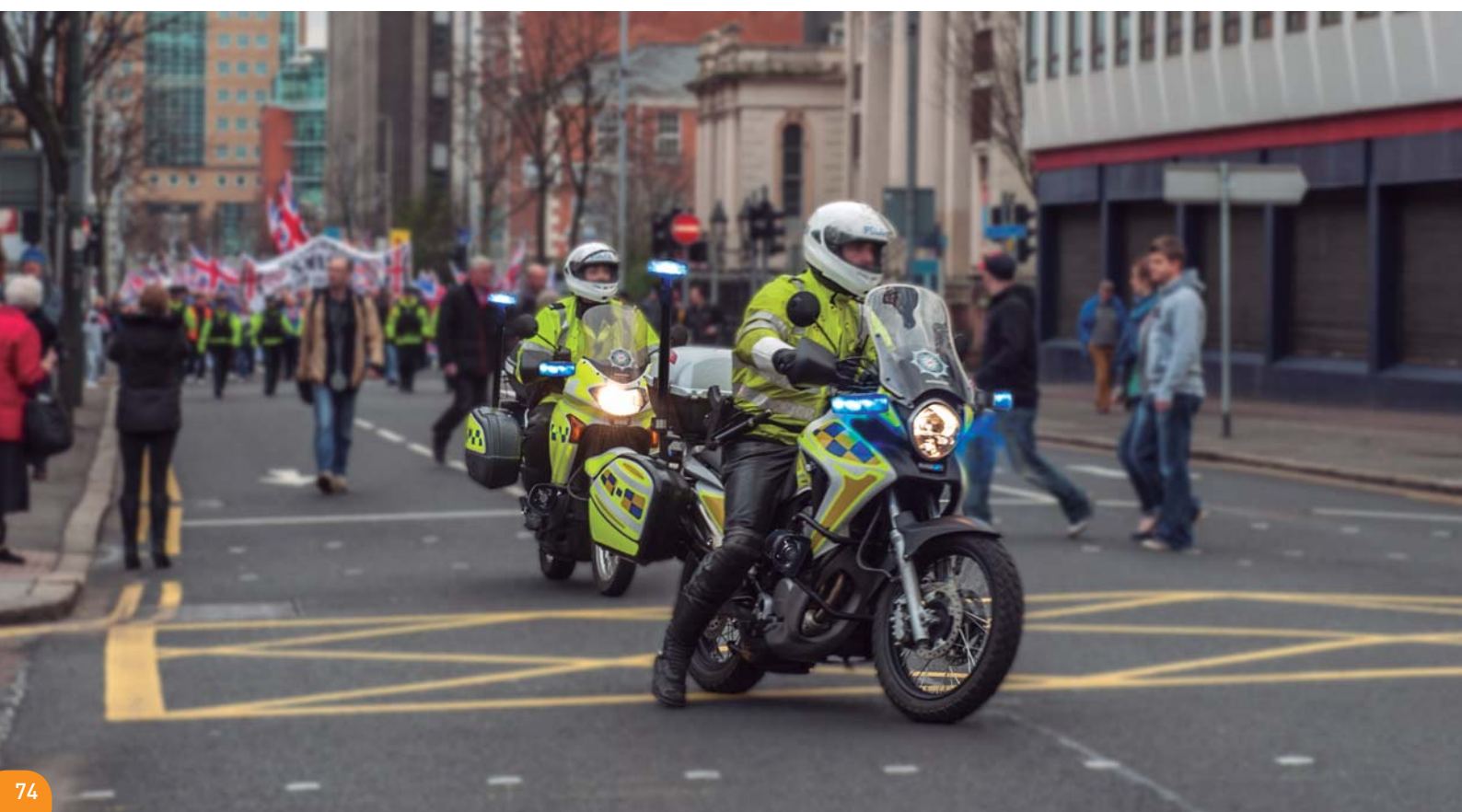
| | |
|--------------------------|----------------------------|
| Voltage: | 10 – 30V |
| Output power: | 140 W (max.) |
| Auxiliary lights output: | 1 x 5 A |
| Auxiliary output: | 1 x 1 A |
| Frequency and tone: | According to selected tone |
| Dimensions: | 96 mm x 29 mm x 86 mm |
| Weight: | 450 gr |
| Operating temperature: | -30°C to 65°C |

Speaker

| | |
|-------------------------------|---|
| Coil impedance: | 4 Ohms |
| Maximum output power: | 70W |
| Acoustic pressure (dB) at 2m: | 1 speaker: 117 dB 2 speakers: 120 dB |
| Operating temperature: | -20°C to 50°C |
| Dimensions: | 116 mm x 69 mm x 114 mm diameter |
| Weight: | 1.080 gr |

| REF. | MOD. | DESCRIPTION |
|--------------------------------------|--------------------|--|
| Sirens without public address | | |
| 2020286 | ASX700 | 70 W Siren amplifier, analogic system, day / night function, claxon, without auxiliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone (WAIL, YELP, BITONAL) |
| 2020286AH | ASX700 | 70 W Siren amplifier, analogic system, day / night function, claxon, without auxiliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone - Airhorn |
| 2020287 | ASX710 | 70 W Siren amplifier, analogic system, day / night function, claxon, (2) auxiliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone (WAIL, YELP, BITONAL) |
| 2020287AH | ASX710 | 70 W Siren amplifier, analogic system, day / night function, claxon, (2) auxiliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone - Airhorn |
| 2020288 | ASX800 | 70 W Siren amplifier, CANBUS system, day / night function, claxon, without auxiliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone (WAIL, YELP, BITONAL) |
| 2020288AH | ASX800 | 70 W Siren amplifier, CANBUS system, day / night function, claxon, without auxiliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone - Airhorn |
| 2020289 | ASX810 | 70 W Siren amplifier, CANBUS system, day / night function, claxon, (2) auxiliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone (WAIL, YELP, BITONAL) |
| 2020289AH | ASX810 | 70 W Siren amplifier, CANBUS system, day / night function, claxon, (2) auxiliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone - Airhorn |
| Mount Accesories | | |
| 82441700 | ASX700 - 800 - 810 | 1 Meter wiring, waterproof connectors, for ASX700, ASX800 and ASX810 siren models |
| 82441701 | ASX700 - 800 - 810 | 4 Meter wiring, waterproof connectors, for ASX700, ASX800 and ASX810 siren models |
| 82441702 | ASX710 | 1 Meter wiring, waterproof connectors, for ASX710 siren model |
| 82441703 | ASX710 | 4 Meter wiring, waterproof connectors, for ASX710 siren model |
| Speakers | | |
| 2021069 | AL-ALX | 70W Compact speaker, 4 Ohms, neodymium driver, reduced dimmensions, 117dB, 12V, black colour, mount bracket included |

* Do not connect only 1 speaker to 24V.



SOUNDSTAR Series

The **SCS1000** compact siren is a powerful acoustic signalling system with built-in amplifier and loudspeaker in a single unit.

It is built of ABS with glass fibre and injected aluminium. The SCS1000 siren includes 16 pre-programmed tones which are easy to select using the microswitches conveniently located on the back of the siren. The fuse is included also in the back. A mesh filter prevents solid particles from entering the siren, while a drainage system prevents the accumulation of water on the membrane. A rubber seal joint prevents water from entering the electronic circuits. It includes a vehicle mount system valid for motorcycles or priority vehicles. Siren control is by external switches.

Soundstar is available as Standard or Neodymium versions.

Accessories include ALS1000 (30 W compact loudspeaker), SCS1000-PA (Public address kit) and SCS1000-SBLOCK (anti-vibration kit).



| | Ferrite | Neodymium |
|--|--|-----------|
| Voltage | 12 V | |
| Operating temperature | -30°C to +50°C | |
| Output power | 30 W + 30 W | |
| Coil impedance | 6 Ohms | |
| Maximum consumption | 3A (SCS1000-D) 6A (SCS1000-D + ALS1000-D) | |
| Output voltage | 23Vpp | |
| Frecuencies and tones | 32 selectable tones | |
| Acoustic pressure to 2m at 12v. Two tones (450Hz and 600Hz to 33c/m) (SCS1000-D) | 109 dBA | 111 dBA |
| Acoustic pressuer to 3,5m at 12v. Two tones (450Hz and 600Hz at 33c/m) (SCS1000-D + ALS1000-D) | 114 dBA | 116 dBA |
| Dimensions | Sirena: 135 x 110 x 113 mm | |
| Siren Weight | 1.250 g | 1.085 g |
| Speaker Weight | 1.135 g | 0,970 g |

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

Ferrite Driver

| | | |
|------------|-------------|---|
| 2020277 | SCS1000-D | 30W Compact Siren, ferrite driver, 32 selectable tones, w/ mounting hardware, w/o wiring harness, 12V, black colour (connectors NOT included. See accesories) |
| 2020277-BL | SCS1000-DBL | 30W Compact Siren, ferrite driver, 32 selectable tones, w/ mounting hardware, w/o wiring harness, 12V, white colour (connectors NOT included. See accesories) |

Neodymium Driver

| | | |
|----------|------------|---|
| 2020277N | SCS1000-DN | 30W Compact Siren, neodydium driver, 32 selectable tones, w/ mounting hardware, w/o wiring harness, 12V, black colour (connectors NOT included. See accesories) |
|----------|------------|---|

Mount Accesories

| | | |
|----------|---------------|---|
| 8216113 | SCS1000-PA | Public address kit, w/ volume and microphone functions control. |
| 8299306 | SCS1000-BLOCK | Silent block kit, SCS1000-D and ALS1000-D |
| 8299910 | 8299910 | Sealed connector for SCS1000-D |
| 82441589 | 82441589 | Motorcycle complete wiring harness (LD410, CO400, SCS1000-D) |
| 82441588 | 82441588 | Motorcycle complete wiring harness (LD400, CO400, SCS1000-D) |
| 82441605 | 82441605 | Wiring to adapt SCS1000 to SCS1000-D |

MC300 Series

| | | |
|------------|---------|---|
| 4004233-01 | MC300 | Motorcycle Control allows to control all the functions of lights and siren of the 400 Solaris Series: priority warning lights (LD400 Solaris and CO400 Solaris, "Stop Light" function, cruise light and continuous siren |
| 4004352 | MC300/A | Motorcycle Control allows to control all the functions of lights and siren of the 400 Solaris Series: priority warning lights (LD400 Solaris and CO400 Solaris, "Stop Light" function, cruise light, continuous siren and power limiter |



AS400 Series

The **AS400 Series** brings together priority lights, auxiliary lights and siren in just one control unit. The siren is compact and easily installed. Made of black aluminium for easy and unobtrusive vehicle installation (trunk or under seat).

The control head is in black nylon and includes a microphone with public address. The keypad is in translucent silicon, with built-in illumination for easier use in poor lighting conditions. These materials make the control head totally robust and water-resistant.

The volume control and on/off switch are located in the intermediate connection box.

Two basic models are available:

AS-422 siren amplifier with two light outputs.

AS-422/6S siren amplifier with six light outputs and two multi-function keys for light control.



AS-422

| | |
|---|--|
| Voltage: | 12 or 24 V |
| Output power speaker: | 100 W |
| Light outputs: | 2 x 10 Amp |
| Auxiliary output: | 1 x 10 Amp |
| Dimensions: | Siren: 65 x 130 x 165 mm Control head: 25 x 50 x 105 mm |
| Weight: | Siren: 1500 g |
| Control head: | Number of keys: 10 |
| Horn ring connection Lamp failure connection Radio connection | |

AS-425

| | |
|---|--|
| Voltage: | 12 or 24 V |
| Output power speaker: | 100 W |
| Light outputs: | 2 x 10 Amp |
| Auxiliary outputs: | 1 x 10 Amp |
| Outputs for external relays: | 1 x 1 Amp |
| Dimensions: | Siren: 215 x 135 x 54 mm Control head: 25 x 50 x 105 mm |
| Weight: | Siren: 1500 g |
| Control head: | Number of keys: 10 |
| Horn ring connection Lamp failure connection Radio connection | |

AS-422/6S

| | |
|---|--|
| Voltage: | 12 or 24 V |
| Output power speaker: | 100 W |
| Light outputs: | 2 x 10 Amp |
| Auxiliary outputs: | 6 x 10 Amp |
| Dimensions: | Siren: 215 x 135 x 54 mm Control head: 25 x 50 x 105 mm |
| Weight: | Siren: 1500 g |
| Control head: | Number of keys: 10 |
| Horn ring connection Lamp failure connection Radio connection | |

REF. MOD. DESCRIPTION

Sirens w/ public address (P.A.)

| | | |
|---------|--------------|---|
| 2020155 | AS-422 | 100W Siren amplifier, (3) tones, remote control, P.A., (2) light control outputs w/ relays, wiring harness, 12V |
| 2020156 | AS-422-24 | 100W Siren amplifier, (3) tones, remote control, P.A., (2) light control outputs w/ relays, wiring harness, 24V |
| 2020141 | AS-422/6S | 100W Siren amplifier, (3) tones, remote control, P.A., (8) light control outputs w/ relays, wiring harness, 12V |
| 2020162 | AS-422/6S-24 | 100W Siren amplifier, (3) tones, remote control, P.A., (8) light control outputs w/ relays, wiring harness, 24V |
| 2020099 | AS-425 | 100W Siren amplifier, (3) tones, remote control, P.A., (4) light control outputs w/ relays, lamp failure detection, wiring harness, 12V |
| 2020103 | AS-425-24 | 100W Siren amplifier, (3) tones, remote control, P.A., (4) light control outputs w/ relays, lamp failure detection, wiring harness, 24V |

AS300 Series

The **AS-300 Series** comes in 5 different models specially designed for each application: AS-320DIG, AS-324 and AS-380.

All models include a siren amplifier in black anodized aluminium for unobtrusive on-board installation. The AS300 siren amplifier includes a kit for fast and easy mounting.

- **AS-320DIG** includes a small and compact remote control for controlling lights, siren and public address with volume control. Also includes an alternative switch-operated control system.

- **AS-324** has a switch-operated control system only.

- **AS-380** delivers 400W power via a slave amplifier. Includes remote control pad.



| | |
|-------------------------|--|
| Voltage: | 12 or 24 V |
| Output power speaker: | 100 W |
| Light output: | 1 x 10 Amp |
| Auxiliary output: | 1 x 1 Amp |
| Dimensions: | Siren: 170 x 135 x 55 mm Control head: 115 x 42 x 35 mm |
| Weight: | Siren: 1300 g |
| Radioconnection | |
| Horn ring connection | |
| Lamp failure connection | |

| REF. | MOD. | DESCRIPTION |
|---|---------------------|--|
| Sirens w/ public address (P.A.) | | |
| 2020256 | AS-320DIG | 100W Siren amplifier, (3) tones, remote control, P.A., (1) light output, (1) auxiliar output, wiring harness, 12V |
| 2020257 | AS-320-24DIG | 100W Siren amplifier, (3) tones, remote control, (2) lights outputs, (1) auxiliar output, wiring harness, 24V |
| 2020236 | AS-380M | 100W + 100W Siren amplifier, (4) tones, remote control, P.A., wiring harness, 12V |
| 2020237 | AS-380S | Amplifier for installation along with model AS-380M. Together offer a maximum power of 400W. |
| 100W Siren amplifier | | |
| 2020269 | AS320DIG CAN BUS | 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500CB Series control heads. P.A not included |
| 2020271 | AS320-24DIG CAN BUS | 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 24V. Compatible only with BCT2000 and BCT500CB Series control heads. P.A not included |
| Public address | | |
| 8235984 | AS320-PA CB | Public address kit with remote control. Volume and microfone functions control (for control head BCT3000) 12V |
| Sirens w/o public address (P.A.) | | |
| 2020188 | AS-324 | 100W Siren amplifier, (2) tones, remote control, w/o P.A., (2) lights outputs, (1) auxiliar outputs, wiring harness, 12V |
| 2020183 | AS-324-24 | 100W Siren amplifier, (2) tones, remote control, w/o P.A., (2) lights outputs, (1) auxiliar outputs, wiring harness, 24V |

FEDHORN System

The **FEDHORN system** is an electronic sirens system with horn sound.

- HORN SOUND

Two synchronized sirens connected to two 100W speakers reproduce the sound of horn by electronic technology.

- EASY INSTALLATION

Compact and modular system with an easy fitting into the vehicle, taking advantage of every space inside it.

- EASY MAINTENANCE

Elimination of maintenance cost associated to oil compressor and air membranes systems due to use of a fully electronic system.

- FLEXIBILITY

Specific configuration for different countries.

- PUBLIC ADDRESS OPTION

Remote microphone connection.

- DAY/NIGHT

An internal sound damping assure a sound reduction during the night.

- CANBUS

Communication System between lights, sirens and controller head. This system minimizes wiring installation and allows controlling all the elements by a single remote control.



| | | |
|------------------------------------|--------------|-------------|
| Current Draw: | 12V | 24V |
| Output power with 13.5V: | | |
| with one 11 ohm speaker: | 100 W | 100 W |
| with two 11 ohm speaker: | 180 W | 180 W |
| Intensity with one 11 ohm speaker: | 10 A maximum | 5 A maximum |
| with two 11 ohm speakers: | 18 A maximum | 8 A maximum |
| Output voltage: | 60V | 60V |

Frequencies (depending on siren version) 600- 1350 Hz

| | |
|-----------------------|-----------------------|
| WAIL | 12 cycles per minute |
| YELP | 180 cycles per minute |
| BITONAL | 450 - 600Hz |
| Harmonic distortion | 0,87% (35 W, 100 Hz) |
| Passing band +/- 3 dB | 90 Hz - 28,000 Hz |
| Radio signal level | 2,5 V maximum |

Intensity of auxiliary outputs

| | |
|------------------------|----------------------|
| Lights relay | 10 A maximum |
| Auxiliary relay | 1 A maximum |
| Operating temperatures | -30°C - +50°C |
| Shipping weight | 1300 gr (each siren) |
| Amplifier dimensions | 55 x 135 x 170 mm |

| REF. | MOD. | DESCRIPTION |
|---|-------------|---|
| KC FEDHORN-12 | | 2x100W Sirens System (master/Slave) with horn sound, international tones (wail, help, hi-lo), 1 auxiliary output programmed with priority lights, wiring, 12V. Compatible only with BCT2000 Series (*) |
| KC FEDHORN-24 | | 2x100W Sirens System (master/Slave) with horn sound, international tones (wail, help, hi-lo), 1 auxiliary output programmed with priority lights, wiring, 24V. Compatible only with BCT2000 Series (*) |
| Public address | | |
| 8235984 | AS320-PA CB | Public address kit with remote control. Volume and microphone functions control (for control head BCT3000) |
| Speakers (two units are necessary) | | |
| 2021047 | AL-252N | 100W Speaker, round horn, replaceable neodymium driver, metal L- bracket (1) |
| 2021004 | AL-257N | 100W Speaker, rectangular horn, driver housing, exterior protector, white |
| ES100C | ES100 | ES100 100W Compact Speaker, w/o bail bracket compact, small size |
| Mount Accessories | | |
| ESB-U | MNT-ES100 | Speaker mounting kit ES100 |
| CANBUS Control Box | | |
| BCT2010-09 | BCT2009 | BCT2000 Series control box with 10 keys to control: Priority lights, Cruise light, Day/night mode, Take down lights, Rear lights, Alley lights and tacograph. Siren with wail, stand/land and FEDHORN tones, Manual mode and Radio. |
| BCT2015-19 | BCT2015 | BCT2000 Series control box with 15 keys to control: Priority lights, Cruise lights, Day/night mode, Take down lights, Alley lights and Signalmaster. Siren with wail, yalp, bitonal, FEDHORN tones, high/low intensity, Manual model and Radio. |
| Connectors kit for CANBUS Control Head | | |
| 8299753 | | Connectors kits for Control HEAD (It is necessary when there is no lightbars on the system) |

(*) Must be specified when ordering, which international tones are desired

AS200 Series

The **AS-250 Series** is totally water-resistant thanks to its extruded casing and connector assembly with Santoprene sheath for full weather insulation of electrical connections. This electronic siren is made of extruded black anodized aluminium. The AS-250 Series is controlled by using external switches.

Also available (optional): shock-absorbent silent block for use in conditions subject to intense vibration.



| | |
|-----------------------|------------------|
| Voltage: | 12 V |
| Output power speaker: | 100 W |
| Auxiliary output: | 1 x 1 Amp |
| Dimensions: | 180 x 86 x 60 mm |
| Weight: | 600 g |
| Horn ring connection | |

| REF. | MOD. | DESCRIPTION |
|---|---------------|---|
| Sirens w/o public address (P.A.) | | |
| 2020147 | AS-250 | 100W Siren amplifier, (3) tones, w/o P.A, (1) auxiliary output, waterproof, w/o wiring harness, 12V |
| Mount Accessories | | |
| 8232445 | KT/BLOK-FA/AS | Kit, silent block, FA-535D, FA-706E, FA-540/E, FA-540/E HL, FA-706 and AS-250 |

PA300MSC

The **PA300** electronic siren delivers exceptional performance and durability thanks to its integrated circuits and silicon transistors.

This siren offers multiple features such as peak-and-hold and TAP II, which enables the driver to change the siren tone via the vehicle's horn ring or any remotely mounted switch. The public address includes a system to remove interference that provides high-quality voice reproduction.

One version (PA300MSC-PTY) includes a Priority tone for clearing traffic from intersections.



| | |
|-----------------------|-------------------|
| Voltage: | 12 or 24 V |
| Output power speaker: | 100 W |
| Dimensions: | 194 x 156 x 59 mm |
| Weight: | 2900 g |

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

Sirens w/ public address (P.A.)

| | | |
|---------|-------------|--|
| 2020085 | PA300MSC | 100W Siren amplifier, (5) tones, P.A., 12V |
| 2020086 | PA300-24MSC | 200W Siren amplifier, (5) tones, P.A., 24V |

SIREN Accessories

Mount Accesories

| | | |
|---------|-----------|---|
| 8216117 | AV-D/N | Power limiter for siren amplifier - day/night - |
| 2006021 | SF-20A | Lamp failure detector, 12V |
| 2006024 | SF-20A-24 | Lamp failure detector, 24V |

AL-252N

This speaker is equipped with 100 W Neodymium motor, 11 Ohms impedance. The round ABS diffuser is designed for better sound propagation and includes a black anodized L-bracket for mounting.

The Neodymium loudspeaker motor is lighter and smaller than ferrite models.



| | |
|-------------|--------------|
| Power: | 100 W |
| Ohm: | 11 |
| Driver: | Neodymium |
| Dimensions: | 150 x 135 mm |

AL-257N

AL-257 is a white 100 W high-performance loudspeaker, 11 Ohms impedance. Its rectangular ABS diffuser with easy-to-replace motor stands out for its durability and reliability.

It includes a flat base for mounting on vehicle roofs.



| | |
|-------------|--|
| Power: | 100 W |
| Ohm: | 11 |
| Driver: | Neodymium |
| Dimensions: | 210 x 223 x 155 mm (Hight incl. mounting kit: 180 mm) |

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

| | | |
|---------|---------|--|
| 2021047 | AL-252N | 100W Speaker, round horn, replaceable neodymium driver, metal L- bracket (1) |
|---------|---------|--|

| | | |
|---------|---------|---|
| 2021004 | AL-257N | 100W Speaker, 11 Ohms, ABS rectangular horn, exchangeable neodymium driver, exterior protector, high performance, white |
|---------|---------|---|

(1) We have a large rage of mounting brackets for undercover vehicles. Please check availability with our sales dapartment

SOUNDSTAR ALS1000

The **ALS1000** compact loudspeaker is made of ABS with glass fibre and injected aluminium. This speaker features modern, compact design and fully compatible with other 30 W sirens.

A mesh filter prevents solid particles from entering the siren, while a rubber seal joint prevents water from entering the electronic circuits. It is equipped with drainage system to prevent water accumulation on the membrane.

ALS1000 is the perfect complement to the SCS1000 compact siren. Installed together they deliver 60 W of power.



| | |
|-------------|---------------------|
| Power: | 30 W |
| Ohm: | 6 |
| Driver: | Neodymium or Ferrit |
| Dimensions: | 135 x 110 x 113 mm |
| Weight: | 1150 g |

ES100C

The **DynaMax** offers a unique design which enables to install the speaker in many locations on ambulance cars. It can be mounted easily behind the grille or flush between bumper and hose tray of a large apparatus.



| | |
|-------------|-------------------|
| Power: | 100 W |
| Ohm: | 11 |
| Dimensions: | 140 x 150 x 58 mm |
| Weight: | 2300 g |

AS124

AS124 Series speaker uses advanced housing material and field replaceable neodymium drivers to provide effective, high quality sound at an affordable price.

The housing is made of black polyethylene terephthalate, which made the speaker very lightweight, robust and water-resistant.

It includes a mounting kit for easy vehicle installation.



| | |
|-------------|--------------------|
| Power: | 100 W |
| Ohm: | 11 |
| Driver: | Neodymium |
| Dimensions: | 196 x 119 x 145 mm |
| Weight: | 2900 g |

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

Ferrite Driver

| | | |
|------------|-------------|--|
| 2020278 | ALS1000-D | 30W Compact speaker, 6 Ohms, ferrite driver, reduced dimensions, 12V, black colour |
| 2020278-BL | ALS1000-DBL | 30W Compact speaker, 6 Ohms, ferrite driver, reduced dimensions, 12V, white colour |

Neodymium Driver

| | | |
|----------|-----------|--|
| 2020278N | ALS1000DN | 30W Compact speaker, 6 Ohms, neodymium driver, reduced dimensions, 12V, black colour |
| 750501 | AS124 | High output 100W Speaker, 11 Ohm, neodymium driver, mount hardware |
| ES100C | ES100 | ES100 100W Compact Speaker, w/o bail bracket compact, small size |

Mount Accesories

| | | |
|---------|---------------|---|
| ESB-U | MNT-ES100 | ES100 mounting kit |
| 8299306 | SCS1000-BLOCK | Kit, silent block for SCS1000 and ALS1000 |
| 8299911 | 8299911 | Water-proof connectors for ALS1000-D |

CONTROLLERS

| | | |
|---|-----------------------------------|-----------|
| ➤ | G0112 Series..... | 84 |
| ➤ | ICS2009 Series..... | 86 |
| ➤ | Direct wire converter..... | 86 |
| ➤ | GEP2006PW Series..... | 86 |

GO112 Series

Federal Signal Vama offers one of the most configurable control systems of the market, specially designed either for emergency or commercial vehicles. It allows total vehicle control through a CAN BUS touch screen, easily adaptable to different user needs.

- INTUITIVE AND USER FRIENDLY TOUCH SCREEN

Specially designed for intensive usage and with fast Access keys for each application. With a wide view angle of vision, backlighted and gloves use compatible keys, audio and vibration feedback, etc.

- CONFIGURABLE

User configurable touch screen with special keys personalisation from a PC.

- WIDE RANGE OF SOLUTIONS

GO112 could control not only light and acoustic systems but heating and air conditioning systems, stretcher platform control, temperature, alarms, etc.

- SYNCHRONIZED

Easily synchronized with the emergency vehicle in case of touchscreen replacement.

- FAST INSTALLATION

1 cable direct connection, with no fuses nor relays and adaptable foot mounting. Plug and play touch screen replacement.

- ENERGY SAVINGS

Automatic energy management for a better performance. Stand by function and adjustable brightness by user.



Touch screen console



Flat switch panel

- BLACK BOX

Black box built-in integration to gather key data during emergency situations.

- WATERPROOF CENTRAL UNIT

IP66 protection against water and dust.

- AUTOMATIC FAILURE DETECTION

Their efficient wiring connections, reduced to the minimum, reduce each potential failure. However, system could automatically detect each control problem.

| CENTRAL UNIT | S | M | L | XL |
|---------------|----|----|----|----|
| Outputs + | 10 | 20 | 30 | 40 |
| Outputs - | 10 | 14 | 20 | 28 |
| Inputs +/- | 8 | 14 | 20 | 28 |
| Analog inputs | 3 | 3 | 3 | 3 |
| CAN inputs | 1 | 1 | 1 | 1 |

REF. MOD. DESCRIPTION

Consoles

Touch Screen Console for back wall mounting, white color

| | | |
|---------|--|---------------------------------|
| 2004103 | - Fully configurable - USB port | - Dimensions: 148 x 113 x 28 mm |
| | - Keys with audio and vibration feedback | - Screen dimensions: 4.5" |
| | - Brightness control | - Weight: 205 g |
| | - Wide view angle (130°) | - Operating voltage: 9-30 V |
| | - Size and colors keys configurable | - 4m CANBUS wiring included |

Touch Screen Console by foot mounting, black colour

| | | |
|---------|--|----------------------------------|
| 2004104 | - Fully configurable - USB port | - Dimensions: 128 x 94 x 28mm |
| | - Keys with audio and vibration feedback | - Screen dimensions: 4.5" |
| | - Brightness control | - Weight: 185 gr. (without foot) |
| | - Wide view angle (130°) | - Operating voltage: 9-30 V |
| | - Size and colors keys configurable | - 4m CANBUS wiring included |

Flat Switch Panel

| | | |
|---------|---------------------------------------|--------------------------------------|
| 2004114 | - Plug @ play 100% GO-112 compatible | - Available in 4,6 or 9 keys version |
| | - Vertical and Horizontal positioning | - Back-lit |
| 2004113 | - Colors and pictograms for each key | - Cancell all/Power key |
| | - Keys with audio and tactile effect | - Quiescent current (0mA) |
| 2004112 | - Pilot lamp functions | - Washable |

2004114 FSD-4 Flat switch panel with 4 keys

2004113 FSD-6 Flat switch panel with 6 keys

2004112 FSD-9 Flat switch panel with 9 keys

* Please, consult with the sales department the sales conditions in your country.

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

Central Unit **Central Unit "S"**

| | | |
|---------|---|--|
| 2004105 | <ul style="list-style-type: none"> - 10 self protected outputs (+15A each one) - 10 negative outputs (-1.7A each one) - 8 opto-isolated inputs (+/-) - 3 analog inputs - CAN - J1939 - IP66 protection - Power Management - Automotive connectors | <ul style="list-style-type: none"> - Black box included - Dimensions: 254 x 161 x 58 mm - Weight: 1.119 g - Operating voltage: 9-30 V |
| | | <ul style="list-style-type: none"> 23 positions wiring connector included 35 positions wiring connector included *All inputs and outputs all configurable by customer needs |

Central Unit "M"

| | | |
|---------|--|--|
| 2004106 | <ul style="list-style-type: none"> - 20 self protected outputs (+15A each one) - 20 negative outputs (-1.7A each one) - 14 opto-isolated inputs (+/-) - 3 analog inputs - CAN - J1939 - IP66 protection - Power Management - Automotive connectors | <ul style="list-style-type: none"> - Black box included - Dimensions: 254 x 161 x 58 mm - Weight: 1.142 g - Operating voltage: 9-30 V |
| | | <ul style="list-style-type: none"> 23 positions wiring connector included 35 positions wiring connector included *All inputs and outputs all configurable by customer needs |

Central Unit "L"

| | | |
|---------|--|--|
| 2004107 | <ul style="list-style-type: none"> - 30 self protected outputs (+15A each one) - 20 negative outputs (-1.7A each one) - 20 opto-isolated inputs (+/-) - 3 analog inputs - CAN - J1939 - IP66 protection - Power Management - Automotive connectors | <ul style="list-style-type: none"> - Black box included - Dimensions: 254 x 290 x 58 mm - Weight: 2.052 g - Operating voltage: 9-30 V |
| | | <ul style="list-style-type: none"> 23 positions wiring connector included 35 positions wiring connector included *All inputs and outputs all configurable by customer needs |

Central Unit "XL"

| | | |
|---------|--|--|
| 2004108 | <ul style="list-style-type: none"> - 40 self protected outputs (+15A each one) - 28 negative outputs (-1.7A each one) - 28 opto-isolated inputs (+/-) - 3 analog inputs - CAN - J1939 - IP66 protection - Power Management - Automotive connectors | <ul style="list-style-type: none"> - Black box included - Dimensions: 254 x 290 x 58 mm - Weight: 2.075 g - Operating voltage: 9-30 V |
| | | <ul style="list-style-type: none"> 23 positions wiring connector included 35 positions wiring connector included *All inputs and outputs all configurable by customer needs |

Accessories

Unitherm-HD interface (complementary systems)

| | | |
|---------|---|--|
| 2004109 | <ul style="list-style-type: none"> - Controllable from the touch screen - Sensor included - Compatible with most of the heating / cooling systems - Fan control in PWM mode | <ul style="list-style-type: none"> - Dimensions: 105 x 45 x 92 mm - Weight: 270 g - Operating voltage: 9-30 V - Static outputs CANBUS wiring included |
| | | |

Speed Filter (Configuration and management software)

| | | |
|---------|---|--|
| 2004110 | <ul style="list-style-type: none"> - Software for GO112 system - Data transmission by USB cable (NOT included) - 1 configuration kit - 3 licences | |
| | | |

* Please, consult with the sales department the sales conditions in your country.

ICS2009 Series

ICS2009 Series consists of an electronic power supply manager and a control head.

Electronic power supply modules are small and compact. The control module is powered by just 2 cables. Installation is quicker than for a conventional system and the outputs are fully protected against polarity reversal, overloading and short-circuits.

Control heads stand out due to their compact, ergonomic design. Safe and easy to handle, they are fitted with a backlit keypad. Logos and keys can be personalised by the user, thanks to adhesive labels with a wide range of symbols.



ICS2009

Direct wire converter

CAN BUS system power manager can manage, through an analogic control head, any CAN BUS emergency vehicle light in a simple way.



CAN BUS converter

GEP2006PW Series

GEP2006PW Series, an analogic system power manager from Federal Signal Vama can manage, through a CAN BUS control head, any analogical emergency vehicle light in a simple way.

This power manager could be controlled by following control heads, depending on final user needs:

- **BCT2004-10**: 4-buttons control head for R65 main warning lights, front and rear lights, lighted sign, etc.
- **BCT2006-10**: 6-buttons control head for above functions and, furthermore, cruise light, etc.



GEP2006PW

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

ICS2009 Series

| | | |
|--------------|---------|--|
| ICS2009ST-12 | ICS2009 | Intelligent CanBus control system with SignalMaster control, (4) more outputs, fully protected against polarity, reversal, overloading and short-circuits. Control head with (9) backlit-keys, 12V/24V |
|--------------|---------|--|

CAN BUS converter - ANALOG

| | | |
|---------|--|--|
| 2006036 | | Inputs box to convert a CAN BUS lightbar in an analog system (the fuctions are activated through positive cable) |
|---------|--|--|

Analogical controllers

| | | |
|--------------|---------|--|
| 2020283PW-02 | GEP2006 | Control box to convert analogical lightbars to CAN BUS communication, 4 outputs, 12V |
| 2020283PW-03 | GEP2006 | Control box to convert analogical lightbars to CAN BUS communication, 6 outputs, 12V |

Control heads

| | | |
|------------|---------|---|
| BCT2004-10 | BCT2004 | BCT2004-10,CANBUS control head for GEP2006PW 4S with 4 backlight keys. With two mounting systems: swivel or permanent mount. Control of 4 analogic outputs. |
| BCT2006-10 | BCT2006 | BCT2006-10,CANBUS control head for GEP2006PW 6S with 6 backlight keys. With two mounting systems: swivel or permanent mount. Control of 6 analogic outputs. |
| 82441626 | | Connection kit between BCT CAN BUS control head and GEP2006PW intelligent power manager. |

RECORDING SYSTEM

- Videobadge, body worn camera,.....88
- Black box with GPS, analogic lightbars.....88



Body worn camera

Federal Signal Vama presents the **body worn camera VB-320W** series, able to record video, audio and images. It is a camera specifically designed for law enforcement, surveillance companies and emergency fleets that the use of a body worn camera can be crucial in certain situations of their day to day work.

It has wifi feature, that enables VB-320W series cameras to stream video and audio to VideoManager or an RTSP gateway service, while simultaneously storing evidential quality recording for later download and review.

- INTEGRATED WIFI

Enables the camera to transfer footage directly to VideoManager over wifi hotspots or infrastructure whilst in the field.

- WEARABLE

VB-320W Series is small, robust and lightweight (100g). It ensures a comfortable wearable camera to use on a daily basis.

- WIDE FIELD OF VIEW

The field of view is 130°, assuring non distorted images are obtained.

- SECURE

Events recorded in the camera cannot be retrieved and can only be downloaded at secure site. The events are encrypted with a key code and only authorised users have access to recordings.

- EASY TO USE

Its simple operation makes the camera very intuitive and practical, as no training is needed. Configure the buttons to start and stop the recording in the way that suits you the best, to make it very easy and simple to use.

- BIG DATA STORAGE

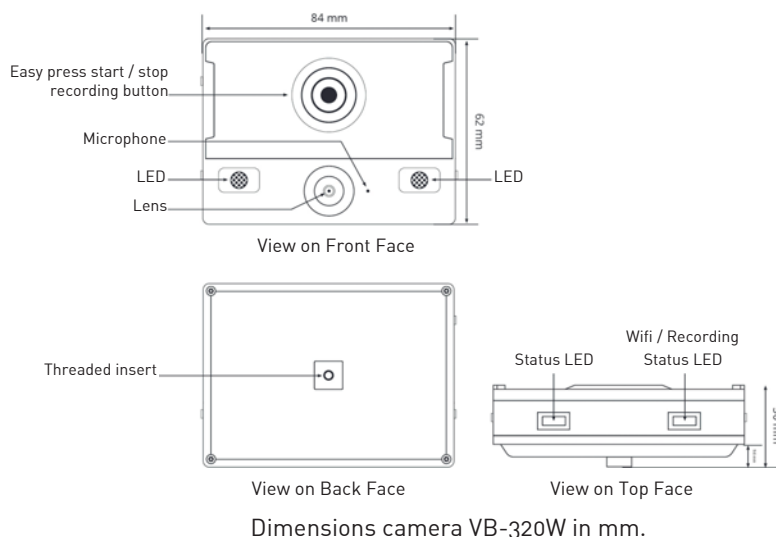
The camera has a 16GB storage capacity.

- WATER, DUST AND IMPACT RESISTANT

The cameras have been made with materials and special reinforcements to resist impacts, falls or vibrations during its transportation, storage, operational use and adverse weather conditions. Meets IP54.



Camera VB-320W



Dimensions camera VB-320W in mm.

DOCKING STATION

Charge and simultaneous download all the events connecting a single USB to PC.



VB-320 Individual Dock

- Camera to PC USB connector for charging and download.
- Connection is a single USB to the PC.



DC-200 Dock Controller

- Connects up to 6 docking stations (84 cameras).
- 2 USB ports.
- Automatic updates, no storage.
- Embedded device.



VB-300 14 cameras Dock

- Ideal for larger deployments.
- Multiple docking stations can be connected to a single PC.
- Can be also connected to a controller and a main electric plug.

Videomanager

Federal Signal Vama presents the **VideoManager**, the most advanced back-office management software tool for managing video footage, system users and suite of body worn cameras.

It delivers a powerful user interface for managing the estate of body worn cameras and downloaded footage, as well as providing a suite of services for automatic footage download, external applications integration and footage policy implementation, it makes the creation of evidence-ready footage fast, simple and secure.

VideoManager is exceptionally scalable, allowing to manage anything from 1 to 20.000+ cameras. The advanced suite of networking solutions offer flexible and adaptable upload & management, tailored for any enterprise.

- EASY TO USE

As it is web-based, you can upload and manage footage on-the-go via your laptop, tablet or smartphone, using more than a web-browser.

- SHARE VIDEO SAFELY

It also allows collaborative review of footage within your organization, sharing secure access links with colleagues and partner organizations, enabling camera to courtroom accountability.



VideoManager software


















- SECURE

Each event created in the camera and transferred to Video manager is encrypted. Generate, export and import encryption keys using VideoManager, ensuring that only authorised users can download and access footage.

- SCALABLE

VideoManager is ready to suit your enterprise, offering flexible, adaptable upload and footage management, tailored according to your needs.

| REF. | MOD. | DESCRIPTION |
|---|------|--|
| Cameras | | |
|  4520163 | | Body worn camera VB-320 with WiFi & 16Gb storage 1 user VideoManager license, Quick-release hardpoint fitted |
| Camera accessories | | |
|  4520168 | | VideoBadge VB-300 series crocodile uniform clip |
|  4520169 | | VideoBadge VB-300 series alligator uniform clip |
|  4520167 | | VideoBadge VB-300 series replacement Quick Release Base |
|  4520164 | | VideoBadge VB-300 series quick-release KlickFast Stud |
|  4520166 | | VideoBadge VB-300 series quick-release Sports Camera pillar |
|  4520165 | | VideoBadge VB-300 series quick-release Tilting KlickFast |
|  4520172 | | VB-300 Custom Artwork ID card (Artwork ID in notes) |
|  4520170 | | KlickFast Uniform screw-on dock |
|  4520171 | | KlickFast Radio Loop dock |
| Docks | | |
|  4520161 | | VideoBadge VB-300 series 14-port USB dock/ EU power cable |
|  4520160 | | VideoBadge VB-300 series Single-port USB dock |
| Dock controllers | | |
|  4520174 | | Dock Controller DC-200 with EU power cord. Connects up to 6 docks |
|  4520173 | | Dock Controller DC-200 with RFID reader kit with EU power cord |
|  4520159 | | Replacement (spare) RFID Reader for DC-200-RFID-KIT |

* All references above have 18 months warranty minimum (parts & labour).

For more information, please contact our sales department.

Black box with GPS

GPS and analogic lightbar data recording system

Federal Signal Vama presents new **black box with GPS**, with a geolocation system for every emergency or service vehicle, providing lightbar, siren, sign, etc. status while is on duty. Thanks to its compact dimensions it could be installed in several vehicle places.

- REDUCTION OF ACCIDENT RISKS

Decrease of related insurance policy fees thanks to lightbar and siren events recorded on emergency situations.

- FLEET COST REDUCTION AND FLEET MANAGEMENT

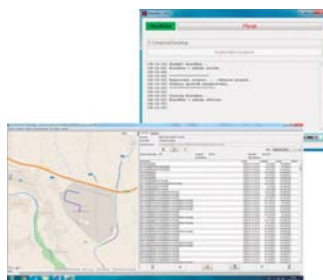
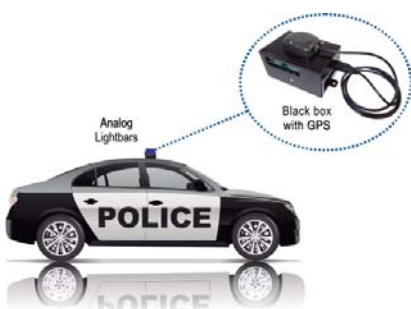
Improves global operations efficiency: longer-lasting product life, fleets and routes optimisation, accident decreasing.

- EASY TO USE

Once installed, black box data could be downloaded easily through Ethernet and/or USB socket, and could be analysed afterwards.

- COMPACT

Especially designed to occupy a minimum space inside vehicle for an easy installation.



Practical and intuitive management software, allowing to manage the data according each user, and submit it on several reports.



- ANALYSIS SOFTWARE

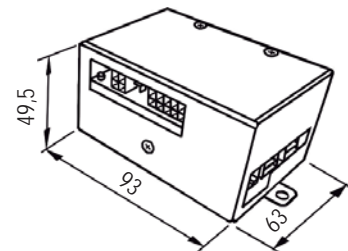
With "Route Converter" software program, very intuitive, providing vehicle position through black box GPS, and lightbar, siren, etc. status.

- HIGH DATA STORAGE

Internal data storage up to 6GB, capable of storing data continuously during 30 days.

- SECURE

With password to download all data from the vehicle.



Black box dimensions in mm.

| | |
|--------------------|--------------------------|
| Voltage: | 12-24V |
| Nº analog outputs: | 1 |
| Nº analog inputs: | 5 |
| Operating System: | Linux |
| Dimensions: | 114 mm x 63 mm x 49,5 mm |
| Weight: | 185 gr |

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

| | | |
|-------------|--|--|
| 82351025-01 | | Black box with GPS, analog, 12-24V, Spanish/English software included. |
|-------------|--|--|

ACCESSORIES

| | | |
|---|-------------------------------|-----|
| ➤ | Gun-locks..... | 92 |
| ➤ | Rechargeable flashlights..... | 93 |
| ➤ | Reading lamps..... | 95 |
| ➤ | Control units..... | 96 |
| ➤ | Back-up alarms..... | 97 |
| ➤ | Lighting accessories..... | 98 |
| ➤ | Stinger..... | 101 |

AMK Series

The safety gun-locks offer a protection system when the weapon is not in use and prevent access by non-authorized personnel, thus avoiding the risk of accidents.

There are different standard models available, with electromagnetic unblocking, by means of key or a combination of both.



AMK-50



AMK-90



AMK-100



AMK-150

| REF. | MOD. | DESCRIPTION |
|---------|---------|---|
| 1204001 | AMK-50 | Safety Gun-Lock fitted w/ electromagnetic lock, adjustable to different guns, cavity dimensions:min: 58 x 43 mm, max: 58x 78 mm |
| 1204008 | AMK-90 | Safety Gun-Lock fitted w/ electromagnetic lock, cavity dimensions: 47 x 70 mm |
| 1204006 | AMK-100 | Safety Gun-Lock fitted both w/ electromagnetic and manual (key) lock, cavity dimensions: 47 x 70 mm |
| 1204023 | AMK-150 | Safety Gun-Lock fitted both w/ electromagnetic and manual (key) lock, cavity dimensions: 29 x 56 mm |

(*) Optional the Gun-Lock can be installed over the Divider Shield

Accessories

| | | |
|---------|--------|---|
| 1204017 | TA-210 | Timer for Gun-lock, electromagnetic |
| 8216091 | SW-523 | OFF-ON Push button, illuminated w/ protection |
| 9133436 | ACUAL | Rifle stock support |

L500 Series

L500 series stands out for robust, reliable and rechargeable flashlights for professional use. L500 series flashlights are watertight and shock-resistant thanks to their aluminium and polyamide construction, with high-luminosity halogen lamps providing adjustable beam spread and a rubber optics guard ensuring shock absorption in the event of knocks and falls.

Operating with nickel metal hydride batteries, they offer durability without memory effect of conventional battery performance.

The L500 series comes in different versions: standard, flashing mode, LED, with normal or fast charger.

The new versions are Full LEDs and are available with (20) white light luminosity LED or with strobe flashing mode.

Available accessories: light-spreader cones, light-spreader paddle "STOP/ARROW SIGN", metal bracket for storage of cones and paddles, multiple charger for 5 flashlights, etc.

*** Charger sold separately.**



Rechargeable LED flashlight



Rechargeable LED capacitors flashlight

| REF. | MOD. | DESCRIPTION |
|----------------------------------|-----------------|--|
| LED flashlights | | |
| 2101153 | L-550C/S | Rechargeable LED capacitors flashlight, 1 LED diode, (2) light levels, adjustable focus, w/out charger, multivoltage 10-30V. |
| LED flashlights | | |
| 2102018 | L-500RFLED/BL/S | Rechargeable LED flashlight, 3 LED diodes flashlight, (20) white high luminosity LED, (2) light levels, adjustable focus, fast charge time, w/out charger, 12V |
| 2102019 | L-500RFLED/S | Rechargeable LED flashlight, 3 LED diodes flashlight, (2) light levels and strobe flashing, adjustable focus, fast charge time, w/out charger, 12V |
| 2101117 | L-500LED/S | Rechargeable flashlight w/ 6V 10W halogen lamp, (20) high luminosity LED (10 LED red colour and 10 LED amber colour), (1) light level, standard charge time, adjustable focus, w/out charger, 12V |
| 2101120 | L-500RLED/S | Rechargeable flashlight w/ 6V 10W halogen lamp, (20) high luminosity LED (10 LED red colour and 10 LED amber colour), (1) light level, fast charge time, w/out charger unit, adjustable focus, 12V |
| 2101120-01 | L-500RLED/BL/S | Rechargeable flashlight w/ 6V 10W halogen lamp, (20) white high luminosity LED, (1) light level, fast charge time, adjustable focus, w/out charger, 12V |
| Flashing mode flashlights | | |
| 2101110 | L-500I/S | Rechargeable flashlight w/ 6V 10W halogen lamp, (1) light level, flashing, standard charge time, adjustable focus, w/out charger, 12V |
| Standard flashlights | | |
| 2101096 | L-500/S | Rechargeable flashlight w/ 6V 10W halogen lamp, (2) light levels, standard fast charge time, adjustable focus, w/out charger, 12V |
| 2101123 | L-500R/S | Rechargeable flashlight w/ 6V 10W halogen lamp, (2) light levels, fast charge time, adjustable focus, w/out charger, 12V |



| | |
|-----------------------|---|
| Voltage: | 12 V |
| Halogen lamp: | Bi-pin G4 6V 10W (standard charge) Bi-pin G4 6V 8W (fast charge) |
| Amber/red LEDs: | 10 LEDs GEN I |
| White LEDs: | 20 LEDs GEN II |
| Rechargeable battery: | Niquel-MetalHidruro 6V 3.5 Ah (standard charge) Niquel-MetalHidruro 6V 2.5 Ah (fast charge) |
| Charge time: | 30 hours (standard charge) 2.5 hours (fast charge) |
| Battery life: | Amber/red LEDs: 24h White LEDs: 6-12h Flashing mode: 2h 40' High intensity: 2h Low intensity: 2h 40' High intensity 3 LEDs: 2h 30' Low intensity 3 LEDs: 3h 40' Flashing mode 3 LEDs: 2h |

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

Accessories

Flashlight Charger * Charger sold separately

| | | |
|------------|------------|---|
| 2101094REC | CL-510 | Standard flashlight charger for L500 Series flashlights, 12V |
| 2101121REC | CL-510R | Fast flashlight charger for L500R Series flashlights, 12V |
| 2101098 | CM-510 | Multiple charger, (5) L500 Series flashlights, 220V |
| 2102013 | AL-500/400 | Adapter, 12VDC/220V AC, for CL510 and CL510R flashlight charger |
| 2101154REC | CL-550 | Capacitors flashlight charger for L550C Series, multivoltage 10-30V |

Light-Spreader

| | | |
|------------|-----------|--|
| 9151270 | DL-500 | Light-spreader cone for L500 series flashlight, (fluorescent yellow colour) |
| 9151270-01 | DL-500 | Light-spreader cone for L500 series flashlight, (fluorescent red colour) |
| 9151270-02 | DL-500 | Light-spreader cone for L500 series flashlight, white (Recommended the use with L500LED flashlight series for signaling traffic) |
| 2101099 | DL-500/2C | Light-spreader cone for L500 series flashlight, amber/red spreading-Lens. |
| 2101100 | DL-500/3C | Light-spreader cone for L500 series flashlight series, white/ amber/red spreading-Lens. |
| 2101101 | DL-500/3C | Light-spreader cone for L500 series flashlight, white/ green/red spreading-Lens. |

Paddles

| | | |
|---------|--------|--|
| 1005066 | PD-500 | Luminous paddle for L500 series flashlight w/ 'Stop' and Arrows Signs. |
|---------|--------|--|

Support for light-spreader and paddle

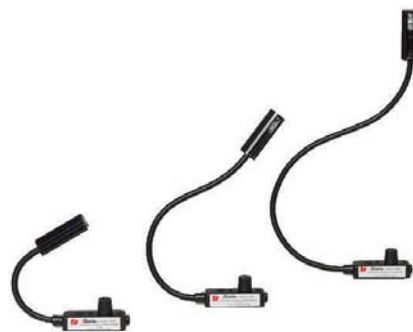
| | | |
|---------|-------------|--|
| 8299018 | SCO-500/400 | Metal bracket for flashlight cone, black |
| 8136813 | SPD-500/400 | Luminous paddle metal bracket, Series L500 |

LITTLITE

Sleek, low profile gooseneck lamps efficiently produce light in a concentrated area and can be aimed exactly where you need it.

Littlite is designed to meet the most demanding needs. The bright white light is perfect for reading maps, etc.

Littlite is available with halogen lamp or as LED version.



| | |
|---------------------|-----------------------------------|
| Voltage: | 12 V |
| Consumed intensity: | Hallogen: 0.5 Amp LED: 0.1 Amp |
| Dimensions: | 18 x 76 x 25 mm |
| Gooseneck length: | Depending on model |
| Weight: | 500 g |

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

LED

LF12ES-LED LF12ES-LED 12" Littlite Model, LED Lamp, metal Bracket, 12V, on/off switch control, 30cm gooseneck

LF18ES-LED LF18ES-LED 18" Littlite Model, LED Lamp, metal Bracket, 12V, on/off switch control, 45cm gooseneck

2101131-01 LEC-35 LED lamp reading, with flange, on/off switch control, 35cm gooseneck

2101130-01 LEC-50 LED lamp reading, with flange, on/off switch control, 50cm gooseneck

HALOGEN

5001048 LF12ER 12" Littlite Model, Halogen Lamp, metal Bracket, 12V, Rheostat control, 30cm gooseneck

5001153 LF18ERB 18" Littlite Model, Halogen Lamp, metal Bracket, 12V, wires from base, Rheostat control, 45cm gooseneck

* All references above have 1 year warranty minimum (parts & labour). For more information, please refer to the price list (Sales conditions-Limited warranty) or contact our sales department.



SW Series

The **SW Series** of switches is made in black plastic for unobtrusive installation in vehicles or on motorcycles. They include illuminated function displays and protective rubber cases ensuring water-resistance in wet conditions.



| REF. | MOD. | DESCRIPTION |
|---------|--------|---|
| 8216090 | SW-521 | ON-OFF Switch, illuminated w/ protection |
| 8216089 | SW-522 | ON-OFF-ON Commuter, illuminated w/ protection |
| 8216091 | SW-523 | OFF-ON Push button, illuminated w/ protection |

Mounts Accesories

| | | |
|---------|--------|-----------------------------------|
| 8150748 | BM-SW2 | Metal base (2) SW Series switches |
| 8150749 | BM-SW3 | Metal base (3) SW Series switches |

Voice Gun

Electronic Voice gun megaphone, with batteries, ABS resistant housing and trigger button.

A12SA

| | |
|-------------|-------------------|
| Power: | 16 W |
| Batteries: | 8 x "AA" |
| Dimensions: | 267 x 257 x 185 m |
| Weght: | 1800 g |



| REF. | MOD. | DESCRIPTION |
|---------|-------|--|
| 2020118 | A12SA | Voice gun megaphone, 16W output, aproximate range 400 meters, (batteries not included) |

Back-up alarms

Federal Signal **back-up alarms** are dependable, affordable alarms ideal for use on utility, construction and other specialty vehicles. Each of the models features a glass reinforced nylon housing for long-lasting durability that can be steam cleaned.

The **EVACUATOR (Plus)** models are available with dual- or single-function feature. The dual-function feature allow users to choose from a 'pulse' tone, which is intermittent signal used for back-up warning, or a 'constant-on' tone, which is a solid signal that can be used to signal motion such as a truck-platform lifting or moving outriggers. Single-function models only have the 'pulse' tone.



252

This small device can alert the other vehicles in the reversing maneuver, intermittent beeping.



EVACUATOR
frontal



EVACUATOR
rear

| | |
|--------------------------|----------------------------------|
| Voltage: | 210333/210335 - 9-48 VDC |
| Current Draw (at 12vdc): | 210333/210335 - 0.17 Amp |
| Sound Output: | 210333 - 107dB 210335 - 112dB |
| Dimensions: | 73 x 73 x 62mm |
| Ship Weight: | 0.3 kg - 210504 : 0.9kg |

| REF. | MOD. | DESCRIPTION |
|---------|-----------|--|
| 2020107 | 252SSG | Alarm, 97 dB, 12-48V |
| 210333 | 210333SSG | Evacuator Plus, 12-48V, output 107 dBA |
| 210335 | 210335SSG | Evacuator Plus, 12-48V, output 112 dBA |

AIREL Series

Illuminated Thermal and infrared Identification System

AIREL is a patented Identification System utilizing illuminated/thermal/infrared numbers that gives aerial and ground units the ability to establish quick visual identification of Public Safety, Military and Industrial vehicles.

It is made with an electroluminescent material that provides years of illumination and identification.

- QUICK IDENTIFICATION

Enables vehicles to be identified in low light conditions by airborne helicopters with a powerful illumination.

- EASY INSTALATION

Industrial Strength adhesive backing 3M.

- ENERGY EFFICIENT

Powerful illumination provided by a Screen printing process that utilizes phosphors and silver as conductive layers that are electrically powered by an inverter.

4



Perfect vehicle identification in low ambient light, with its thermal and infrared lighting.



- WEATHERPROOF

Highly advanced embedded circuitry.

- STEALTH MODE

Thermal/infrared identification by using an additional power supply allowing units on the field operate on undercover operations.

- ELECTROLUMINISCENCE

Proven in military uses.

| REF. | MOD. | DESCRIPTION |
|--------------------------------|--------|---------------------------------------|
| Illuminated letters 20" | | |
| 9010313 | AELL-A | "A" letter, height 50 cm. (20"), blue |
| 9010314 | AELL-B | "B" letter, height 50 cm. (20"), blue |
| 9010315 | AELL-C | "C" letter, height 50 cm. (20"), blue |
| 9010316 | AELL-D | "D" letter, height 50 cm. (20"), blue |
| 9010317 | AELL-E | "E" letter, height 50 cm. (20"), blue |
| 9010318 | AELL-F | "F" letter, height 50 cm. (20"), blue |
| 9010319 | AELL-G | "G" letter, height 50 cm. (20"), blue |
| 9010320 | AELL-H | "H" letter, height 50 cm. (20"), blue |
| 9010321 | AELL-I | "I" letter, height 50 cm. (20"), blue |
| 9010322 | AELL-J | "J" letter, height 50 cm. (20"), blue |
| 9010323 | AELL-K | "K" letter, height 50 cm. (20"), blue |
| 9010324 | AELL-L | "L" letter, height 50 cm. (20"), blue |
| 9010325 | AELL-M | "M" letter, height 50 cm. (20"), blue |
| 9010326 | AELL-N | "N" letter, height 50 cm. (20"), blue |
| 9010327 | AELL-O | "O" letter, height 50 cm. (20"), blue |
| 9010328 | AELL-P | "P" letter, height 50 cm. (20"), blue |

| REF. | MOD. | DESCRIPTION |
|------|------|-------------|
|------|------|-------------|

| | | |
|-----------|--------|---------------------------------------|
| N 9010329 | AELL-Q | "Q" letter, height 50 cm. (20"), blue |
| N 9010330 | AELL-R | "R" letter, height 50 cm. (20"), blue |
| N 9010331 | AELL-S | "S" letter, height 50 cm. (20"), blue |
| N 9010332 | AELL-T | "T" letter, height 50 cm. (20"), blue |
| N 9010333 | AELL-U | "U" letter, height 50 cm. (20"), blue |
| N 9010334 | AELL-V | "V" letter, height 50 cm. (20"), blue |
| N 9010335 | AELL-W | "W" letter, height 50 cm. (20"), blue |
| N 9010336 | AELL-X | "X" letter, height 50 cm. (20"), blue |
| N 9010337 | AELL-Y | "Y" letter, height 50 cm. (20"), blue |
| N 9010338 | AELL-Z | "Z" letter, height 50 cm. (20"), blue |

(*) Please consult availability before make the order

Illuminated numbers 15"

| | | |
|-----------|----------|---|
| N 9010303 | AELN15-0 | "0" Illuminated number, height 38 cm, (15"), blue |
| N 9010304 | AELN15-1 | "1" Illuminated number, height 38 cm, (15"), blue |
| N 9010305 | AELN15-2 | "2" Illuminated number, height 38 cm, (15"), blue |
| N 9010306 | AELN15-3 | "3" Illuminated number, height 38 cm, (15"), blue |
| N 9010307 | AELN15-4 | "4" Illuminated number, height 38 cm, (15"), blue |
| N 9010308 | AELN15-5 | "5" Illuminated number, height 38 cm, (15"), blue |
| N 9010309 | AELN15-6 | "6" Illuminated number, height 38 cm, (15"), blue |
| N 9010310 | AELN15-7 | "7" Illuminated number, height 38 cm, (15"), blue |
| N 9010311 | AELN15-8 | "8" Illuminated number, height 38 cm, (15"), blue |
| N 9010312 | AELN15-9 | "9" Illuminated number, height 38 cm, (15"), blue |

Illuminated numbers 20"

| | | |
|-----------|--------|---|
| N 9010287 | AELN-0 | "0" Illuminated number, height 38 cm, (20"), blue |
| N 9010288 | AELN-1 | "1" Illuminated number, height 38 cm, (20"), blue |
| N 9010289 | AELN-2 | "2" Illuminated number, height 38 cm, (20"), blue |
| N 9010290 | AELN-3 | "3" Illuminated number, height 38 cm, (20"), blue |
| N 9010291 | AELN-4 | "4" Illuminated number, height 38 cm, (20"), blue |
| N 9010292 | AELN-5 | "5" Illuminated number, height 38 cm, (20"), blue |
| N 9010293 | AELN-6 | "6" Illuminated number, height 38 cm, (20"), blue |
| N 9010294 | AELN-7 | "7" Illuminated number, height 38 cm, (20"), blue |
| N 9010295 | AELN-8 | "8" Illuminated number, height 38 cm, (20"), blue |
| N 9010296 | AELN-9 | "9" Illuminated number, height 38 cm, (20"), blue |

Pod connector for each number

| | | |
|-----------|----------|---|
| N 9010297 | AEL-PODB | Pod connector, black colour, order 1 per number or letter |
| N 9010298 | AEL-PODW | Pod connector, white colour, order 1 per number or letter |

Inverter

| | | |
|-----------|-----------|--|
| N 9010299 | AEL-PX300 | Inverter for 1 or 2 numbers or letters |
| N 9010300 | AEL-PX450 | Inverter for 3 numbers or letters |

Infrared/thermal power supply

| | | |
|-----------|----------|---|
| N 9010301 | AEL-PXIR | Infrared/thermal power supply for 1, 2 or 3 numbers and letters |
|-----------|----------|---|

Flashers and relays

Available is a wide range of flashers for LED and halogen lights. There are different models, like for flashing mode, simultaneous flashing, alternated flashing, etc.



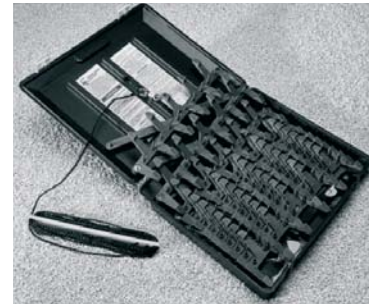
| REF. | MOD. | DESCRIPTION |
|---------|-----------|--|
| 650201 | INTELLI-F | Intelli-Flash, (8) flash patterns, (2) outputs - 6Amp, 12V |
| 9019034 | FHL2 | 95 FPM, (2) 10 amp loads w/ high-beam override |
| RI-V12 | RI-FSV12 | Vama Flashing relay, alternate & simultaneous, (2) wholes (2) lamps, 55w 12V |
| RI-V24 | RI-FSV24 | Vama Flashing relay, alternate & simultaneous, (2) wholes (2) lamps, 55w 24V |
| 2006021 | SF-20A | Speaker failure detection sensor, 12V |
| 2006024 | SF-20A-24 | Speaker failure detection sensor, 24V |
| 2006022 | SF-20L | Lamp failure detection sensor, 12V |



STINGER

Stinger spike system is designed for tire deflation devices. The Stinger spike system comes ready to use. Simply pull/slide the Stinger system across the road. It will automatically open and expand.

The spikes automatically rocks toward the tire, pointing the spikes directly at the tread, allowing the full length of the spike to be used for penetration. The hollow spikes control the tire deflation rate, preventing a blowout and sudden loss of control.



| REF. MOD. | DESCRIPTION |
|-----------|-------------|
|-----------|-------------|

| | |
|--|--|
| | Spike System includes 40 feet of rope with handle, spike replacement kit, spike insertion tool, and hard storage case |
|--|--|

| | |
|--|---------------------|
| | Spike System |
|--|---------------------|

| | |
|-------|---|
| 90210 | Spike system, 2010 Metro, 10' |
| 90200 | Spike system, 2015 Trooper, 15.5' |
| 90225 | Spike system, 2025 Defender, 25' |
| 93200 | Spike system, 3015 XL, 15.5' with 2.1" spikes |

| | |
|--|---|
| | Training Systems (unit with out spikes plus training manual and video) |
|--|---|

| | |
|-------|--------------------------------|
| 90035 | Training Unit, 15.5' with case |
|-------|--------------------------------|

| | |
|--|-----------------------------|
| | Accessories and Kits |
|--|-----------------------------|

| | |
|-------|--|
| 50035 | Spike insertion tools |
| 90026 | Replacement spike kit, Series 2000, 10 spikes, tip guards and sleeves |
| 90027 | Replacement spike kit, Rat Trap II, 4 spikes |
| 93026 | Replacement spike kit, Series XL, (10) spikes, tip guards, and sleeves |

Risk Reduction: Priority Signaling

Increasing number of vehicles, slow, difficult and heavy traffic, driver distraction caused by radios, cell phones, conversations with other passengers, etc, hinder the work of emergency vehicles when they need to use its right of way, or indicate their presence at any time.

To ensure own and other citizens safety, emergency professionals should equip their vehicles with effective optical and acoustic signalling.

Optics and Acoustics Signs

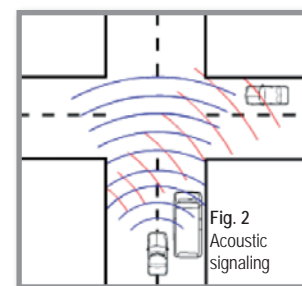
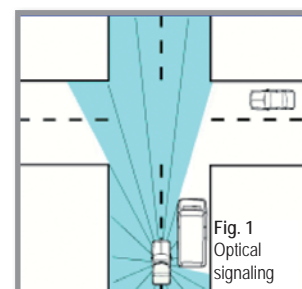
In most European countries, priority vehicles must be identified by warning blue lights and sirens.

Optical signal (priority lights) is only visible with no obstacles between it and the observer. Once perceived by this observer, emergency vehicle identification is safe and immediate.

(See Fig.1)

Audible signal (siren) is perceptible even if vehicle is not on observer's visual field, although by this way he does not identify easily priority vehicle. (See Fig.2)

Both systems are complementary and their combination ensures accurate identification, early enough to get a quick and safely passageway.



Light Sources and European Regulation

In Europe, warning lights must comply with R65 Regulation from Geneva Accords, which regulate flash frequency, intensity, colour, temperature, sealing, etc.

Lights regulations can be grouped into three categories: rotating (halogen lamp rotating beam), strobe (gas discharge lamp xenon) and LED diodes (light emitting diodes). Three technologies are used on emergency vehicles signalisation.

R65 Regulation allows an emergency vehicle to be equipped with two warning lights, or even more, synchronized in two groups.

Siren Sounds and Regulation

In Europe does not exist in a common regulation for sirens use on emergency vehicles.

Several regulations cover different sound pressure in dB, harmonic frequencies and sound patterns. FEDERAL SIGNAL VAMA has got different versions available, approved in all European countries, which accurately reproduce different required sounds.

The obtained signal is amplified by the speaker, in order to reach different sound pressures.

▶ **Non-regulated priority lights**

Nowadays, directional lights have been used to enhance other vehicle priority lights.

Some countries have regulations for this kind of lights, including blue colour, halogen, flashing strobe xenon or LEDs lights.

▶ **Traffic Signalling for stopped or slow vehicles**

As important as optical and acoustics of a vehicle, traffic signals for a perfect identification of stopped or slow vehicles became an important part of emergency warning lights.

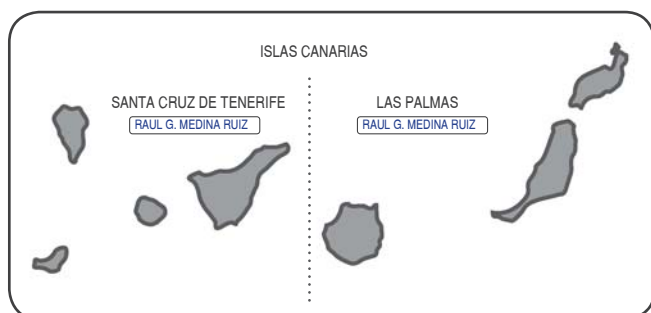
Blue lights help in this case, but rear-facing amber lights are more effective. These could be halogen, strobes, LED lights or directional warning lights (SignalMaster).

▶ **Other supplemental warning lights**

According to their different functions, emergency vehicles could use auxiliary lights to make emergency situations more comfortable, safe and effective.

These lights emit white light whose beam could be concentrated or diffused. According to their function, they can be safety lights, work lights, side lights, etc.







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