

# High-Intensity 50 000 cd

ICAO Traficom HI 50 000 cd  
ICAO MI Type B/C 2000 cd

**OBELUX**  
AVIATION LIGHTS

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## Optical Characteristics:

- ▶ 50 000 cd @ Day
- ▶ 10 000 cd @ Twilight
- ▶ 2 000 cd @ Night
- ▶ Colour aviation WHITE and RED
- ▶ NVG compliant infrared (850nm)
- ▶ Horizontal beam 360°
- ▶ Vertical beam 3°

## Specifications met

ICAO International Standards and Recommended Practices: Aerodromes Annex 14 Volume 1, 8th Edition, July 2018, Chapter 6: Medium-intensity Type B/C.

Finnish Transport and Communications Agency, Traficom

Ohje tuulivoimaloiden päivämerkintään, lentoestevaloihin sekä valojen ryhmytykseen. 7.9.2020 (FIN)



Photo only for illustration.

## High-Intensity White and Red Dual 50 000 cd LED Aviation Obstruction Lights

Obelux high-intensity stand-alone white 50 000 cd and medium-intensity red 2 000 cd model is used for marking tall structures, such as wind turbines, transmission masts, chimneys, broadcast masts, etc. The product offers unique features such as incorporated fault monitoring, photocell, GPS synchronization, and it supports both stand-alone and Modbus operation as a part of Obelux aviation light system network.

### Key Features

- ▶ Based on LED technology
- ▶ 50 000 cd WHITE flashing and 2 000 cd RED fixed or flashing
- ▶ Supports both stand-alone and Modbus operations
- ▶ Suitable for Offshore environment
- ▶ Incorporated GPS synchronisation
- ▶ Adjustable luminous output levels 10%, 30%, and 100%
- ▶ Incorporated photocell and fault monitoring
- ▶ Hot start feature for radar controlled systems
- ▶ Design lifetime more than 20 years
- ▶ 5-year warranty- the longest in the industry

## Electrical Characteristics

- ▶ Operating voltage (ACW):  
Nominal 100-240 V<sub>AC</sub> ± 10%, 50Hz / 60Hz ± 6%  
Range 90-265 V<sub>AC</sub>
- ▶ Operating voltage (DC): 20-60 V<sub>DC</sub>
- ▶ Flash rates: 20/30/40/60 fpm
- ▶ Meets standards  
EMC (Emissions): EN 61000-6-4  
EMC (Immunity): EN 61000-6-2
- ▶ Overvoltage protection
- ▶ Alarm relay output NO/NC dry contact  
Switch voltage / max current: 50 V<sub>DC</sub> / 1 A, 250 V<sub>AC</sub> / 6 A
- ▶ Modbus RS-485 isolated

## Power Consumptions

- ▶ ACW versions:
  - 40W @ Day (WHITE, 40 fpm)
  - 8W @ Night (WHITE, 40 fpm)
  - 10W @ Night (WHITE+IR, 40 fpm)
  - 8W @ Night (RED, 40 fpm)
  - 11W @ Night (RED+IR, 40 fpm)
  - 25W @ Night (RED, fixed)
  - 30W @ Night (RED+IR, fixed)

(Power consumptions are for 200ms flash pulse length)

## Recommended Cables:

- ▶ Power (ACW): 3G1,5 mm<sup>2</sup> or 3G2,5 mm<sup>2</sup>
- ▶ Data: 3x0,5 mm<sup>2</sup> - 3x1,5 mm<sup>2</sup> shielded
- ▶ Alarm: 3x0,5 mm<sup>2</sup> - 3x1,5 mm<sup>2</sup>
- ▶ Power + Alarm: 6G1,5 mm<sup>2</sup>, 6G2,5 mm<sup>2</sup> or hybrid cable
- ▶ Power + Data: Hybrid cable (e.g., Servo cable)

- ▶ Terminals can be used to distribute power and data to another light head (6 core or hybrid cable must be used).

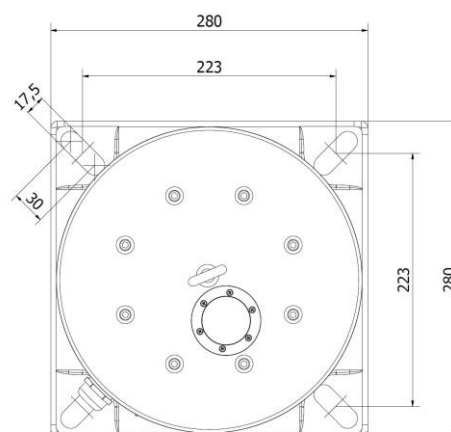
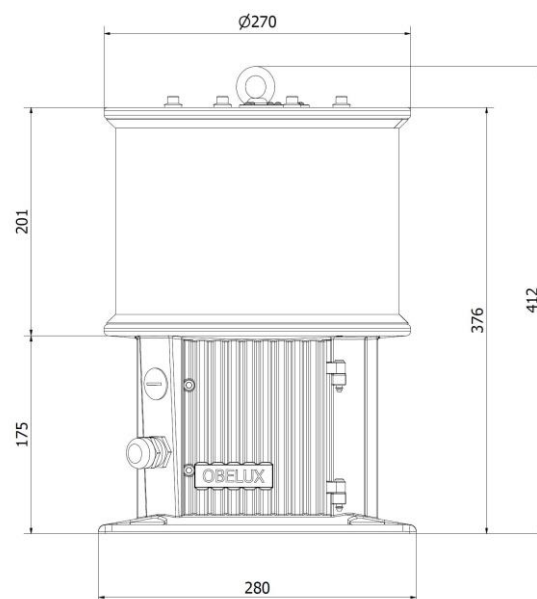
## Options

- ▶ Cold-climate version (CCV)
- ▶ NVG compliant infrared (IR)
- ▶ Mounting sets (see appendix A)
- ▶ Pre-attached cables (see appendixes B and C)

*Note: Add-on cards available for MI and MID models not compatible with HID series!*

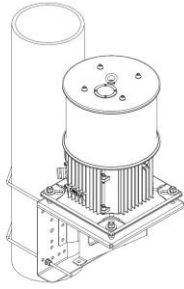
## Mechanical Characteristics

- ▶ Painted marine grade aluminium body (C5MHigh)
- ▶ Glass cover
- ▶ Degree of protection IP66
- ▶ Operating temperature range -40...+55 °C
- ▶ Mounting 240x240mm, Ø17mm holes
- ▶ Height 412 mm, length 280 mm
- ▶ Weight 14 kg
- ▶ Cable glands M25 for Ø11-17 mm cables (seal for Ø6-13 mm cables included)



| Order code:     | Output:   | ICAO:       | Operating voltage:     | GPS: | Infrared: | CCV: | Photocell and Fault monitoring: | Packing dimensions:     |
|-----------------|-----------|-------------|------------------------|------|-----------|------|---------------------------------|-------------------------|
| HID-ACWGAM      | 50 000 cd | HI+Type B/C | 90-265 V <sub>AC</sub> | Yes  | No        | No   | Yes                             | 460x330x330 mm, 15,5 kg |
| HID-ACWIRGAM    | 50 000 cd | HI+Type B/C | 90-265 V <sub>AC</sub> | Yes  | Yes       | No   | Yes                             | 460x330x330 mm, 15,5 kg |
| HID-ACWCCVGAM   | 50 000 cd | HI+Type B/C | 90-265 V <sub>AC</sub> | Yes  | No        | Yes  | Yes                             | 460x330x330 mm, 15,5 kg |
| HID-ACWCCVIRGAM | 50 000 cd | HI+Type B/C | 90-265 V <sub>AC</sub> | Yes  | Yes       | Yes  | Yes                             | 460x330x330 mm, 15,5 kg |
| HID-DCGAM       | 50 000 cd | HI+Type B/C | 20-60 V <sub>DC</sub>  | Yes  | No        | No   | Yes                             | 460x330x330 mm, 15,5 kg |
| HID-DCIRGAM     | 50 000 cd | HI+Type B/C | 20-60 V <sub>DC</sub>  | Yes  | Yes       | No   | Yes                             | 460x330x330 mm, 15,5 kg |
| HID-DCCCVGAM    | 50 000 cd | HI+Type B/C | 20-60 V <sub>DC</sub>  | Yes  | No        | Yes  | Yes                             | 460x330x330 mm, 15,5 kg |
| HID-DCCCVIRGAM  | 50 000 cd | HI+Type B/C | 20-60 V <sub>DC</sub>  | Yes  | Yes       | Yes  | Yes                             | 460x330x330 mm, 15,5 kg |

## **Appendix A: Available mounting sets**



### **Obelux MS-MIV1001 / 1002:**

- ▶ Mounting set for wall mounting and for 60-200mm tubes.
- ▶ Mounting set includes bracket, U-bolts, and fasteners.
- ▶ Mounting bracket AISI 304 stainless steel or AISI 316 acid-proof steel, other parts AISI 316 acid-proof steel.

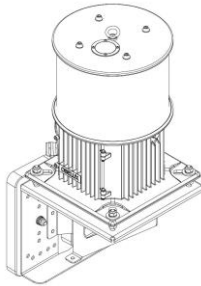
More detailed mechanical data: see MS-MIV1001/1002 datasheet.

▶ **Order Code: MS-MIV1001**

(AISI 304 stainless steel bracket)

▶ **Order Code: MS-MIV1002**

(AISI 316 acid-proof steel bracket)



### **Obelux MS-MIV1003:**

- ▶ Mounting set for wall mounting with magnets.
- ▶ Mounting set includes bracket, magnets, and fasteners.
- ▶ Magnet holder marine grade anodised aluminium, other parts AISI 316 acid-proof steel.

More detailed mechanical data: see MS-MIV1003 datasheet.

▶ **Order Code: MS-MIV1003**

## Appendix B: Pre-attached cable (HAN6)

### Cable specification:

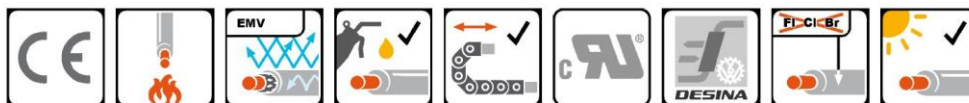
#### SERVO cable FACAB EFK SERVO-CP acc. to Siemens Standard 6FX8008+



|                                         |                               |
|-----------------------------------------|-------------------------------|
| Specification/standard:                 | UL/CSA                        |
| conductor material:                     | bare copper                   |
| conductor construction:                 | fine stranded class 6         |
| insulation:                             | polypropylen                  |
| screen:                                 | Cu-braid, tinned              |
| screen coverage:                        | 85 %                          |
| sheathing material:                     | polyurethan                   |
| colour of outer sheath:                 | orange RAL 2003 (DESINA)      |
| flame retardant:                        | VDE 0482-332-1-2/IEC 60332-1  |
| halogen free:                           | DIN EN 50267/IEC 60754        |
| oil resistant:                          | EN 60811-2-1                  |
| max. operating temperature, fixed:      | -50 - +80 °C                  |
| temperature, moved/during installation: | -40 - +80 °C                  |
| bending radius, fixed installation:     | 5 x DA                        |
| bending radius, moved application:      | 7,5 x DA                      |
| Bending cycles, max.:                   | 5 Mio.                        |
| Moving distance, max.:                  | 100 m                         |
| nominal voltage U <sub>0</sub> :        | 600 V                         |
| nominal voltage U:                      | 1 kV                          |
| test voltage:                           | 4 kV                          |
| core identification:                    | acc. to Siemens specification |

**Application:** Low capacity connection cable between servo controller and frequency driven motor. For application in machine tools and drag chains with medium mechanical stress. Please pay attention to our instructions for the use of drag-chain cables.

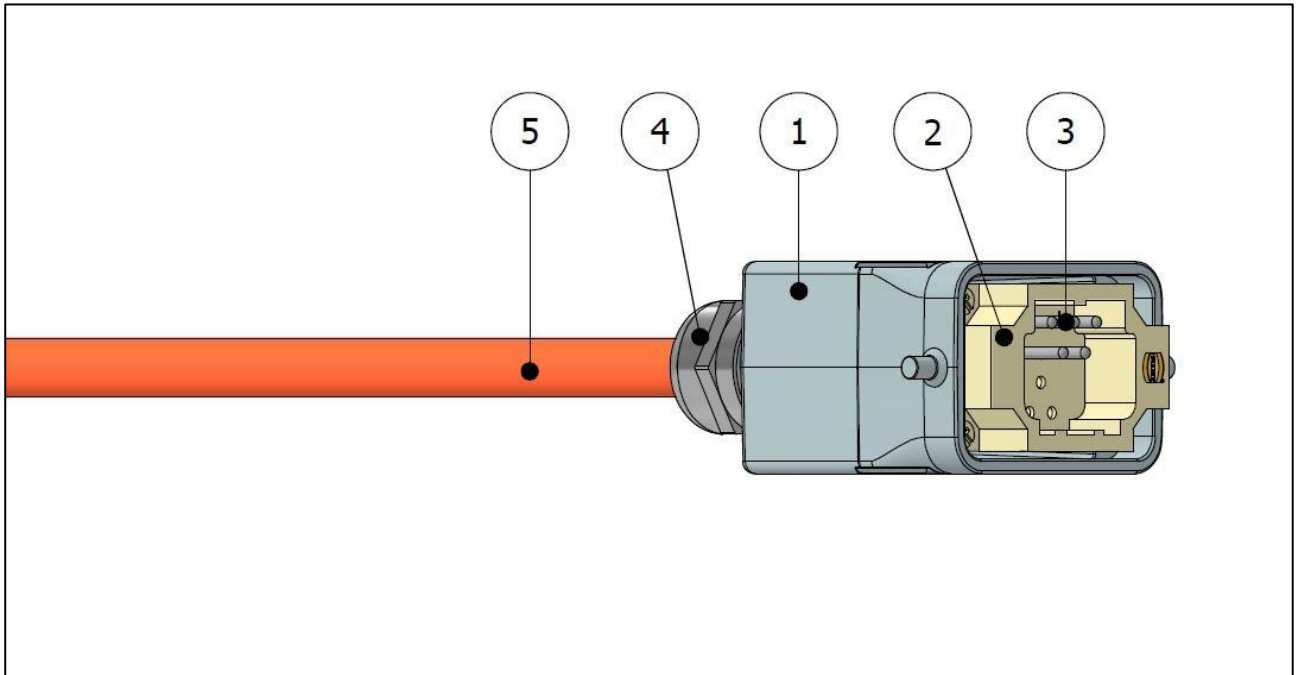
**Additional information:** Siemens part numbers (6FX...) are registered trade marks of Siemens AG and used only as reference.



The products and information presented here are for technical calculation only. They are subject to technical progress and in no way represent the ability of shipment. Outer diameters are approximately.

| p/n    | part name                                                     | D <sub>A</sub><br>[mm] | G<br>[kg] | Cu<br>[kg/km] | p/n    | part name                                                  | D <sub>A</sub><br>[mm] | G<br>[kg] | Cu<br>[kg/km] |
|--------|---------------------------------------------------------------|------------------------|-----------|---------------|--------|------------------------------------------------------------|------------------------|-----------|---------------|
| 035291 | [4G25] 0,6/1 kV OR cUL - 6FX8008-1BB25                        | 25,4                   | 1523      | 1100          | 035298 | [4G6+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA41              | 16,8                   | 540       | 365           |
| 035292 | [4G35] 0,6/1 kV OR cUL - 6FX8008-1BB35                        | 28,6                   | 2080      | 1510          | 035299 | [4G10+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA516FX8008-1BA5 | 19,9                   | 782       | 560           |
| 035293 | [4G50] 0,6/1 kV OR cUL - 6FX8008-1BB50                        | 33,4                   | 2710      | 2130          | 035300 | [4G16+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA616FX8008-1BA6 | 22,5                   | 1101      | 816           |
| 035294 | [4G70] 0,6/1 kV OR cUL - 6FX8008-1BB70                        | 42,5                   | 4123      | 3025          | 035301 | [4G25+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA256FX8008-1BA2 | 26,2                   | 1490      | 1172          |
| 035295 | [4G1,5+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA116FX8008-1BA1   | 11,6                   | 244       | 163,5         | 035302 | [4G35+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA356FX8008-1BA3 | 29,8                   | 2015      | 1595          |
| 035296 | [4G2,5+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA21 6FX8008-1BA21 | 13,4                   | 310       | 189           | 035303 | [4G50+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA50             | 34                     | 2754      | 2214          |
| 035297 | [4G4+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA316FX8008-1BA3     | 14,8                   | 408       | 260,5         |        |                                                            |                        |           |               |
| DA     | outer diameter                                                |                        |           |               |        |                                                            |                        |           |               |
| G      | weight                                                        |                        |           |               |        |                                                            |                        |           |               |
| Cu     | copper                                                        |                        |           |               |        |                                                            |                        |           |               |

## Connector parts:



- |             |                                          |                |
|-------------|------------------------------------------|----------------|
| 1. Housing: | HAN HC2 Pegs Top Entry M25               | 19 30 006 0446 |
| 2. Insert:  | HAN EE 10pos Male Crimp                  | 09 32 010 3001 |
| 3. Crimp:   | Contact HAN E Male Ag 1,5mm <sup>2</sup> | 09 33 000 6104 |
| 4. Gland:   | M25x1.5 EMC                              |                |
| 5. Cable:   | Servo 4G1,5+(2x1,5)                      |                |

## Connector pinouts:

| Alarm Relay |               | Modbus      |               |
|-------------|---------------|-------------|---------------|
| Pin number: | Designation:  | Pin number: | Designation:  |
| 1           | L (+ with DC) | 1           | L (+ with DC) |
| 2           | N (- with DC) | 2           | N (- with DC) |
| 3           | NO            | 3           | D+            |
| 4           | COM           | 4           | D-            |
| 5           | NC            | 5           | SH            |
| 6           | -             | 6           | -             |
| 7           | -             | 7           | -             |
| 8           | -             | 8           | -             |
| 9           | -             | 9           | -             |
| 10          | -             | 10          | -             |
| PE          | PE            | PE          | PE            |

## Order code:

Syntax for order code: **[Light unit name]-[Cable length]-[Connector type]**  
For "Alarm Relay" pinout: Use GA (instead of GAM) in the product code  
For "Modbus" pinout: Use GAM in the product code

Example: HID-ACWCCVIRGA-2.70M-HAN6 (Alarm Relay, 2,7m cable with HAN6 connector)  
Example: HID-ACWCCVIRGAM-2.70M-HAN6 (Modbus, 2,7m cable with HAN6 connector)

## Appendix C: Pre-attached cable (open ended)

### Cable specification:

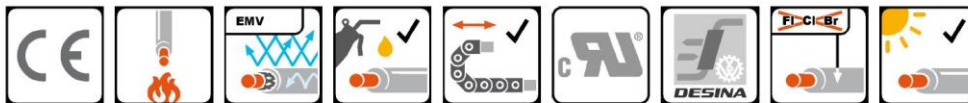
#### SERVO cable FACAB EFK SERVO-CP acc. to Siemens Standard 6FX8008+



|                                         |                               |
|-----------------------------------------|-------------------------------|
| Specification/standard:                 | UL/CSA                        |
| conductor material:                     | bare copper                   |
| conductor construction:                 | fine stranded class 6         |
| insulation:                             | polypropylen                  |
| screen:                                 | Cu-braid, tinned              |
| screen coverage:                        | 85 %                          |
| sheathing material:                     | polyurethan                   |
| colour of outer sheath:                 | orange RAL 2003 (DESINA)      |
| flame retardant:                        | VDE 0482-332-1-2/IEC 60332-1  |
| halogen free:                           | DIN EN 50267/IEC 60754        |
| oil resistant:                          | EN 60811-2-1                  |
| max. operating temperature, fixed:      | -50 - +80 °C                  |
| temperature, moved/during installation: | -40 - +80 °C                  |
| bending radius, fixed installation:     | 5 x DA                        |
| bending radius, moved application:      | 7,5 x DA                      |
| Bending cycles, max.:                   | 5 Mio.                        |
| Moving distance, max.:                  | 100 m                         |
| nominal voltage U <sub>0</sub> :        | 600 V                         |
| nominal voltage U:                      | 1 kV                          |
| test voltage:                           | 4 kV                          |
| core identification:                    | acc. to Siemens specification |

**Application:** Low capacity connection cable between servo controller and frequency driven motor. For application in machine tools and drag chains with medium mechanical stress. Please pay attention to our instructions for the use of drag-chain cables.

**Additional information:** Siemens part numbers (6FX...) are registered trade marks of Siemens AG and used only as reference.

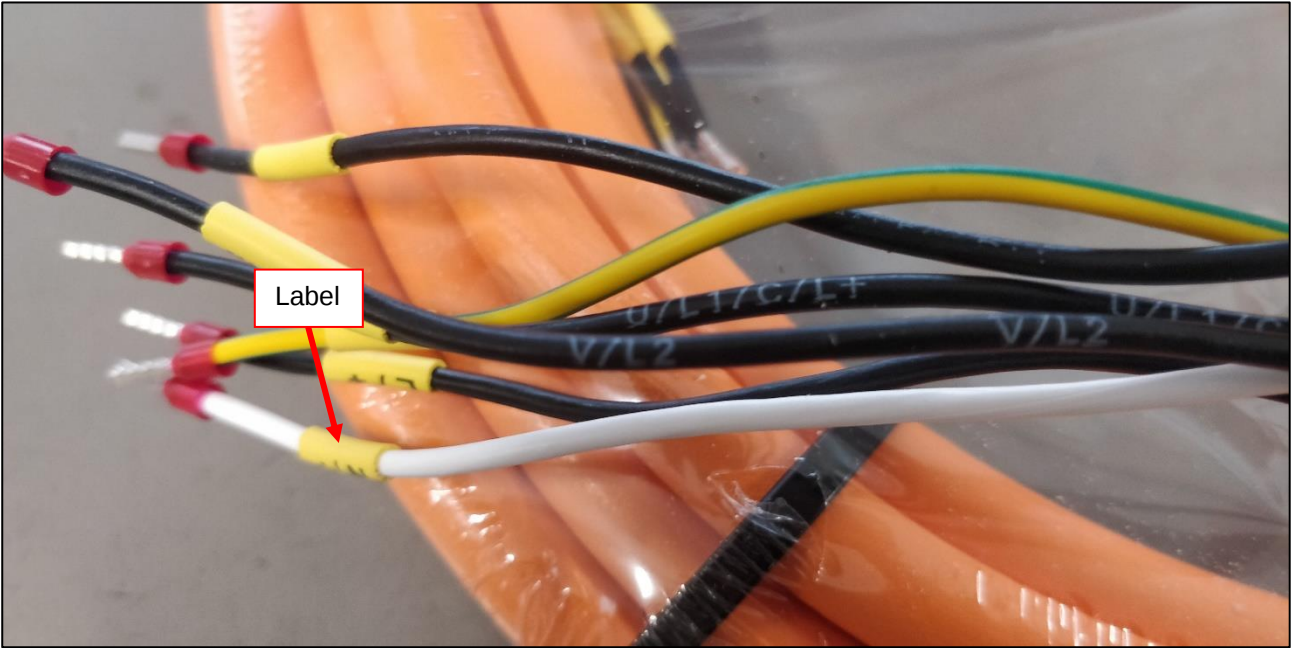


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| p/n    | part name                                                     | D <sub>A</sub><br>[mm] | G<br>[kg] | Cu<br>[kg/km] |
|--------|---------------------------------------------------------------|------------------------|-----------|---------------|
| 035291 | [4G25] 0,6/1 kV OR cUL - 6FX8008-1BB25                        | 25,4                   | 1523      | 1100          |
| 035292 | [4G35] 0,6/1 kV OR cUL - 6FX8008-1BB35                        | 28,6                   | 2080      | 1510          |
| 035293 | [4G50] 0,6/1 kV OR cUL - 6FX8008-1BB50                        | 33,4                   | 2710      | 2130          |
| 035294 | [4G70] 0,6/1 kV OR cUL - 6FX8008-1BB70                        | 42,5                   | 4123      | 3025          |
| 035295 | [4G1,5+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA116FX8008-1BA1   | 11,6                   | 244       | 163,5         |
| 035296 | [4G2,5+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA21 6FX8008-1BA21 | 13,4                   | 310       | 189           |
| 035297 | [4G4+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA316FX8008-1BA3     | 14,8                   | 408       | 260,5         |
| 035298 | [4G6+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA41                 | 16,8                   | 540       | 365           |
| 035299 | [4G10+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA516FX8008-1BA5    | 19,9                   | 782       | 560           |
| 035300 | [4G16+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA616FX8008-1BA6    | 22,5                   | 1101      | 816           |
| 035301 | [4G25+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA256FX8008-1BA2    | 26,2                   | 1490      | 1172          |
| 035302 | [4G35+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA356FX8008-1BA3    | 29,8                   | 2015      | 1595          |
| 035303 | [4G50+(2X1,5)] 0,6/1 kV OR cUL - 6FX8008-1BA50                | 34                     | 2754      | 2214          |

|    |                |
|----|----------------|
| DA | outer diameter |
| G  | weight         |
| Cu | copper         |

Wire designations:



| Alarm Relay |               | Modbus |               |
|-------------|---------------|--------|---------------|
| Label:      | Designation:  | Label: | Designation:  |
| L / +       | L (+ with DC) | L / +  | L (+ with DC) |
| N / -       | N (- with DC) | N / -  | N (- with DC) |
| PE          | PE            | PE     | PE            |
| NO          | NO            | D+     | D+            |
| COM         | COM           | D-     | D-            |
| NC          | NC            | SH     | SH            |

Order code:

Syntax for order code: **[Light unit name]-[Cable length]**  
For “Alarm Relay” pinout: Use GA (instead of GAM) in the product code  
For “Modbus” pinout: Use GAM in the product code

Example:       HID-ACWCCVIRGA-5.0M                   (Alarm Relay, 5,0m cable)  
Example:       HID-ACWCCVIRGAM-5.0M                (Modbus, 5,0m cable)