

## S300 PR



Heavy duty sensor for outdoor applications and harsh environments

- Industrial plastic housing with IP67 mechanical protection
- Defogging system function
- Double independent timing functions with double time scale from 0-2s or 0-10s, One-Delay, Off Delay, ONE SHOT



## APPLICATIONS

- Packaging end of line, palletizers
- Outdoor or indoor gates control
- Automotive plants
- Automated warehousing

(\*)DC models:  
ATEX II 3DG

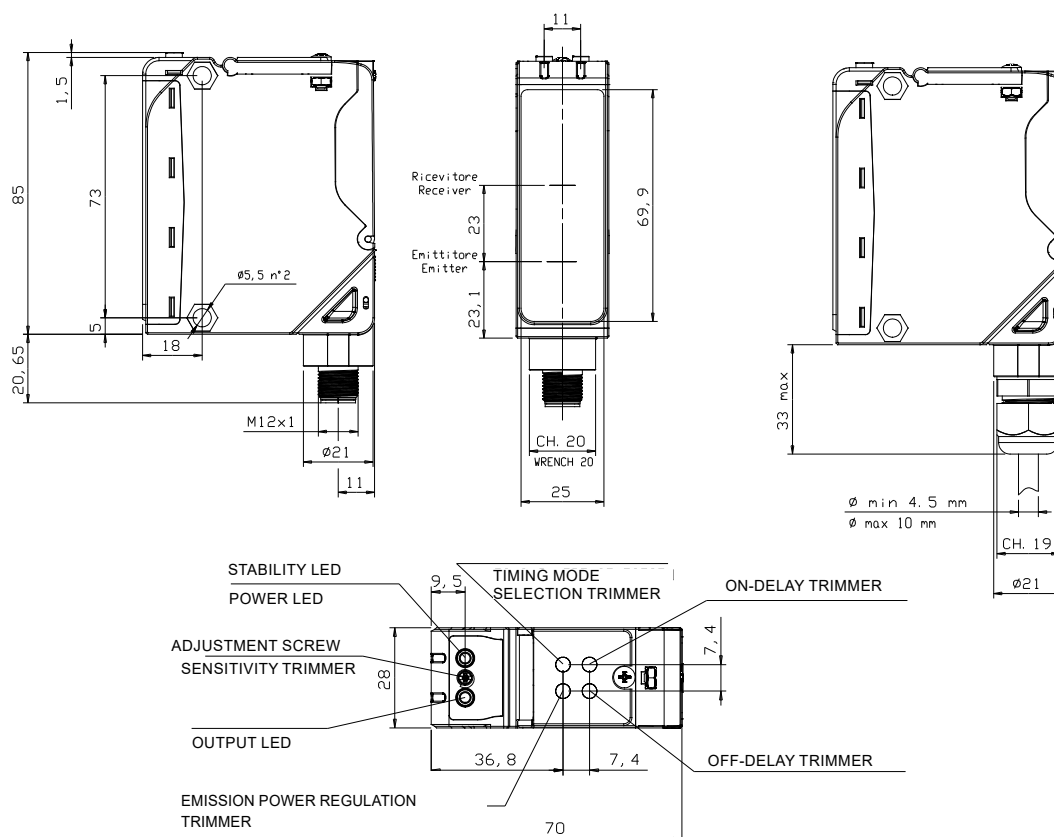
## S300 PA

|                                    |           |                          |
|------------------------------------|-----------|--------------------------|
| <b>Through beam</b>                |           | 0...60 m                 |
| <b>Polarized retroreflective</b>   |           | 0,1...22 m               |
| <b>Diffuse proximity</b>           |           | 0,05...5 m               |
| <b>Background suppression</b>      |           | 0,4...2,5 m              |
| <b>Power supply</b>                | Vdc       | 10...30 V                |
|                                    | Vac       |                          |
|                                    | Vac/dc    | 24...240 Vac/24...60 Vdc |
| <b>Output</b>                      | PNP       |                          |
|                                    | NPN       |                          |
|                                    | NPN/PNP   | •                        |
|                                    | relay     | •                        |
|                                    | other     |                          |
| <b>Connection</b>                  | cable     |                          |
|                                    | connector | •                        |
|                                    | pig-tail  |                          |
| <b>Approximate dimensions (mm)</b> |           | 25x100x70                |
| <b>Housing material</b>            |           | PBT                      |
| <b>Mechanical protection</b>       |           | IP67                     |

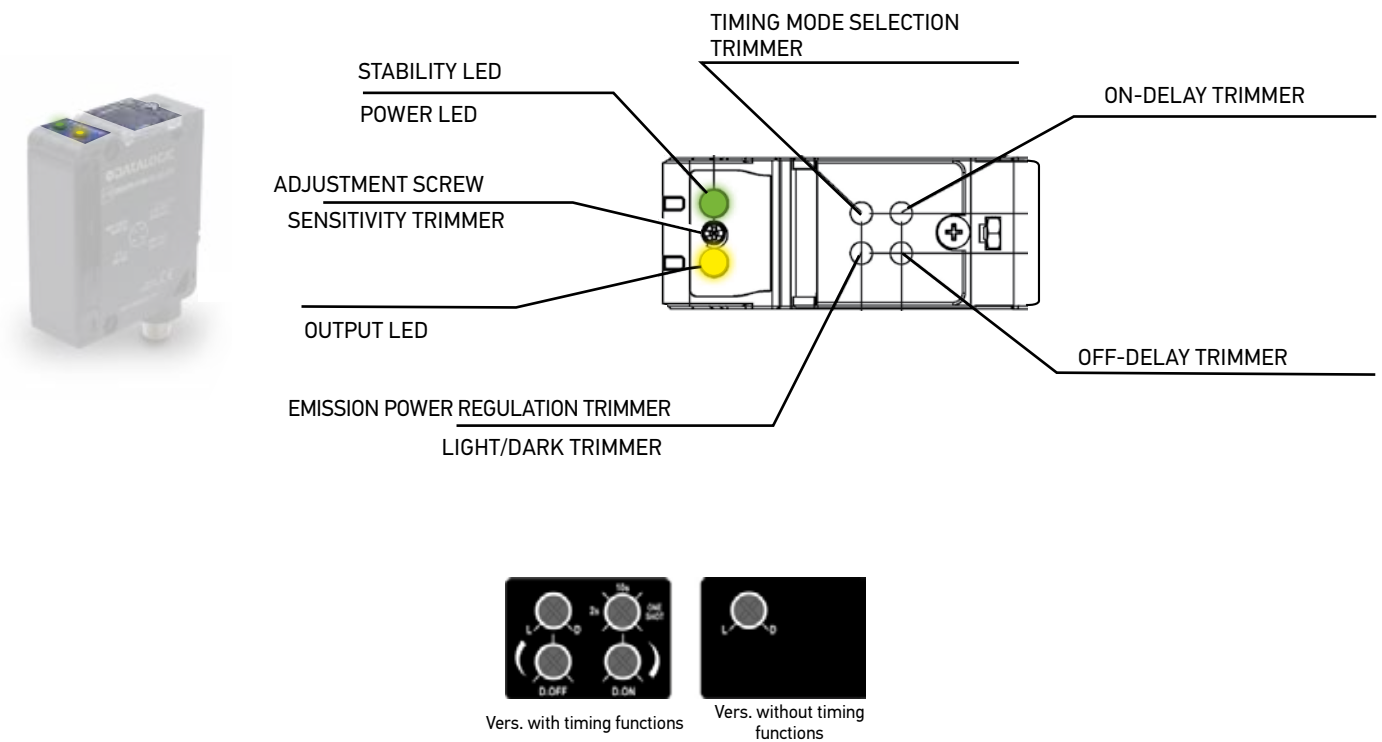
# TECHNICAL DATA

|                                              |                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Power supply</b>                          | 10 ... 30 Vdc (mod. S300...2/5)<br>24...240 Vac/24...60 Vdc (mod. S300...1)                                                                                                                                                                                                                                       |
| <b>Ripple</b>                                | 10% max.                                                                                                                                                                                                                                                                                                          |
| <b>Consumption (output current excluded)</b> | 30 mA max. (mod. S300...2/5-B/C)<br>35 mA max. (mod. S300...2/5-M)<br>25 mA max. (mod. S300...2/5-F)<br>20 mA max. (mod. S300...2/5-G)<br>3 VA max. (mod. S300...1)                                                                                                                                               |
| <b>Light emission</b>                        | red LED 660 nm (mod. S300...B)<br>IR LED 880 nm (mod. S300...C/G/M)                                                                                                                                                                                                                                               |
| <b>Setting</b>                               | sensitivity trimmer, DARK/LIGHT trimmer (mod. S300...F/C/B)<br>15 turns adjustment screw/DARK/LIGHT trimmer (mod. S300...M)<br>emission power regulation trimmer (mod. S300...G)<br>versions with timing functions: time base selection and one shot trimmer/ON DELAY trimmer/OFF DELAY trimmer (mod. S300...x06) |
| <b>Indicators</b>                            | yellow OUTPUT LED (excl. mod. S300...G)<br>green STABILITY LED, POWER LED (mod. S300...G)                                                                                                                                                                                                                         |
| <b>Output</b>                                | PNP or NPN open collector (mod. S300...2/5); Electromechanical SPDT 250 Vac/30 Vdc (mod. S300...1)                                                                                                                                                                                                                |
| <b>Output current</b>                        | 100 mA (mod. S300...2/5)<br>3 A max. (mod. S300...1)                                                                                                                                                                                                                                                              |
| <b>Saturation voltage</b>                    | 2,4 V max.                                                                                                                                                                                                                                                                                                        |
| <b>Response time</b>                         | 1 ms (mod. S300...2/5-B/C/F/G)<br>2 ms (mod. S300...2/5-M)<br>20 ms (mod. S300...1)                                                                                                                                                                                                                               |
| <b>Switching frequency</b>                   | 500 Hz (mod. S300...2/5-B/C/F/G)<br>250 Hz (mod. S300...2/5-M)<br>25 Hz (mod. S300...1)                                                                                                                                                                                                                           |
| <b>Connection</b>                            | terminal block, M12 4-pole connector (only DC mod.)                                                                                                                                                                                                                                                               |
| <b>Dielectric strength</b>                   | 500 Vac, 1 min between electronics and housing                                                                                                                                                                                                                                                                    |
| <b>Insulating resistance</b>                 | >20 MΩ, 500 Vdc between electronics and housing                                                                                                                                                                                                                                                                   |
| <b>Electrical protection</b>                 | class 2 (mod. S300...2/5)                                                                                                                                                                                                                                                                                         |
| <b>Mechanical protection</b>                 | IP67 (IEC/EN60529)/cable gland EN50262                                                                                                                                                                                                                                                                            |
| <b>Ambient light rejection</b>               | according to EN 60947-5-2                                                                                                                                                                                                                                                                                         |
| <b>Vibrations</b>                            | 0,5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6)                                                                                                                                                                                                                                            |
| <b>Shock resistance</b>                      | 11 ms (30 G) 6 shock for every axis (EN60068-2-27)                                                                                                                                                                                                                                                                |
| <b>Housing material</b>                      | PBT 30% glass fiber-reinforced                                                                                                                                                                                                                                                                                    |
| <b>Lens material</b>                         | frontal window and lens in PC                                                                                                                                                                                                                                                                                     |
| <b>Operating temperature</b>                 | -40 ... 55 °C                                                                                                                                                                                                                                                                                                     |
| <b>Storage temperature</b>                   | -40 ... 70 °C                                                                                                                                                                                                                                                                                                     |
| <b>Weight</b>                                | 140 g (mod. S300...2/5), 150 g (mod. S300...1)                                                                                                                                                                                                                                                                    |

# DIMENSIONS

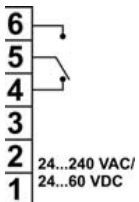


# INDICATORS AND SETTINGS

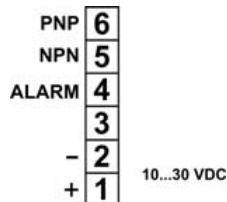


# CONNECTIONS

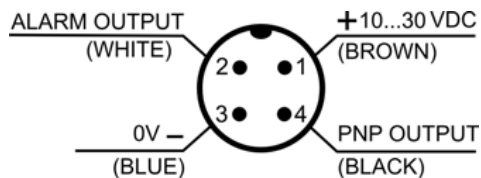
## MODELS



## DC MODELS

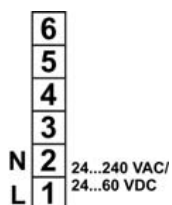


## M12 CONNECTOR (only DC models)

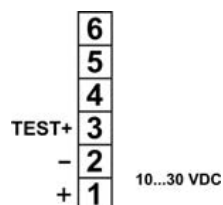


Through beam emitter

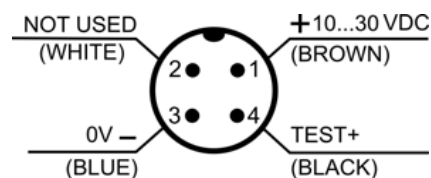
## AC MODELS



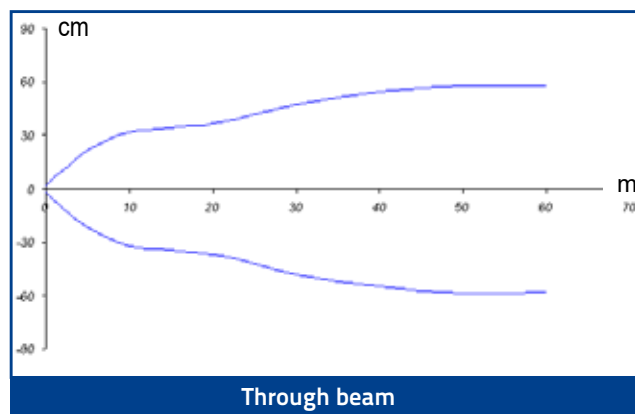
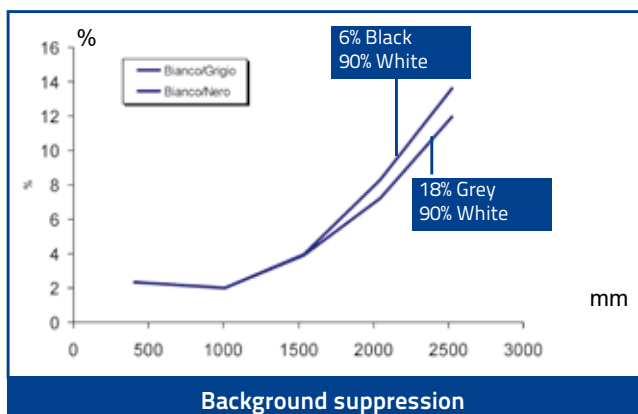
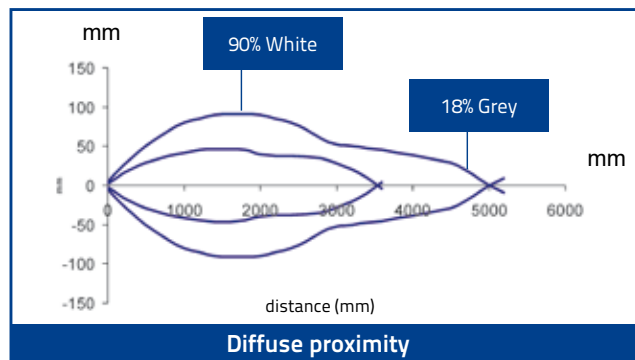
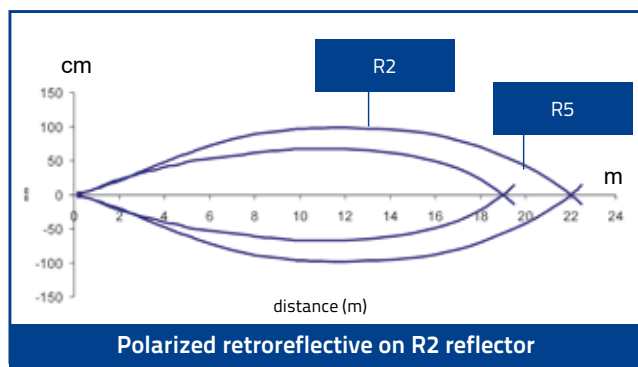
## DC MODELS



## M12 CONNECTOR (only DC models)



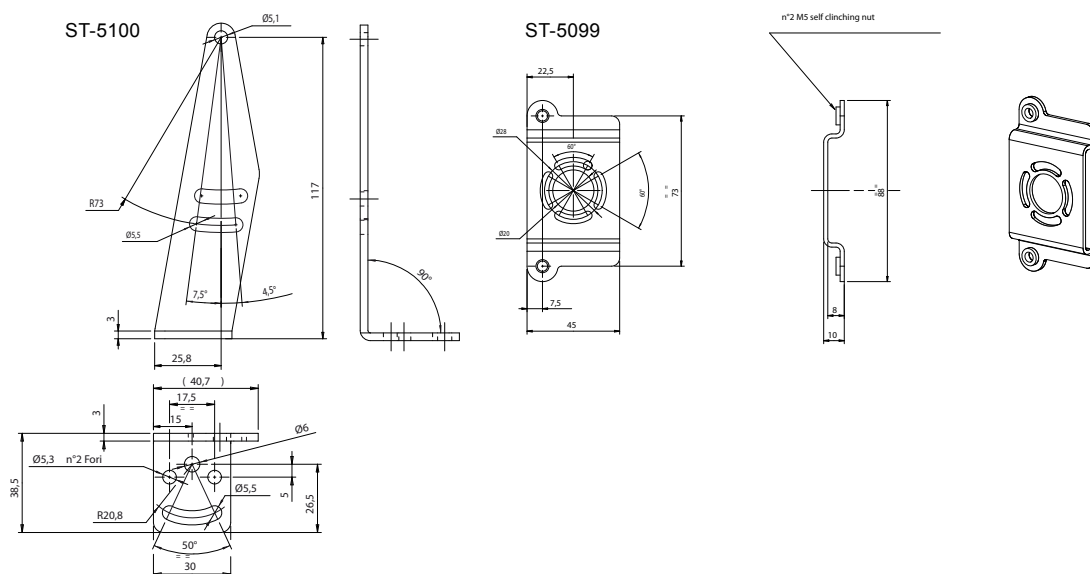
## DETECTION DIAGRAMS



## MODEL SELECTION AND ORDER INFORMATION

| OPTIC FUNCTION            | OUTPUT  | CONNECTION           | SETTING                                                  | MODEL              | ORDER No.          |
|---------------------------|---------|----------------------|----------------------------------------------------------|--------------------|--------------------|
| Polarized retroreflective | NPN/PNP | Vdc - Terminal block | Sensitivity and D/L trimmers                             | S300-PR-2-B01-OC   | 951451000          |
|                           |         |                      | Timing, sensitivity and D/L trimmers                     | S300-PR-2-B06-OC   | 951451010          |
|                           |         | Vdc - M12 Connector  | Sensitivity and D/L trimmers                             | S300-PR-5-B01-OC   | 951451020          |
|                           |         |                      | Timing, sensitivity and D/L trimmers                     | S300-PR-5-B06-OC   | 951451030          |
|                           | Relay   | Vac - Terminal block | Sensitivity and D/L trimmers                             | S300-PR-1-B01-RX   | 951451040          |
|                           |         |                      | Timing, sensitivity and D/L trimmers                     | S300-PR-1-B06-RX   | 951451050          |
|                           |         |                      | Timing, sensitivity and D/L trimmers; defogging function | S300-PR-1-B06-RX-M | 951451060          |
| Diffused proximity        | NPN/PNP | Vdc - Terminal block | Sensitivity and D/L trimmers                             | S300-PR-2-C01-OC   | 951451070          |
|                           |         |                      | Timing, sensitivity and D/L trimmers                     | S300-PR-2-C06-OC   | 951451080          |
|                           |         | Vdc - M12 Connector  | Sensitivity and D/L trimmers                             | S300-PR-5-C01-OC   | 951451090          |
|                           |         |                      | Timing, sensitivity and D/L trimmers                     | S300-PR-5-C06-OC   | 951451100          |
|                           | Relay   | Vac - Terminal block | Sensitivity and D/L trimmers                             | S300-PR-1-C01-RX   | 951451110          |
|                           |         |                      | Timing, sensitivity and D/L trimmers                     | S300-PR-1-C06-RX   | 951451120          |
|                           |         |                      | Timing, sensitivity and D/L trimmers; defogging function | S300-PR-1-C06-RX-M | 951451130          |
| Through beam receiver     | NPN/PNP | Vdc - Terminal block | Sensitivity and D/L trimmers                             | S300-PR-2-F01-OC   | 951451210          |
|                           |         |                      | Timing, sensitivity and D/L trimmers                     | S300-PR-2-F06-OC   | 951451220          |
|                           |         | Vdc - M12 Connector  | Sensitivity and D/L trimmers                             | S300-PR-5-F01-OC   | 951451230          |
|                           |         |                      | Timing, sensitivity and D/L trimmers                     | S300-PR-5-F06-OC   | 951451240          |
|                           | Relay   | Vac - Terminal block | Sensitivity and D/L trimmers                             | S300-PR-1-F01-RX   | 951451250          |
|                           |         |                      | Timing, sensitivity and D/L trimmers                     | S300-PR-1-F06-RX   | 951451260          |
|                           |         |                      | Timing, sensitivity and D/L trimmers; defogging function | S300-PR-1-F06-RX-M | 951451270          |
| Through beam emitter      | -       | Vdc - Terminal block | Emission power regulation trimmer                        | S300-PR-2-G00-EX   | 951451280          |
|                           |         | Vdc - M12 Connector  |                                                          | S300-PR-5-G00-EX   | 951451290          |
|                           |         |                      |                                                          | S300-PR-1-G00-EX   | 951451300          |
|                           |         | Vac - Terminal block |                                                          | Defogging function | S300-PR-1-G00-EX-M |
| Background suppression    | NPN/PNP | Vdc - Terminal block | Sensitivity and D/L trimmers                             | S300-PR-2-M01-OC   | 951451140          |
|                           |         |                      | Timing, sensitivity and D/L trimmers                     | S300-PR-2-M06-OC   | 951451150          |
|                           |         | Vdc - M12 Connector  | Sensitivity and D/L trimmers                             | S300-PR-5-M01-OC   | 951451160          |
|                           |         |                      | Timing, sensitivity and D/L trimmers                     | S300-PR-5-M06-OC   | 951451170          |
|                           | Relay   | Vac - Terminal block | Sensitivity and D/L trimmers                             | S300-PR-1-M01-RX   | 951451180          |
|                           |         |                      | Timing, sensitivity and D/L trimmers                     | S300-PR-1-M06-RX   | 951451190          |
|                           |         |                      | Timing, sensitivity and D/L trimmers; defogging function | S300-PR-1-M06-RX-M | 951451200          |

## ACCESSORIES



| MODEL   | DESCRIPTION      | ORDER No. |
|---------|------------------|-----------|
| ST-5099 | mounting BRACKET | 95ACC2830 |
| ST-5100 | mounting BRACKET | 95ACC2840 |

## CABLES

| TYPE                 | DESCRIPTION                     | LENGTH                | MODEL         | ORDER No. |
|----------------------|---------------------------------|-----------------------|---------------|-----------|
| Axial M12 Connector  | 4-pole, grey, P.V.C.            | 3 m                   | CS-A1-02-G-03 | 95A251380 |
|                      |                                 | 5 m                   | CS-A1-02-G-05 | 95A251270 |
|                      |                                 | 7 m                   | CS-A1-02-G-07 | 95A251280 |
|                      |                                 | 10 m                  | CS-A1-02-G-10 | 95A251390 |
|                      | 4-pole, P.U.R.                  | 2 m                   | CS-A1-02-R-02 | 95A251540 |
|                      |                                 | 5 m                   | CS-A1-02-R-05 | 95A251560 |
| Radial M12 Connector | 4-pole, grey, P.V.C.            | 3 m                   | CS-A2-02-G-03 | 95A251360 |
|                      |                                 | 5 m                   | CS-A2-02-G-05 | 95A251240 |
|                      |                                 | 7 m                   | CS-A2-02-G-07 | 95A251245 |
|                      |                                 | 10 m                  | CS-A2-02-G-10 | 95A251260 |
|                      | 4-pole, P.U.R.                  | 2 m                   | CS-A2-02-R-02 | 95A251550 |
|                      |                                 | 5 m                   | CS-A2-02-R-05 | 95A251570 |
| Axial M12 Connector  | 4-pole, shielded, black, P.V.C. | 3 m                   | CV-A1-22-B-03 | 95ACC1480 |
|                      |                                 | 5 m                   | CV-A1-22-B-05 | 95ACC1490 |
|                      |                                 | 10 m                  | CV-A1-22-B-10 | 95ACC1500 |
|                      |                                 | 15 m                  | CV-A1-22-B-15 | 95ACC2070 |
|                      |                                 | 25 m                  | CV-A1-22-B-25 | 95ACC2090 |
| Radial M12 Connector |                                 | 3 m                   | CV-A2-22-B-03 | 95ACC1540 |
|                      | 5 m                             | CV-A2-22-B-05         | 95ACC1550     |           |
|                      | 10 m                            | CV-A2-22-B-10         | 95ACC1560     |           |
| Axial M12 Connector  | 4-pole, U.L., black, P.V.C.     | 3 m                   | CS-A1-02-U-03 | 95ASE1120 |
|                      |                                 | 5 m                   | CS-A1-02-U-05 | 95ASE1130 |
|                      |                                 | 10 m                  | CS-A1-02-U-10 | 95ASE1140 |
|                      |                                 | 15 m                  | CS-A1-02-U-15 | 95ASE1150 |
|                      |                                 | 25 m                  | CS-A1-02-U-25 | 95ASE1160 |
| Radial M12 Connector | 4-pole, black                   | Connector- not cabled | CS-A1-02-B-NC | G5085002  |
|                      |                                 | Connector- not cabled | CS-A2-02-B-NC | G5085003  |

