

# SINGLE BEAM SAFETY SENSORS SAFETY CONTROL UNITS



Installation Flexibility

Long distance

Low temperature with defogging function

4 safety areas controlled with one unit

Double muting

## SENSORS:

- Emitter-receiver photocells with test input
- Type 2 and Type 4 models
- Plastic tubular and MAXI formats
- Up to 50m operating distance
- Class 1 red laser emission models up to 40
- Standard M12 connectors

## CONTROL UNITS:

- Integrated control of 4 single beams and 2 light curtains
- Simple DIP Switch configuration
- Muting functions can be assigned to light curtains or single beams



## APPLICATIONS

- Robots
- Automatic assembling lines
- Palletizers and Depalletizers

## S5-5-G8-62-SG-ST2

| EMITTER/RECEIVER |          |
|------------------|----------|
| G8-62            | Emitter  |
| F8-92            | Receiver |

| TYPE |        |
|------|--------|
| 2    | Type 2 |
| 4    | Type 4 |

## SL5-5-G-82-SG-ST4

| EMITTER/RECEIVER |          |
|------------------|----------|
| G-82             | Emitter  |
| F-92             | Receiver |

## S300-PR-5-G00-EX-M-SG-ST2

| EMITTER/RECEIVER |          |
|------------------|----------|
| G00-EX           | Emitter  |
| F00-OC           | Receiver |

| DEFOGGING FUNCTION |           |
|--------------------|-----------|
| ...                | Standard  |
| M                  | Defogging |

| TYPE |        |
|------|--------|
| 2    | Type 2 |
| 4    | Type 4 |

# TECHNICAL DATA

|                                      | S5                                                     | SL5                        | S300                                               |
|--------------------------------------|--------------------------------------------------------|----------------------------|----------------------------------------------------|
| GENERAL DATA                         |                                                        |                            |                                                    |
| Format                               | M18 Tubular                                            |                            | Rectangular                                        |
| Light Emission                       | Infrared LED 880 nm                                    | Class 1 Red laser (650 nm) | Infrared LED 880 nm                                |
| Type (EN61496-1)                     | 2/4 depending on model                                 | 4                          | 2/4 depending on model                             |
| Effective Aperture Angle (EN61496-2) | -/+ 2.5° for Type 4 models<br>-/+ 5° for Type 2 models |                            |                                                    |
| Operating distance                   | 0 ... 8 m                                              | 0 ... 40 m                 | 0 ... 50 m (S300...ST2)<br>9 ... 40 m (S300...ST4) |
| ELECTRICAL DATA                      |                                                        |                            |                                                    |
| Power supply (Vdc)                   | 24 Vdc ± 15%                                           |                            |                                                    |
| Outputs                              | PNP (short circuit protection)                         |                            |                                                    |
| Output current                       | 100 mA max.                                            |                            |                                                    |
| Response time                        | 1 ms max.                                              |                            |                                                    |
| MECHANICAL AND ENVIRONMENTAL DATA    |                                                        |                            |                                                    |
| Operating temperature                | -25 ... 55°C                                           | -10 ... 50 °C              | -40 ... 55 °C                                      |
| Mechanical protection (EN 60529)     | IP 67                                                  |                            |                                                    |
| Housing Material                     | Polycarbonate, ABS                                     |                            | PBT                                                |
| Window material                      | PMMA                                                   |                            | Polycarbonate                                      |

|                                                              | SG-BWS-T4                     | SG-BWS-T4-2 | SG-BWS-T4-MT      | SG-BWS-T4-2-MT |
|--------------------------------------------------------------|-------------------------------|-------------|-------------------|----------------|
| GENERAL DATA                                                 |                               |             |                   |                |
| PL (EN ISO 13849-1)                                          | e                             |             |                   |                |
| SIL (IEC 61508)                                              | 3                             |             |                   |                |
| ELECTRICAL DATA                                              |                               |             |                   |                |
| Power supply                                                 | 24 Vdc -15/+10%               |             |                   |                |
| PNP Outputs from S5/SL5/S300                                 | 4                             |             |                   |                |
| OSSDs couples from SLC                                       | ---                           |             | 2                 |                |
| Muting inputs                                                | ---                           |             | 4                 |                |
| Test, Reset, Override, EDM, Muting enable, Auto/Man Selector | 3                             |             | 9                 |                |
| Outputs                                                      |                               |             |                   |                |
| Safety outputs                                               | 2 PNP                         |             | 2 NO              |                |
| Muting lamps                                                 | ---                           |             | 2                 |                |
| Test outputs                                                 | 4                             |             | 4                 |                |
| Response time <sup>A</sup>                                   | 29 ms                         | 33 ms       | 35 ms             | 39 ms          |
| MECHANICAL AND ENVIRONMENTAL DATA                            |                               |             |                   |                |
| Operating temperature                                        | 0 ... +55°C                   |             |                   |                |
| Humidity                                                     | 15 ... 95 % (no condensation) |             |                   |                |
| Mechanical protection                                        | IP20                          |             |                   |                |
| FUNCTIONS <sup>B</sup>                                       |                               |             |                   |                |
| Single beams pairs (Rx/Tx) monitored                         | 4                             | 8           | 4                 | 8              |
|                                                              | Automatic/Manual reset        |             |                   |                |
|                                                              | External Device Monitoring    |             |                   |                |
|                                                              | ---                           |             | L/T Muting        |                |
|                                                              | ---                           |             | Double muting     |                |
|                                                              | ---                           |             | Muting Enable     |                |
|                                                              | ---                           |             | Muting timeout    |                |
|                                                              | ---                           |             | Override          |                |
| COMPATIBILITY                                                |                               |             |                   |                |
| Single beam photocells                                       | S5/SL5/S300                   |             |                   |                |
| Safety light curtains                                        | ---                           |             | All DATALOGIC SLC |                |

## NOTES

<sup>A</sup> includes response time of photocells

<sup>B</sup> Functions setting is done through DIP switches in SG-BWS-T4-MT and through wiring in SG-BWS-T4

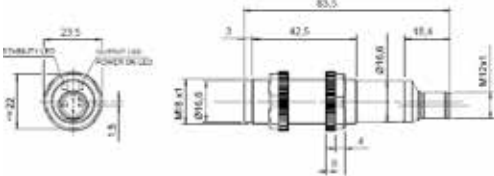
# CONNECTIONS

|      | EMITTER | RECEIVER |
|------|---------|----------|
| S5   |         |          |
| SL5  |         |          |
| S300 |         |          |

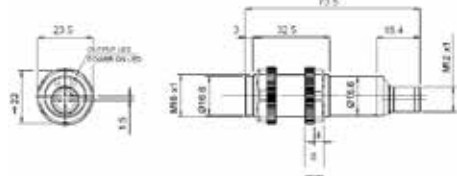
# DIMENSIONS (mm)

## S5

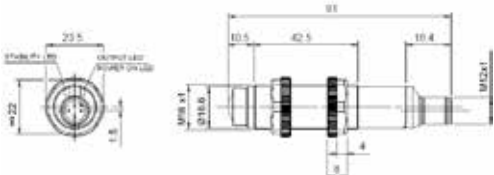
S5-5-F8-SG-ST2



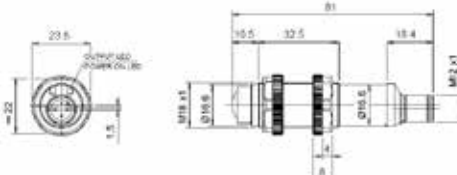
S5-5-G8-62-SG-ST2



S5-5-F8-92-SG-ST4

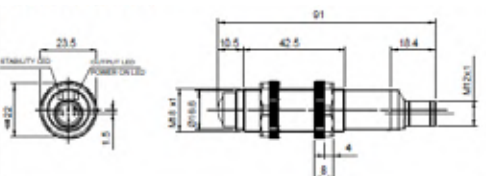


S5-5-G8-62-SG-ST4

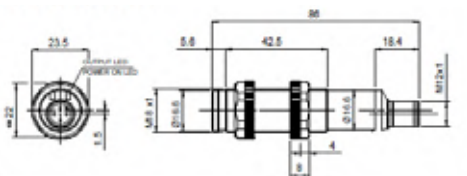


## SL5

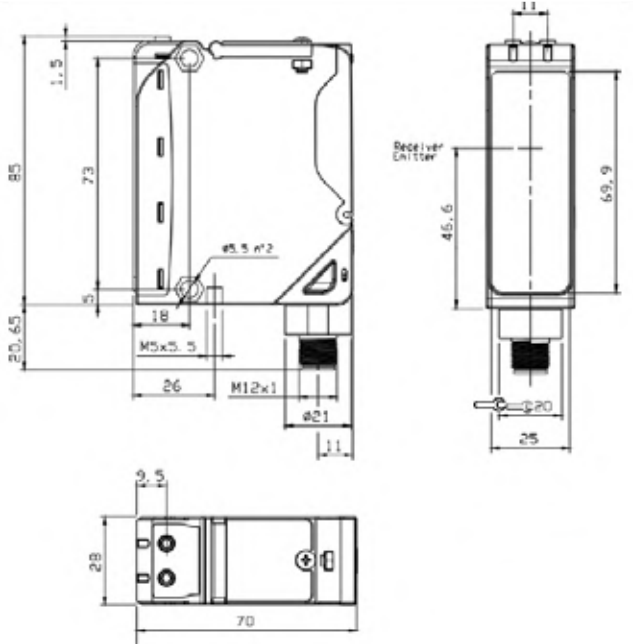
SL5-5-F-92-SG-ST4



SL5-5-G-82-SG-ST4



## S300



# ACCESSORIES

| MODEL        | DESCRIPTION                                                 | ORDER NUMBER |
|--------------|-------------------------------------------------------------|--------------|
| SP-40        | Fixed support for tubular M18 sensors                       | 95ACC1370    |
| SWING-18     | Adjustable support for plastic tubular M18 sensors          | 895000006    |
| MICRO-18     | Support with micrometric regulation for tubular M18 sensors | 95ACC1380    |
| ST-5099      | S300 Fixed bracket                                          | 95ACC2830    |
| ST-5100      | S300 Fixed bracket                                          | 95ACC2840    |
| DataVS-MK-01 | S300 Mounting kit                                           | 95A901380    |

# ORDER CODES

| SAFETY CONTROL UNITS |                                                 |              |
|----------------------|-------------------------------------------------|--------------|
| MODEL                | DESCRIPTION                                     | ORDER NUMBER |
| SG-BWS-T4            | Safety control unit pl=e auto/man edm, 4 beams  | 957051000    |
| SG-BWS-T4-2          | Safety control unit pl=e auto/man edm, 8 beams  | 957051030    |
| SG-BWS-T4-MT         | Safety control unit pl=e double muting, 4 beams | 957051010    |
| SG-BWS-T4-MT-2       | Safety control unit pl=e double muting, 8 beams | 957051040    |

| SINGLE BEAM SAFETY SENSORS |      |                           |                  |              |
|----------------------------|------|---------------------------|------------------|--------------|
|                            | TYPE | MODEL                     | EMITTER/RECEIVER | ORDER NUMBER |
| S5                         | 2    | S5-5-G8-62-SG-ST2         | Emitter          | 952051870    |
|                            |      | S5-5-F8-92-SG-ST2         | Receiver         | 952051890    |
|                            | 4    | S5-5-G8-62-SG-ST4         | Emitter          | 952051910    |
|                            |      | S5-5-F8-92-SG-ST4         | Receiver         | 952051930    |
| SL5                        | 4    | SL5-5-G-82-SG-ST4         | Emitter          | 952501160    |
|                            |      | SL5-5-F-92-SG-ST4         | Receiver         | 952501170    |
| S300                       | 2    | S300-PR-5-G00-EX-SG-ST2   | Emitter          | 951451320    |
|                            |      | S300-PR-5-F00-OC-SG-ST2   | Receiver         | 951451340    |
|                            | 4    | S300-PR-5-G00-EX-SG-ST4   | Emitter          | 951451360    |
|                            |      | S300-PR-5-F00-OC-SG-ST4   | Receiver         | 951451380    |
| S300<br>DEFOGGING          | 2    | S300-PR-5-G00-EX-M-SG-ST2 | Emitter          | 951451330    |
|                            |      | S300-PR-5-F00-OC-M-SG-ST2 | Receiver         | 951451350    |
|                            | 4    | S300-PR-5-G00-EX-M-SG-ST4 | Emitter          | 951451370    |
|                            |      | S300-PR-5-F00-OC-M-SG-ST4 | Receiver         | 951451390    |

1) The photocells listed above are certified and must be used only with safety control units SG-BWS-T4 and SG-BWS-T4-MT. Neither technical and functioning compatibility nor certifications are guaranteed if they are used with other brand control units or old/obsolete DATALOGIC control units.

# CABLE ORDER CODES

| MODEL          | DESCRIPTION                   | ORDER NUMBER |
|----------------|-------------------------------|--------------|
| CS -A1-02-U-03 | 4-pole M12 cable (axial) 3 m  | 95ASE 1120   |
| CS -A1-02-U-05 | 4-pole M12 cable (axial) 5 m  | 95ASE 1130   |
| CS -A1-02-U-10 | 4-pole M12 cable (axial) 10 m | 95ASE 1140   |
| CS -A1-02-U-15 | 4-pole M12 cable (axial) 15 m | 95ASE 1150   |
| CS -A1-02-U-25 | 4-pole M12 cable (axial) 25 m | 95ASE 1160   |