

# S300 PA

**DATALOGIC**



## ADVANCED MAXI PHOTOELECTRIC MULTIVOLTAGE SENSORS

- Industrial plastic housing with IP67 mechanical protection
- Timing function from 0.6-16 s ON delay, OFF delay and ONE SHOT
- Terminal block for both Vdc and Vac/ Vdc free voltage
- Distance trimmer for mechanical background suppression models

### APPLICATIONS

- Packaging end of line, palletizers
- Outdoor or indoor gates control
- Manufacturing plants



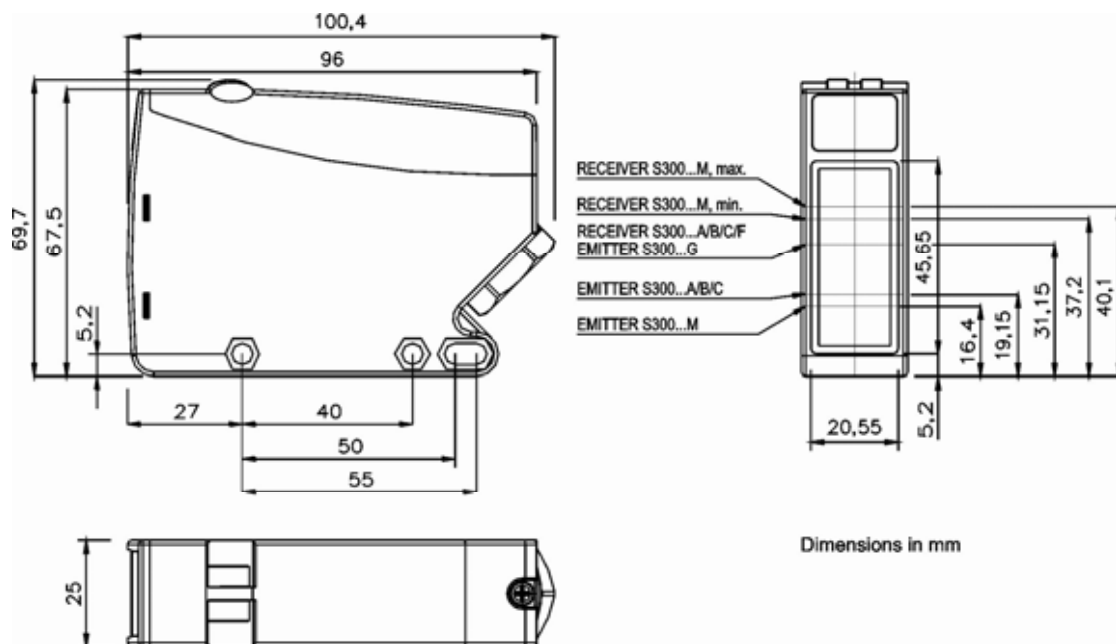
(\*)DC models:  
ATEX II 3DG

| S300 PA                                  |           |                          |
|--|-----------|--------------------------|
| <i>Through beam</i>                      |           | 0...50 m                 |
| <i>Retroreflective (on R2 reflector)</i> |           | 0,1...15 m               |
| <i>Polarized retroreflective</i>         |           | 0,1...10 m               |
| <i>Diffuse proximity</i>                 |           | 0,05...2 m               |
| <i>Background suppression</i>            |           | 0,2...2 m                |
| <i>Power supply</i>                      | Vdc       | 12...30 V                |
|  | Vac       |                          |
|  | Vac/dc    | 24...240 Vac/24...60 Vdc |
| <i>Output</i>                            | PNP       |                          |
|  | NPN       |                          |
|  | NPN/PNP   | •                        |
|  | relay     | •                        |
|  | other     |                          |
| <i>Connection</i>                        | cable     |                          |
|  | connector | •                        |
|  | pig-tail  |                          |
| <i>Approximate dimensions (mm)</i>       |           | 25x100x70                |
| <i>Housing material</i>                  |           | PBT                      |
| <i>Mechanical protection</i>             |           | IP67                     |

# TECHNICAL DATA

|  |  |
|--|--|
| <b>Power supply</b>                          | 12 ... 30 Vdc (mod. S300...2)<br>24...240 Vac/24...60 Vdc (mod. S300...1)  |
| <b>Ripple</b>                                | 10% max.   |
| <b>Consumption (output current excluded)</b> | 35 mA max. (mod. S300...2)<br>3 VA max. (mod. S300...1)  |
| <b>Light emission</b>                        | red LED 660 nm (mod. S300...B)<br>IR LED 940 nm (mod. S300...C)<br>IR LED 880 nm (mod. S300...A/G/M)   |
| <b>Setting</b>                               | sensitivity trimmer (mod. S300...A/B/C/F), DARK/LIGHT dip-switch (mod. S300...A/B/C/F/M)<br>7-turns distance adjustment trimmer (mod. S300...M)<br>dip-switch mode ON delay/OFF delay/ON-OFF delay/single pulse (ONE-SHOT) (mod. S300...x06)<br>timing 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); electromechanical SPDT 250 Vac/30 Vdc (mod. S300...1)   |
| <b>Output current</b>                        | 100 mA (mod. S300...2)<br>3 A max. (mod. S300...1)   |
| <b>Saturation voltage</b>                    | 2,4 V max.   |
| <b>Response time</b>                         | 1 ms (mod. S300...2-A/B/C/M)<br>2 ms (mod. S300...2-F/G)<br>25 ms (mod. S300...1)  |
| <b>Switching frequency</b>                   | 500 Hz (mod. S300...2-A/B/C/M)<br>250 Hz (mod. S300...2-F/G)<br>20 Hz max. (mod. S300...1)   |
| <b>Connection</b>                            | terminal block   |
| <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)  |
| <b>Mechanical protection</b>                 | IP67 (IEC/EN60529)   |
| <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>                 | -25 ... 55 °C  |
| <b>Storage temperature</b>                   | -25 ... 70 °C  |
| <b>Weight</b>                                | 120 g (mod. S300...2), 130 g (mod. S300...1)   |

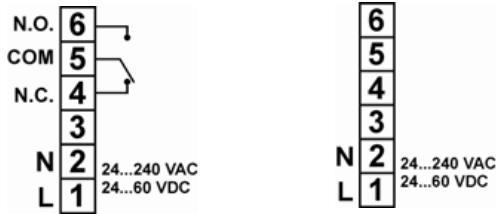
## DIMENSIONS



# CONNECTIONS

## VAC MODELS

Through beam emitter

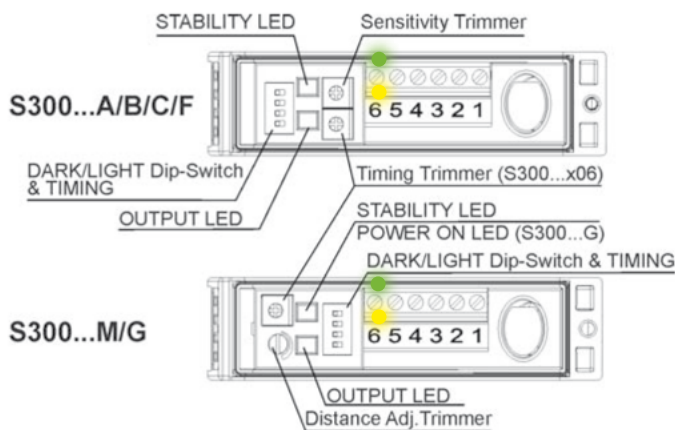


## VDC MODELS

Through beam emitter



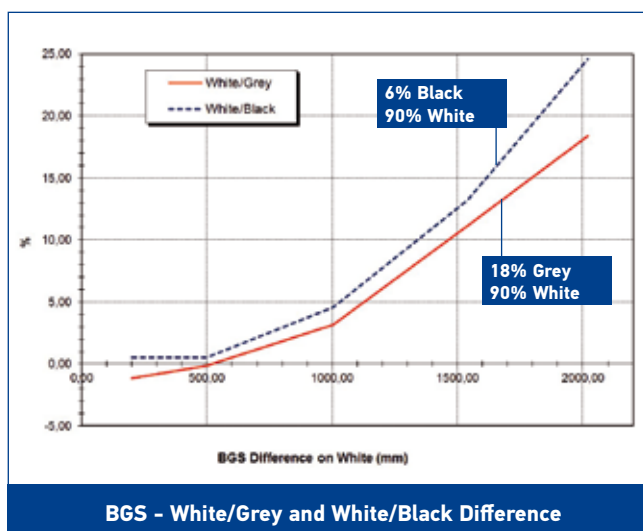
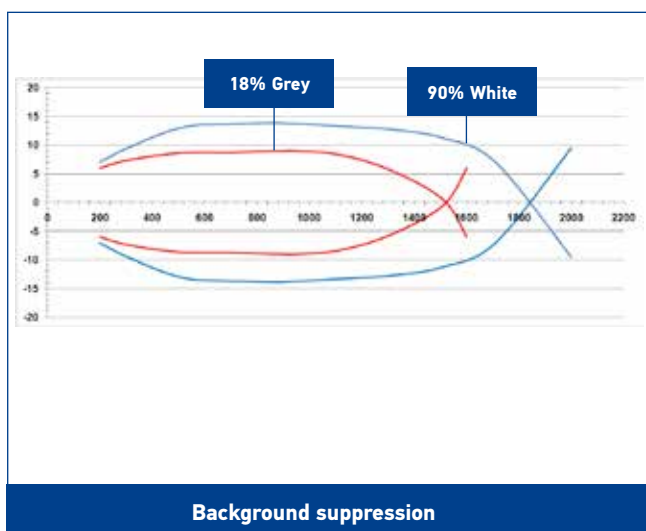
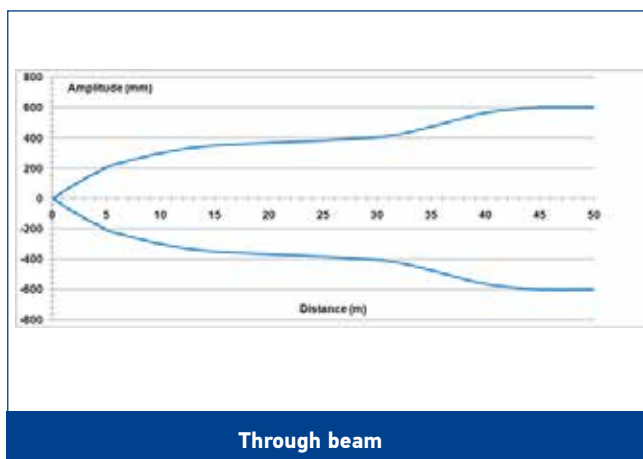
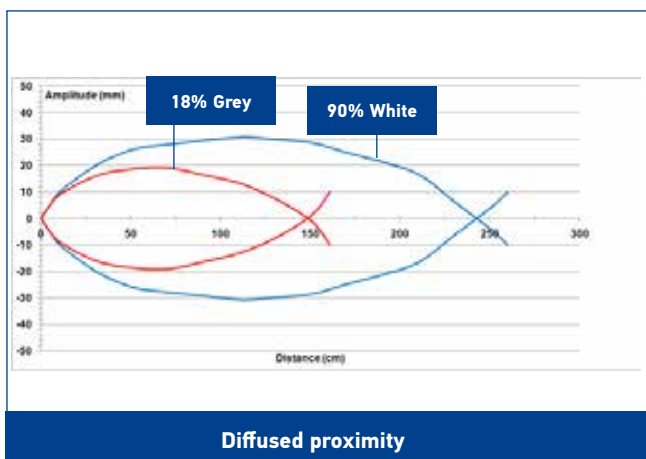
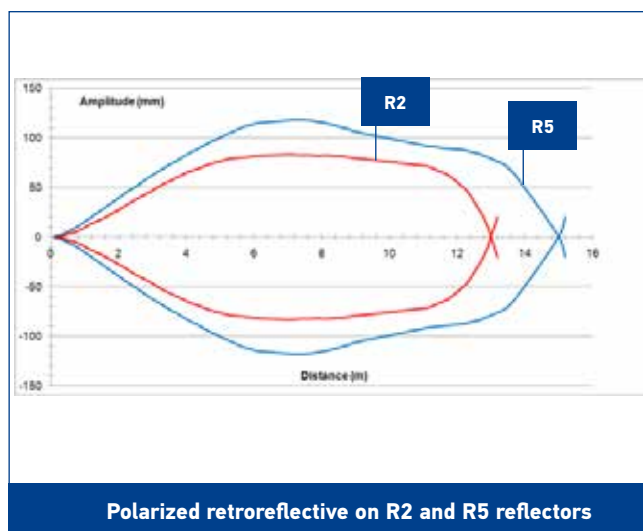
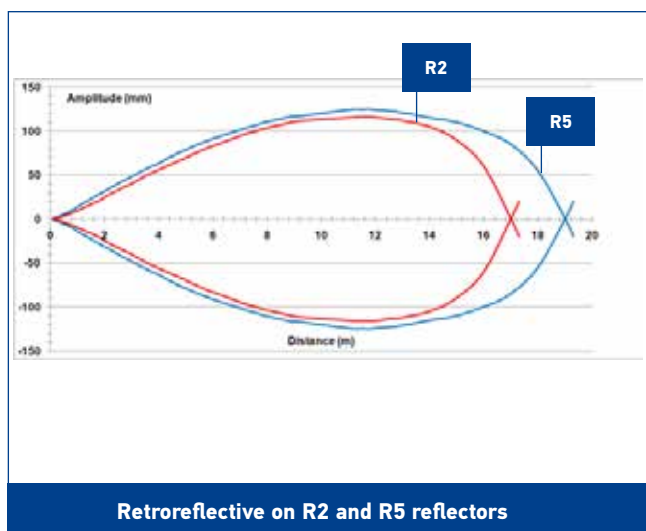
# INDICATORS AND SETTINGS



## Settings

The **M** model presents a **multiturn adjustment screw** for the adjustment of the background suppression distance using a mechanical variation of the optic triangulation angle. The **other models have a mono-turn electronic trimmer** that adjusts the sensitivity and the sensor operating distance. The operating distance can be increased by rotating the screws clockwise. Trimmers can be used to adjust the output activation and deactivation delay time whilst functioning mode selection is performed through DIP SWITCHES.

# DETECTION DIAGRAMS

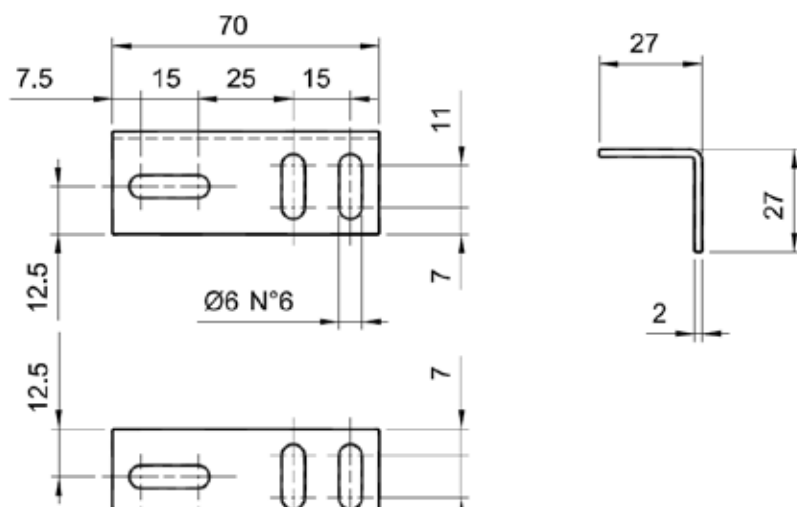


# MODEL SELECTION AND ORDER INFORMATION

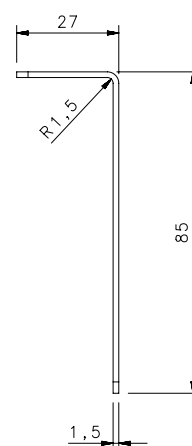
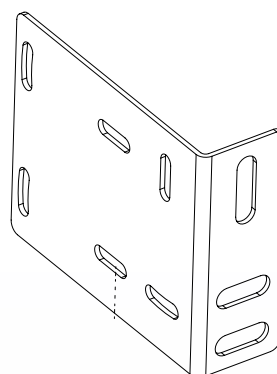
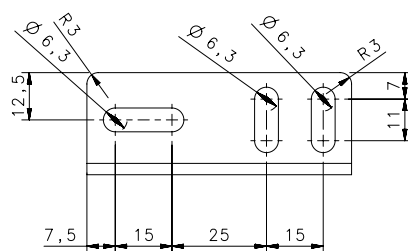
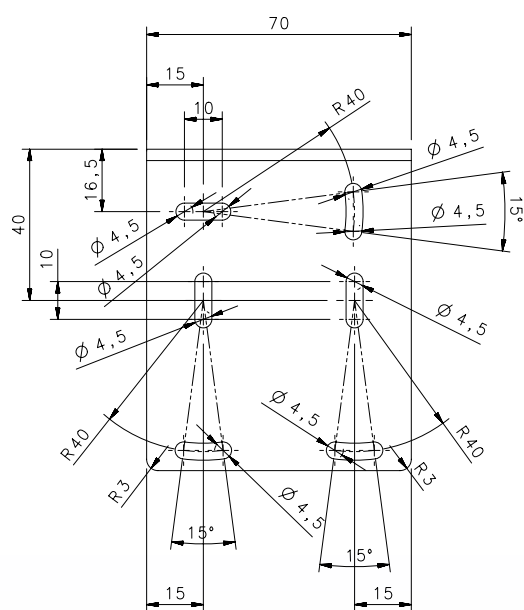
| OPTIC FUNCTION                                   | POWER SUPPLY             | OUTPUT      | SETTING   | MODEL            | ORDER No. |
|--|--------------------------|-------------|---|------------------|-----------|
| Retroreflective<br>(IR LED 880 nm)               | 12...30 Vdc              | NPN/<br>PNP | Sensitivity trimmer and D/L dip-switch                    | S300-PA-2-A01-OC | 951451500 |
|  |                          |             | Timing and sensitivity trimmers, D/L dip-switch           | S300-PA-2-A06-OC | 951451510 |
|  | 24...240 Vac/24...60 Vdc | Relay       | Sensitivity trimmer and D/L dip-switch                    | S300-PA-1-A01-RX | 951451480 |
|  |                          |             | Timing and sensitivity trimmers, D/L dip-switch           | S300-PA-1-A06-RX | 951451490 |
| Polarized<br>retroreflective<br>(red LED 660 nm) | 12...30 Vdc              | NPN/<br>PNP | Sensitivity trimmer and D/L dip-switch                    | S300-PA-2-B01-OC | 951451540 |
|  |                          |             | Timing and sensitivity trimmers, D/L dip-switch           | S300-PA-2-B06-OC | 951451550 |
|  | 24...240 Vac/24...60 Vdc | Relay       | Sensitivity trimmer and D/L dip-switch                    | S300-PA-1-B01-RX | 951451520 |
|  |                          |             | Timing and sensitivity trimmers, D/L dip-switch           | S300-PA-1-B06-RX | 951451530 |
| Diffused proximity<br>(IR LED 940 nm)            | 12...30 Vdc              | NPN/<br>PNP | Sensitivity trimmer D/L dip-switch                        | S300-PA-2-C01-OC | 951451420 |
|  |                          |             | Timing and sensitivity trimmers, D/L dip-switch           | S300-PA-2-C06-OC | 951451430 |
|  | 24...240 Vac/24...60 Vdc | Relay       | Sensitivity trimmer and D/L dip-switch                    | S300-PA-1-C01-RX | 951451400 |
|  |                          |             | Timing and sensitivity trimmers, D/L dip-switch           | S300-PA-1-C06-RX | 951451410 |
| Through beam<br>receiver                         | 12...30 Vdc              | NPN/<br>PNP | Sensitivity trimmer and D/L dip-switch                    | S300-PA-2-F01-OC | 951451600 |
|  |                          |             | Timing and sensitivity trimmers, D/L dip-switch           | S300-PA-2-F06-OC | 951451610 |
|  | 24...240 Vac/24...60 Vdc | Relay       | Sensitivity trimmer and D/L dip-switch                    | S300-PA-1-F01-RX | 951451580 |
|  |                          |             | Timing and sensitivity trimmers, D/L dip-switch           | S300-PA-1-F06-RX | 951451590 |
| Through beam<br>emitter<br>(IR LED 880 nm)       | 12...30 Vdc              | -           | -   | S300-PA-2-G00-EX | 951451570 |
|  | 24...240 Vac/24...60 Vdc |             | -   | S300-PA-1-G00-EX | 951451560 |
| Background<br>suppression<br>(IR LED 880 nm)     | 12...30 Vdc              | NPN/<br>PNP | 7-turns distance adjustment trimmer and /L dip-switch     | S300-PA-2-M01-OC | 951451460 |
|  |                          |             | Timing and 7-turns distance adj. trimmers, D/L dip-switch | S300-PA-2-M06-OC | 951451470 |
|  | 24...240 Vac/24...60 Vdc | Relay       | 7-turns distance adjustment trimmer and D/L dip-switch    | S300-PA-1-M01-RX | 951451440 |
|  |                          |             | Timing and 7-turns distance adj. trimmers, D/L dip-switch | S300-PA-1-M06-RX | 951451450 |

## ACCESSORIES

ST-511



ST-S300-PA



| MODEL      | DESCRIPTION      | ORDER No. |
|------------|------------------|-----------|
| ST-511     | mounting bracket | 95ACC2810 |
| ST-S300-PA | mounting bracket | 95ACC7870 |