# MAXI SENSORS | E | E | C | T | C |



DATALOGIC AUTOMATION

## **S300**

The S300 series of advanced MAXI photoelectric sensors represents the most suitable solution for critical applications thanks to excellent performances and resistance in harsh working conditions. The new series offers a wide range of models and functions in order to guarantee easy use and installation. The new series presents 4 different models with through beam optical function up to 60m, polarized retroreflex at 22m, diffused proximity at 5m and background suppression at 2.5m. All the models are available both Vdc from 10 to 30V and Vac/Vdc free-voltage from 24 to 240V versions. A timing function version and with both the SPDT relay or the bipolar transistor NPN/ PNP open collector outputs is offered. The terminal block connection simplifies and speeds-up the installation procedure, whereas the heavy-duty plastic housing guarantees excellent resistance under harsh use conditions.





- Excellent optical performances
- Sturdy plastic housing with IP67 mechanical protection
- Defogging system function
- Wide range of operating temperatures ranging from -40 to 55°C
- Double independent timing with double time scale from 0-2s and from 0-10s, ON-delay, OFF delay ONE SHOT timing functions
- M12 4-pole rotatable connector for Vdc version and terminal block for Vac/Vdc free-voltage version
- Distance trimmer clutch for mechanical background suppression models

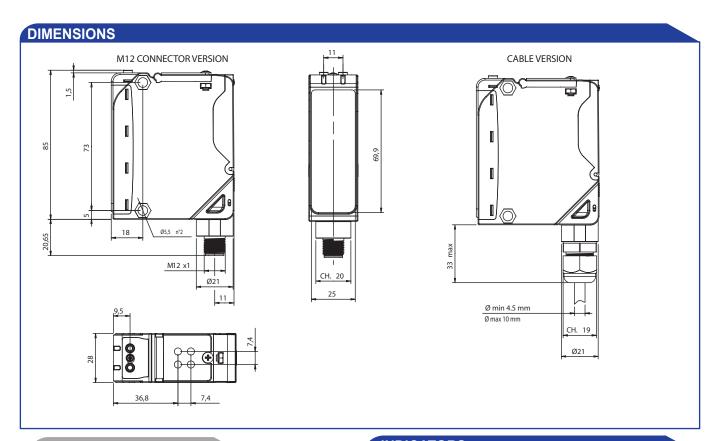
#### **APPLICATIONS**





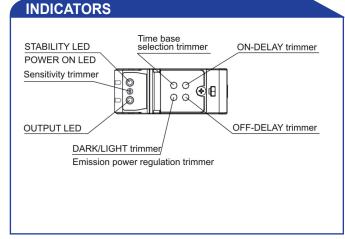


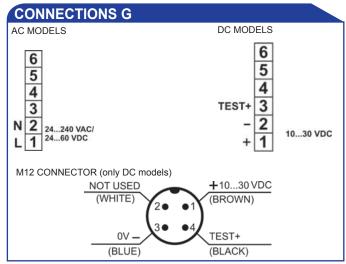
SENSORS

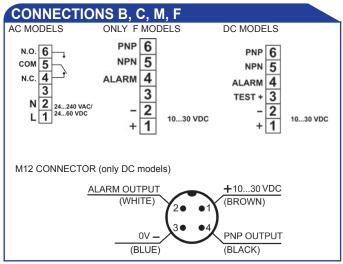


#### SETTINGS

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 as well as to select the functioning mode.









## TECHNICAL DATA

COMMON DATA	S300-B	S300-C	S300-M	S300-F	S300-G
Emission type:	Red LED	IR LED	IR LED		IR LED
Operating distances (typical values):	22m	5m	2.5m	60m	
Setting:	Mono-turn sensitivity trimmers		Multi-turn adjustment screw	Mono-turn sensitivity trimmers	
White/Black difference (90% / 4%)	< 15%				
Indicators:	OUTPUT LED (yellow) STABILITY LED (green)		OUTPUT LED (yellow) STABILITY LED (green)	POWER ON LED (green)	
Operating temperature:	-4055°C				
Storage temperature:	-4070°C				
Dielectric strength:	1500Vac 1 min between electronics and housing				
Insulating resistance:	>20MΩ 500Vdc between electronics and housing				
Ambient light rejection:	according to EN 60947-5-2				
Vibrations:	0.5mm width, 10 55Hz, for each axis (EN60068-2-6)				
Shock resistance:	11ms (30G) 6 shocks for each axis (EN60068-2-27)				
Housing material:	PBT (30% fibre-reinforced glass)				
Lens material:	PC				
Mechanical protection:	IP67 (IEC / EN60529) / NEMA TYPE 1 (For UL / c-UL)				
Connections:	Terminal block (recommended cable diameter: between 8 and 10mm)				

AC VOLTAGE MODELS	S300-B	S300-C	S300-M	S300-F/G
Power supply:	24240Vac / 12240Vdc			
Ripple:	10% max			
Consumption (output current excluded):	< 3VA			
Outputs:	SPDT electromagnetic relay: 250Vac, 30Vdc			
Output current:	3A (resistive load)			
Response time:	20ms max			
Switching frequency:	25Hz			
Weight:	150g			

DC MODELS	S300-B	S300-C	S300-M	S300-F/G
Power supply:	12240Vdc			
Ripple:	10% max			
Consumption (output current excluded):	< 30mA		F= < 25mA G= < 20mA	
Outputs:	PNP and NPN open collector  100mA (resistive load)			
Output current:				
Output saturation voltage:	2.4V max			
Response time:	1m	s max	2ms max	1ms max
Switching frequency:	50	0Hz	250Hz	500Hz
Weight:	140gr			

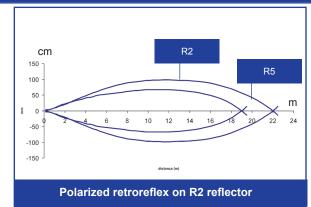


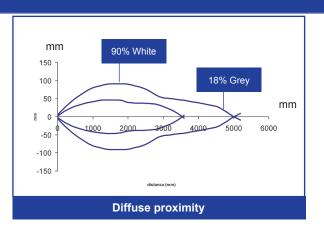
#### TIMING FUNCTION DIAGRAM

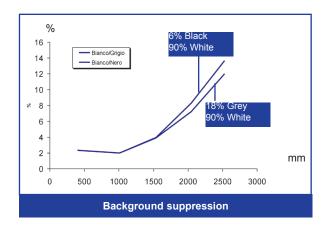
**Four** selectable **timing functions**: one shot, ON delay, OFF delay and normal mode. **Trimmer adjustment** of the functions is available. The timing functions can be particularly useful in applications where the output signal pulse has to be modified.

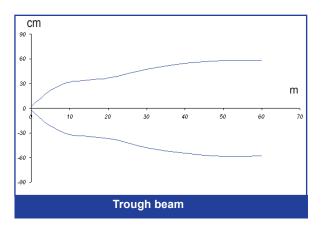
OPERATION MODE	OUTPUTS		
Normal (timing disable)			
ONE SHOT (only with short time base 02 sec.)	Ton   Ton		
ON/OFF Delay	-Ton- Toff- Ton-		
ON Delay			
OFF Delay	Toff   Toff		

#### **DETECTION DIAGRAMS**









### MODEL SELECTION AND ORDER INFORMATION



01 = Adj, no timing

**Power Supply Optics Function** Timing Function Output Version

1 = AC/DC terminal block 2 = DC terminal block 5 = DC M12 4p connector M = Background Suppression

C = Diffused proximity

B = Polarized retroreflex

F = Receiver

00 = no ADJ, no timing OC = PNP/NPN M = Defogging system RX = Relay NO-NC

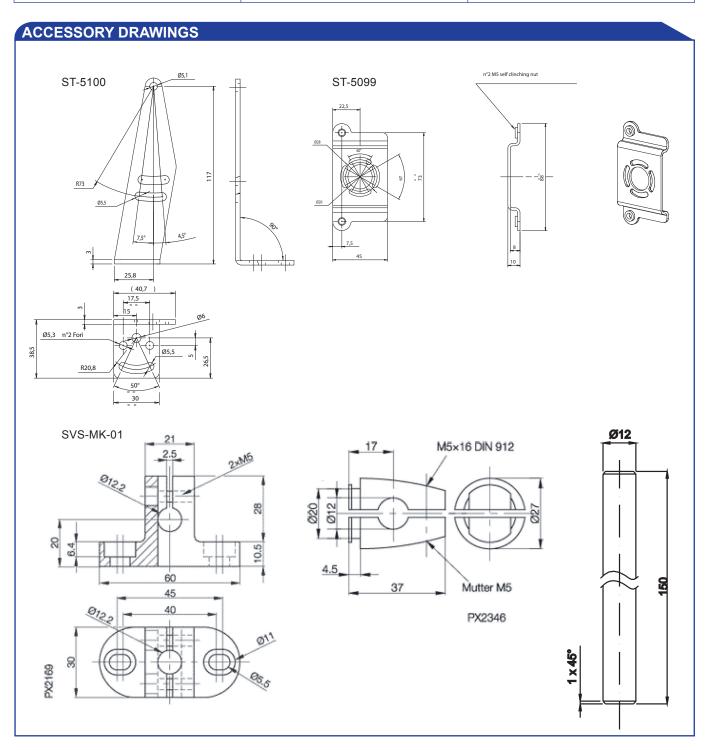
06 = Adj, timing EX = No outputs

G = Emitter

ORDER NO.	MODEL	DESCRIPTION	
951451140	40 S300-PR-2-M01-OC Background suppression, terminal block, DC		
951451150	S300-PR-2-M06-OC	Background suppression, terminal block, DC, with timing function	
951451160	S300-PR-5-M01-OC	Background suppression, M12 connector, DC	
951451170	S300-PR-5-M06-OC	Background suppression, M12 connector, DC, with timing function	
951451180	S300-PR-1-M01-RX	Background suppression, terminal block, AC	
951451190	S300-PR-1-M06-RX	Background suppression, terminal block, AC, with timing function	
951451200	S300-PR-1-M06-RX-M	Background suppression, terminal block, AC, with timing and defogging functions	
951451000	S300-PR-2-B01-OC	Polarized retroreflex, terminal block, DC	
951451010	S300-PR-2-B06-OC	Polarized retroreflex, terminal block, DC, with timing function	
951451020	S300-PR-5-B01-OC	Polarized retroreflex, M12 connector, DC	
951451030	S300-PR-5-B06-OC	Polarized retroreflex, M12 connector, DC, with timing function	
951451040	S300-PR-1-B01-RX	Polarized retroreflex, terminal block, AC	
951451050	S300-PR-1-B06-RX	Polarized retroreflex, terminal block, AC, with timing function	
951451060	S300-PR-1-B06-RX-M	Polarized retroreflex, terminal block, AC, with timing and defogging functions	
951451070	S300-PR-2-C01-OC	Proximity, terminal block, DC	
951451080	S300-PR-2-C06-OC	Proximity, terminal block,DC, with timing function	
951451090	S300-PR-5-C01-OC	Proximity, M12 connector, DC	
951451100	S300-PR-5-C06-OC	Proximity, M12 connector, DC, with timing function	
951451110	S300-PR-1-C01-RX	Proximity, terminal block, AC	
951451120	S300-PR-1-C06-RX	Proximity, terminal block, AC, with timing function	
951451130	S300-PR-1-C06-RX-M	Proximity, terminal block, AC, with timing and defogging functions	
951451210	S300-PR-2-F01-OC	Receiver, terminal block, DC	
951451220	S300-PR-2-F06-OC	Receiver, terminal block, DC, with timing function	
951451230	S300-PR-5-F01-OC	Receiver, M12 connector, DC	
951451240	S300-PR-5-F06-OC	Receiver, M12 connector, DC, with timing function	
951451250	S300-PR-1-F01-RX	Receiver, terminal block, AC	
951451260	S300-PR-1-F06-RX	Receiver, terminal block, AC, with timing function	
951451270	S300-PR-1-F06-RX-M	Receiver, terminal block, AC, with timing and defogging functions	
951451280	S300-PR-2-G00-EX	Emitter, terminal block, DC	
951451290	S300-PR-5-G00-EX	Emitter, M12 connector, DC	
951451300	S300-PR-1-G00-EX	Emitter, terminal block, AC	
951451310	S300-PR-1-G00-EX-M	Emitter, terminal block, AC, with timing and defogging functions	

#### **ACCESSORY SELECTION AND ORDER INFORMATION**

MODEL	DESCRIPTION	ORDER N°
ST-5099	FIXED BRACKET	95ACC2830
ST-5100	FIXED BRACKET	95ACC2840
DataVS-MK-01	MOUNTING KIT	95A901380













The company endeavours to continuously improve and renew its products; for this reason the technical data and contents of this catalogue may undergo variations without prior notice. For correct installation and use, the company can guarantee only the data indicated in the instruction manual supplied with the products.

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