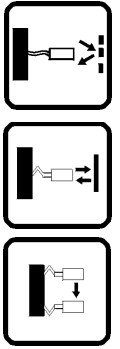


DIN RAIL MOUNTING μ P BASED SENSORS



- 10 bit resolution models with 500 μ s response for high operating distances
- 12 bit resolution models with 100 μ s response and 4 digit display for high speed
- EASYtouch™ push button setting with remote control, keylock and output delay
- Ultra-thin housing with CLEARLOCK™ patented fibre fixing system

the 1st in Europe

S7 SERIES

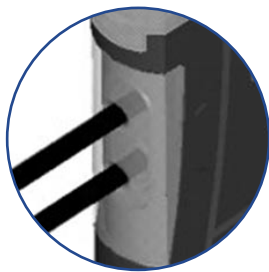
The **S7** series is the first fibre optic amplifier to be manufactured in Europe that is equipped with a full 4 digit display, confirming Datasensor's technological leadership. With its slim 10mm body width, the **S7** represents the ideal solution for all applications requiring high accuracy sensing combined with very compact dimensions.

The high resolution 12 bit amplifier has a response time of 100 μ s for a switching frequency of 5 KHz. The 12 bit, 4096 resolution steps make the **S7** series perfect for ultra high precision detection of small objects and low colour contrasts. This is made easier by the integral 4 digit display, which clearly indicates the received signal, selected time delay and the adjustable set point values.

Setting the **S7** is easy and rapid, thanks to the patent-covered EASYtouch™ adjustment system, that offers remote setting, keylock and activation of the output OFF delay function.

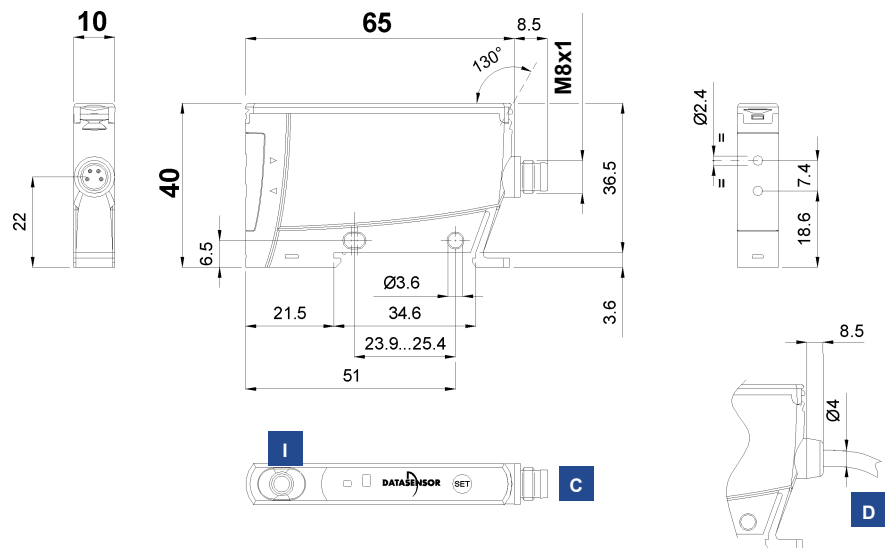
S7 FIBRE-OPTIC SENSORS

The ultra-thin housing is specifically designed for side-by-side mounting on DIN rail where space is limited or mounting through two M3 clearance holes onto the side of a machine. The **CLEARLOCK™** fibre-optic fixing system assists reliable insertion of standard and high performance 2.2mm Ø fibre-optics. The **EASYtouch™** one touch setting procedure automatically selects the best detection conditions. For critical applications a two touch setting is provided for fine tuning. S7 benefits from remote teach, keypad lock and delay off timing functions. For further information on our extensive range of fibre-optic accessories please see our OF datasheet.

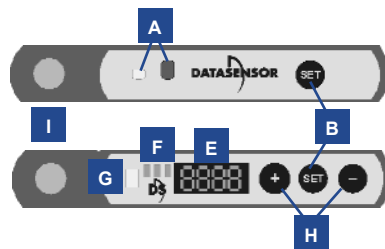


CLEARLOCK™

DIMENSIONS



INDICATORS AND SETTINGS



- A** OUTPUT status and READY/ERROR LEDs
- B** Teach-in push-button
- C** M8 connector output
- D** Cable output
- E** 4 digit display
- F** STATUS signalling LEDs
- G** OUTPUT status LED
- H** '+' e '-' buttons (ADJUST/MENU)
- I** Fibre lock/unlock button

Teach-in button for setting.
EASYtouch™ provides two setting modes: standard or fine.
 Please refer to instructions manual for operating details

ACCESSORIES

For **dedicated accessories** refer to the **ACCESSORIES** section of this catalogue

Refer also to **Fibre-Optics (A.02)**, **Connectors (A.03)** and **Fixing brackets (A.04)** of the **General Catalogue**

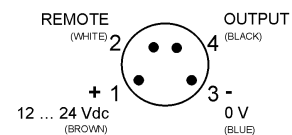
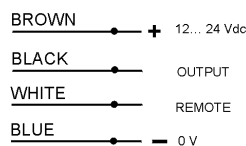
CONNECTIONS



S7-2/3



S7-5/6





TECHNICAL DATA

	S7-2-E-N	S7-2-E-P	S7-3-E-N	S7-3-E-P	S7-5-E-N	S7-5-E-P	S7-6-E-N	S7-6-E-P
Proximity operating distance:								
0 ... 100 mm	●	●	●	●	●	●	●	●
0 ... 50 mm (fast mode)	●	●			●	●		
Through beam operating distance:								
0 ... 300 mm	●	●	●	●	●	●	●	●
0 ... 100 mm (fast mode)	●	●			●	●		
Power supply:	●	●	●	●	●	●	●	●
12 ... 24 Vdc ± 10 % ¹	●	●	●	●	●	●	●	●
Consumption:	●	●	●	●	●	●	●	●
≤ 50 mA	●	●	●	●	●	●	●	●
Light emission²:	●	●	●	●	●	●	●	●
red LED 670 nm	●	●	●	●	●	●	●	●
Setting:	●	●	●	●	●	●	●	●
teach-in SET button	●	●	●	●	●	●	●	●
remote via cable ³	●	●	●	●	●	●	●	●
'+' e '-' buttons (ADJUST/MENU)	●	●			●	●		
Setting procedure:	●	●	●	●	●	●	●	●
EASYtouch™ or fine	●	●	●	●	●	●	●	●
Indicators:	●	●	●	●	●	●	●	●
yellow USCITA LED	●	●	●	●	●	●	●	●
green / red READY / ERROR LED			●	●			●	●
4 digit display, status bar	●	●			●	●		
Output type:	●	●	●	●	●	●	●	●
PNP, NO	●	●	●	●	●	●	●	●
NPN, NO	●	●	●	●	●	●	●	●
Output current:	●	●	●	●	●	●	●	●
≤ 100 mA	●	●	●	●	●	●	●	●
Saturation voltage:	●	●	●	●	●	●	●	●
≤ 2 V	●	●	●	●	●	●	●	●
Response time:	●	●	●	●	●	●	●	●
500 μs	●	●	●	●	●	●	●	●
100 μs (fast mode)	●	●			●	●		
Switching frequency (max.):	●	●	●	●	●	●	●	●
1 kHz	●	●	●	●	●	●	●	●
5 kHz (fast mode)	●	●			●	●		
Operating mode:	●	●	●	●	●	●	●	●
light with EASYtouch™	●	●	●	●	●	●	●	●
automatic dark / light with fine acq.	●	●	●	●	●	●	●	●
Timing function:	●	●	●	●	●	●	●	●
20 ms minimum output ON	●	●	●	●	●	●	●	●
Auxiliary functions:	●	●	●	●	●	●	●	●
remote	●	●	●	●	●	●	●	●
keylock ⁴	●	●	●	●	●	●	●	●
Connection:	●	●	●	●	●	●	●	●
2 m Ø 4 mm cable ⁵	●	●	●	●	●	●	●	●
M8 4-pole connector					●	●	●	●
Electrical protection:	●	●	●	●	●	●	●	●
class 2	●	●	●	●	●	●	●	●
Mechanical protection:	●	●	●	●	●	●	●	●
IP65	●	●	●	●	●	●	●	●
Electrical protection device:	●	●	●	●	●	●	●	●
A, B ⁶	●	●	●	●	●	●	●	●
Housing material:	●	●	●	●	●	●	●	●
ABS	●	●	●	●	●	●	●	●
Weight:	●	●	●	●	●	●	●	●
30 g max.	●	●	●	●	●	●	●	●
115 g max.					●	●		
Functioning temp.:	●	●	●	●	●	●	●	●
-25 ... +55°C	●	●	●	●	●	●	●	●
Storage temp.:	●	●	●	●	●	●	●	●
-25 ... +70°C	●	●	●	●	●	●	●	●
Reference standard:	●	●	●	●	●	●	●	●
EN 60947-5-2	●	●	●	●	●	●	●	●

SELECTION TABLE

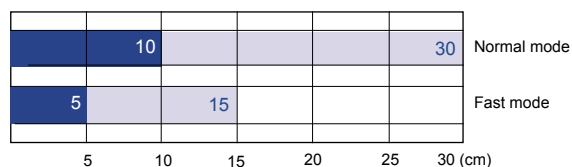
fibre-optic sensor with display - 2 m cable		
S7-2-E-N	950551000	NPN
S7-2-E-P	950551010	PNP
fibre-optic sensor without display - 2 m cable		
S7-3-E-N	950551040	NPN
S7-3-E-P	950551050	PNP
fibre-optic sensor with display - M8 connector		
S7-5-E-N	950551020	NPN
S7-5-E-P	950551030	PNP
fibre-optic sensor without display - M8 connector		
S7-6-E-N	950551060	NPN
S7-6-E-P	950551070	PNP

TECHNICAL NOTES

- Limit values
- Average life of 100.000 h with $T_A = +25^\circ\text{C}$
- Connect to 0 V when remote wire not used
- Active with remote at +V at power on
- PVC, 4 x 0.14 mm²
- A - reverse polarity protection
B - overload and short circuit protection



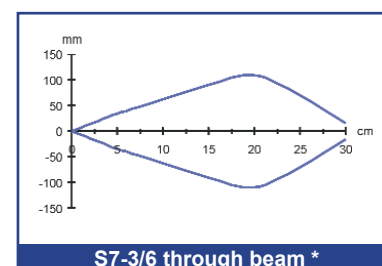
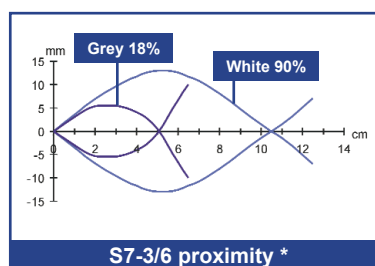
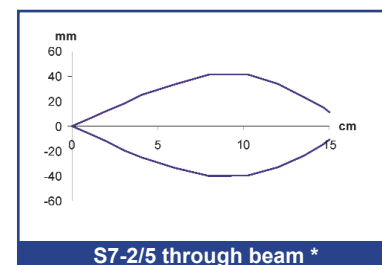
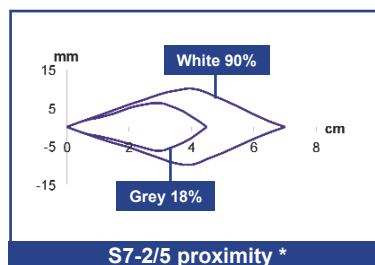
DETECTION DIAGRAMS



- Proximity operating distance
- Through beam operating distance

Standard fibre-optics:
OF-42-ST-20 proximity
OF-43-ST-20 through beam

High efficiency fibre-optics or accessory lenses can be used to obtain larger operating distances. Refer to **Fibre-optics** (A.02) of the **General Catalogue**

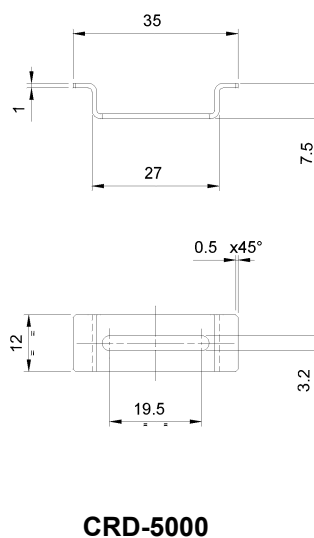
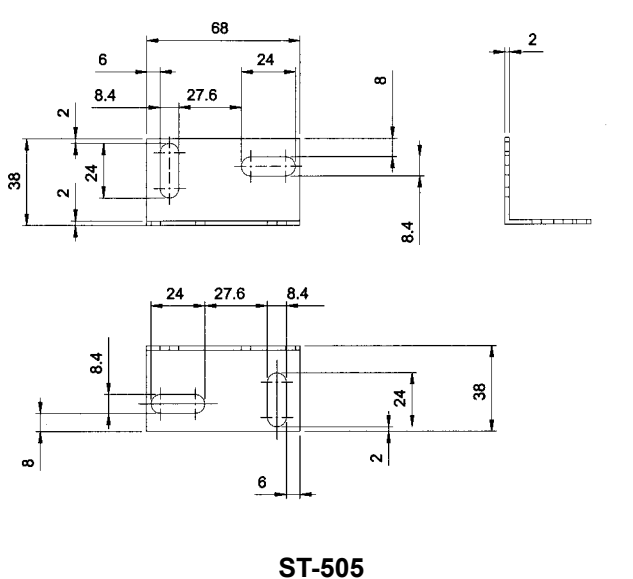


* standard fibre-optics

SELECTION AND ORDER INFORMATION

MODEL	CONNECTION	OUTPUT	DISPLAY	CODE N°
S7-2-E-N	4-pole cable	NPN	yes	950551000
S7-2-E-P	4-pole cable	PNP	yes	950551010
S7-3-E-N	4-pole cable	NPN	no	950551040
S7-3-E-P	4-pole cable	PNP	no	950551050
S7-5-E-N	M8 4-pole connector	NPN	yes	950551020
S7-5-E-P	M8 4-pole connector	PNP	yes	950551030
S7-6-E-N	M8 4-pole connector	NPN	no	950551060
S7-6-E-P	M8 4-pole connector	PNP	no	950551070

ACCESSORIES - DIMENSIONS



ACCESSORIES - SELECTION AND ORDER INFORMATION

MODEL	DESCRIPTION	CODE N°
ST-505	1 pc 'L'- shaped fixing support	95ACC1300
CRD-5000	1 pc fixing support on DIN rail	95ACC1290

Refer also to *Accessories for Sensors* of the *General Catalogue*



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HEADQUARTERS

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