



**Model Number**

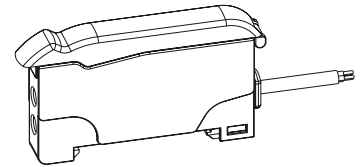
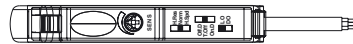
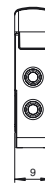
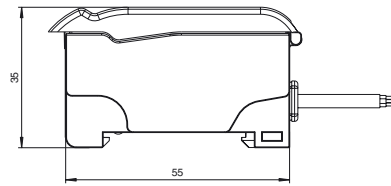
**SU18-16/40a/102/115/126a**

Fibre optic amplifier for plastic fibre optics  
with fixed cable

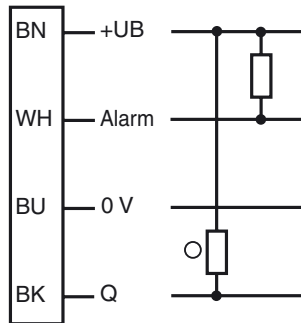
**Features**

- Self diagnosis function
- Sleek design
- Visible red light with brighter beam spot for easy alignment
- Easy installation on DIN rail
- 3 response times selectable
- High switching frequency

**Dimensions**



**Electrical connection**



○ = Light on  
● = Dark on

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**Technical data****General specifications**

Effective detection range	depends on the fibre optics being used
Light source	LED , 660 nm
Approvals	CE
Light type	red, modulated light
Ambient light limit	10000 Lux

**Indicators/operating means**

Operating display	green LED, statically lit Power on , Undervoltage indicator: Green LED, pulsing (approx. 0.8 Hz) , short-circuit : LED green flashing (approx. 4 Hz)
Function display	LED yellow: static illumination switching state, flashes when falling short of the stability control
Operating elements	Potentiometer for setting sensitivity slide switch 2 positions: light/dark switching slide switch 3 positions: timer function - timer off, on delay 40 ms, off-delay 40 ms slide switch 3 positions: operating mode - normal, high speed , high resolution

**Electrical specifications**

Operating voltage	10 ... 30 V DC
Ripple	10 %
No-load supply current	$I_0 \leq 30 \text{ mA}$

**Output**

Output of the pre-fault indication	1 npn, short-circuit proof, open collector
Switching type	light/dark ON, switchable
Signal output	1 npn, short-circuit proof, open collector
Switching voltage	max. 30 V DC
Switching current	max. 100 mA , resistive load
Voltage drop	$U_d \leq 2 \text{ V DC at } 100 \text{ mA} ; \leq 0.7 \text{ V at } 10 \text{ mA}$
Switching frequency	$f$ Standard mode: 3 kHz , High speed mode: 6 kHz , High resolution: 250 Hz
Response time	Standard mode: 160 $\mu\text{s}$ , High speed mode: 80 $\mu\text{s}$ , High resolution: 2 ms
Repeat accuracy	$R \leq 0.5 \%$ of adjusted sensor range

**Standard conformity**

Standards	EN 60947-5-2
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**Ambient conditions**

Ambient temperature	-10 ... 55 °C (263 ... 328 K)
Storage temperature	-20 ... 70 °C (253 ... 343 K)

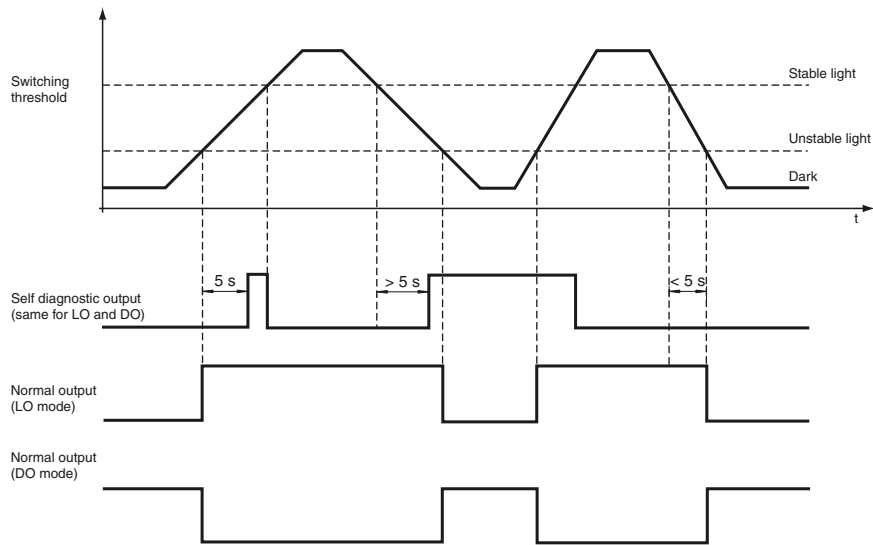
**Mechanical specifications**

Protection degree	IP50
Connection	2 m cable, 4 x 0,14 mm <sup>2</sup> , PVC
Material	
Housing	PC
Mass	45 g

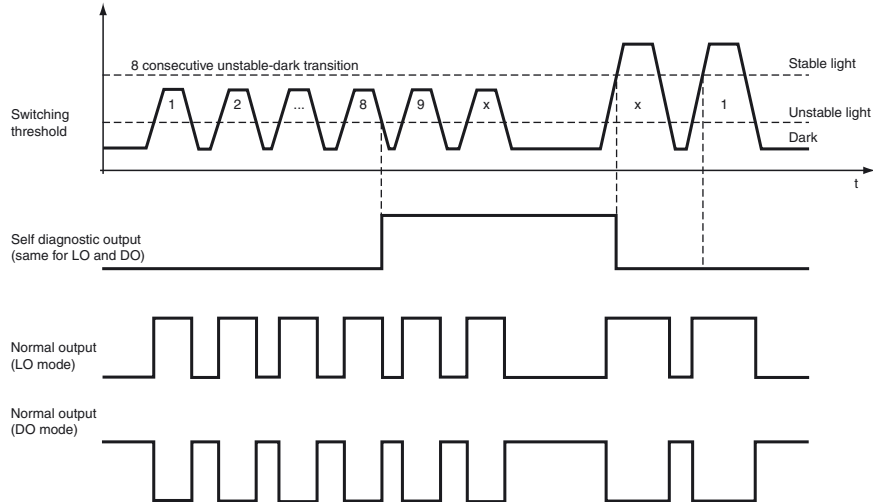
Curves/Diagrams

Self-Diagnostic definition and operation:

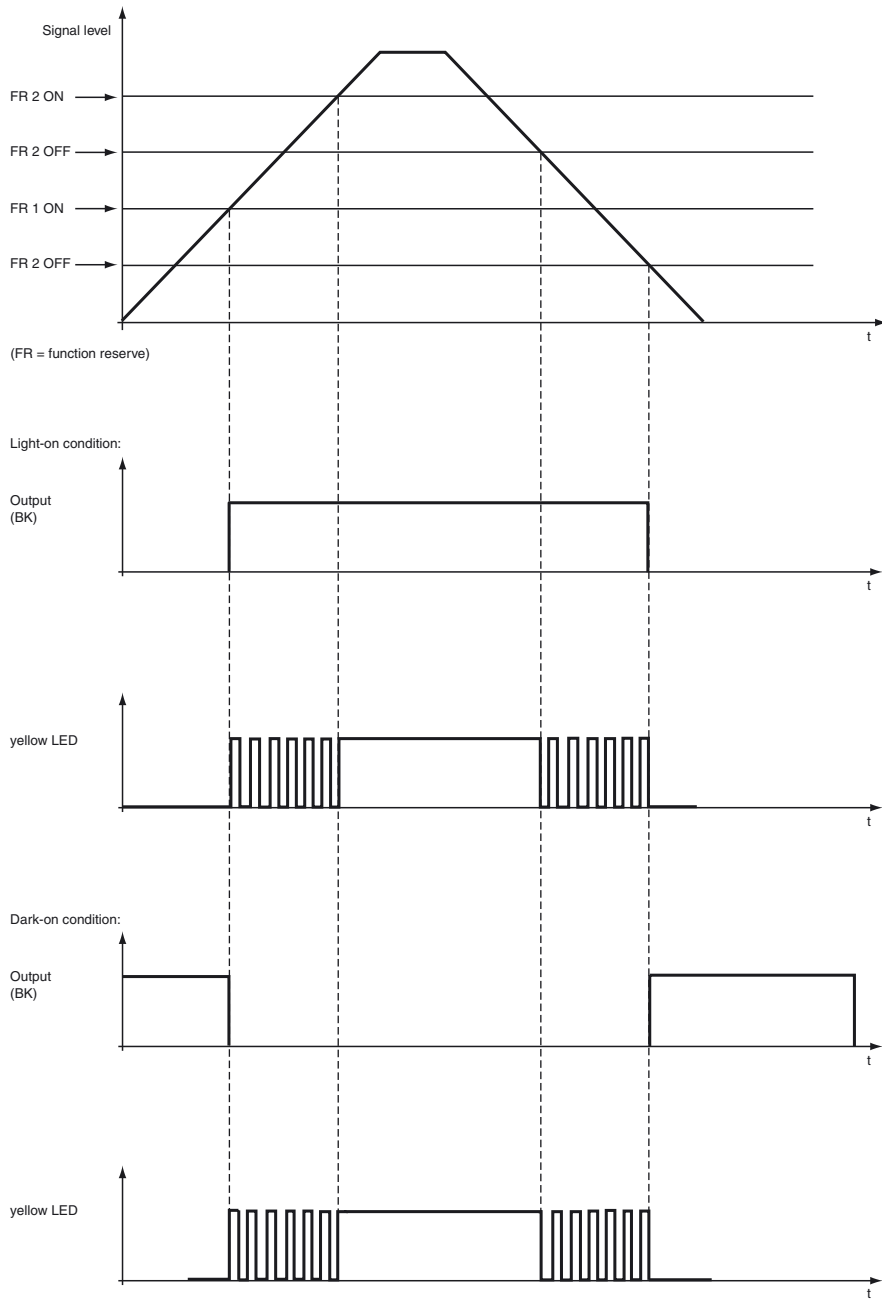
5 sec. rule for light-ON (LO) and dark-ON (DO) mode



8 cyc. rule for light-ON (LO) and dark-ON (DO) mode



**LED indicators and operating chart:**



**Fibre optics selection table**

	Model number	Detection range in mm	Minimum object size in mm	Fig.
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Plastic fibre - reflection type	KLR-C02-2,2-1,0-K70	80	Ø0.25	1
	KLR-C16-2,2-1,0-K71	85	Ø0.1	2
	KLR-C16-2,2-1,0-K72	100	Ø0.1	3
	KLR-C02-1,25-1,0-K73	4	Ø0.05	4
	KLR-C09-1,25-1,0-K74	40	Ø0.05	5
	KLR-C02-1,25-1,0-K75	4	Ø0.05	6
	KLR-C09-1,25-1,0-K76	35	Ø0.05	7
	KLR-C09-1,25-1,0-K77	35	Ø0.05	8
	KLR-C04-1,25-1,0-K78	8	Ø0.05	9
	KLR-C04-1,25-1,0-K79	8	Ø0.05	10
	KLR-C04-1,25-1,0-K80	8	Ø0.05	11
	KLR-C06-1,25-1,0-K81	22	Ø0.05	12
	KLR-A18-1,3-1,0-K82	36	Ø0.05	13
	KLR-A32-2,2-1,0-K83	35	Ø0.05	14
Plastic fibre - through beam type	KLE-C01-2,2-1,0-K100	300	Ø0.32	15
	KLE-C01-2,2-1,0-K101	300	Ø0.32	16
	KLE-C01-2,2-1,0-K102	300	Ø0.25	17
	KLE-C01-2,2-1,0-K103	300	Ø0.25	18
	KLE-C04-1,0-1,0-K104	80	Ø0.12	19
	KLE-C01-1,25-1,0-K105	20	Ø0.05	20
	KLE-C04-1,0-1,0-K106	80	Ø0.05	21
	KLE-C01-1,0-1,0-K107	20	Ø0.05	22
	KLE-C04-1,0-1,0-K108	80	Ø0.12	23
	KLE-A16-2,2-1,0-K109	100	Ø0.05	24
	KLE-A16-2,2-1,0-K110	250	Ø0.05	25
	KLE-A16-2,2-1,0-K111	250	Ø0.05	26
	KLE-C01-1,3-2,0-K112	300	Ø0.25	27
	KLE-C01-2,2-2,0-K113	300	Ø0.25	28

Other lengths and other end caps on request

**Plastic fibres - reflection type**

Fig. 1

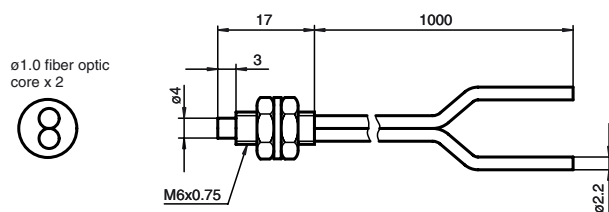
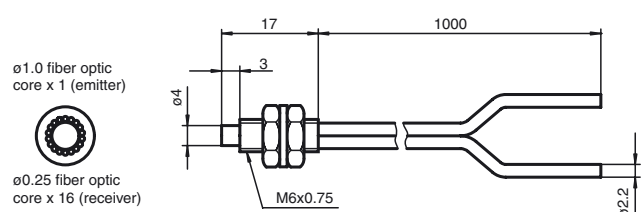


Fig. 2



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Fig. 3

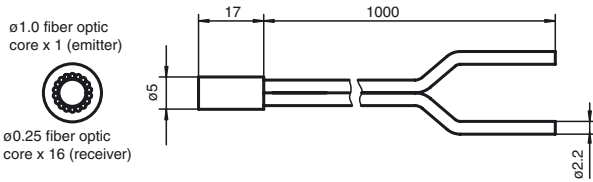


Fig. 4

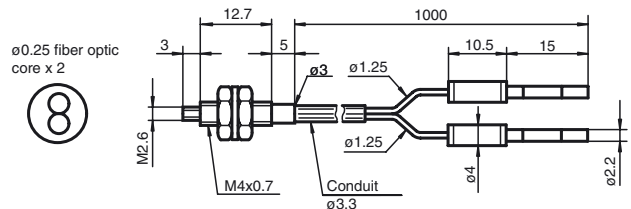


Fig. 5

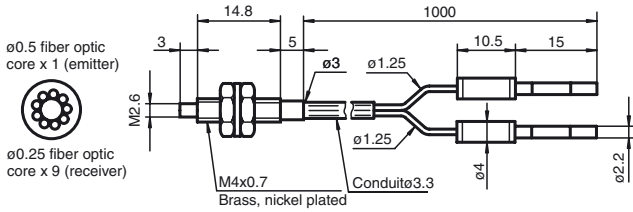


Fig. 6

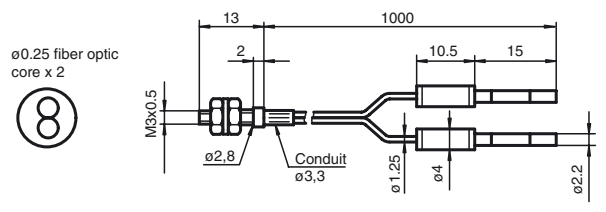


Fig. 7

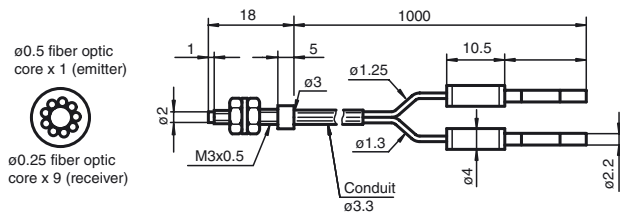


Fig. 8

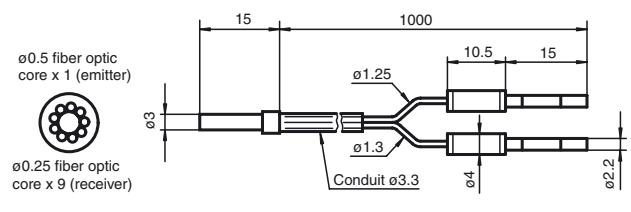


Fig. 9

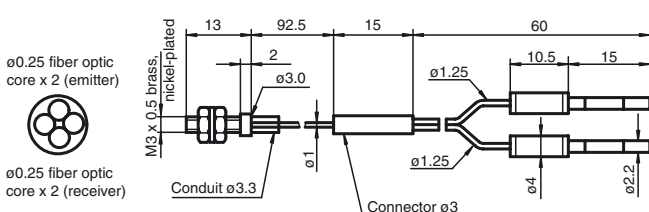


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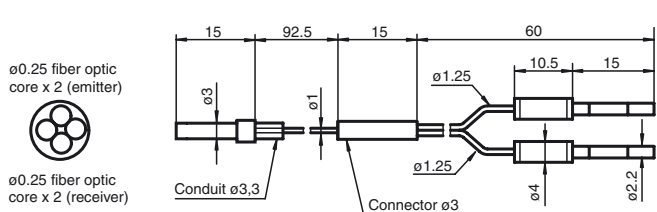


Fig. 11

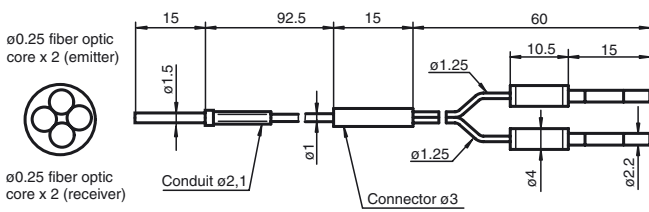


Fig. 12

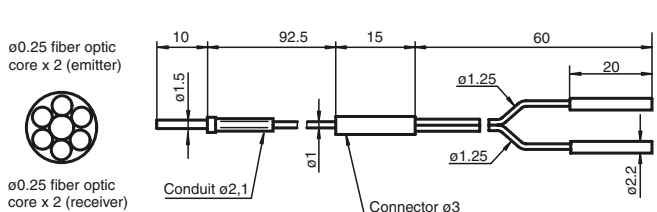


Fig. 13

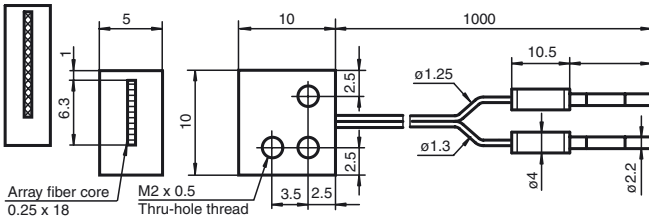
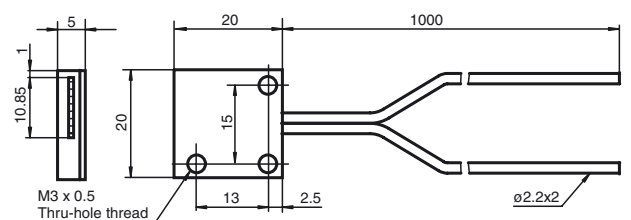


Fig. 14



Plastic fibres - through beam type

Fig. 15

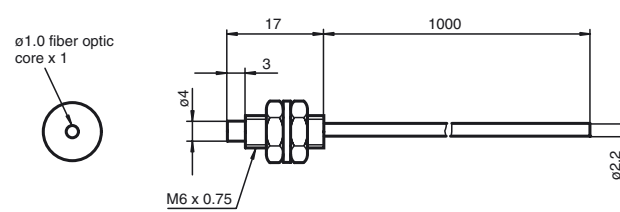


Fig. 16

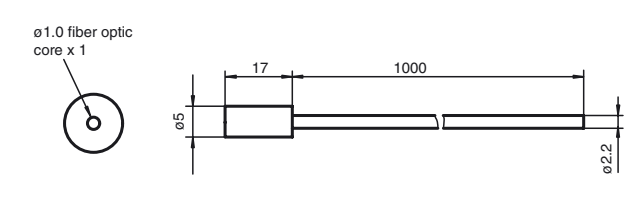


Fig. 17

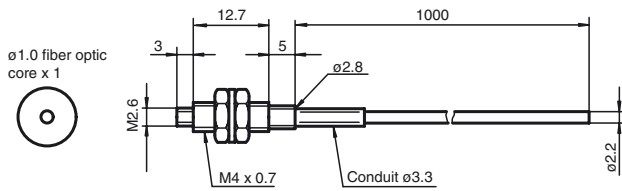


Fig. 18

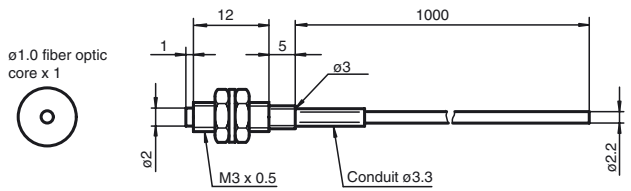


Fig. 19

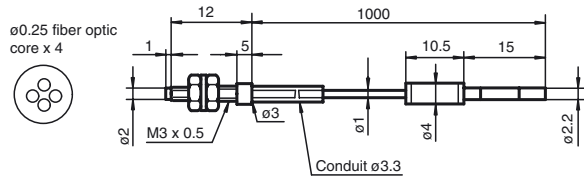


Fig. 20

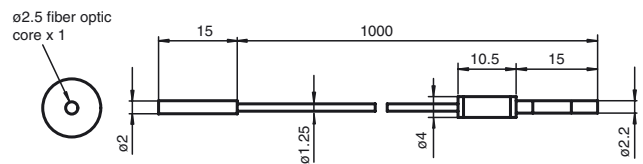


Fig. 21

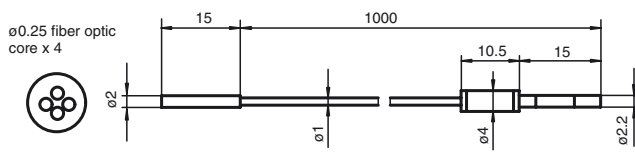


Fig. 22

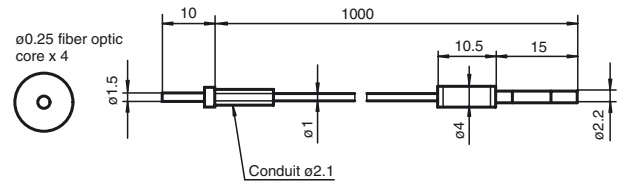


Fig. 23

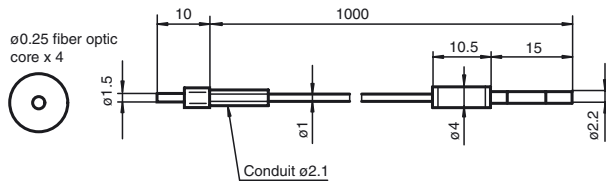


Fig. 24

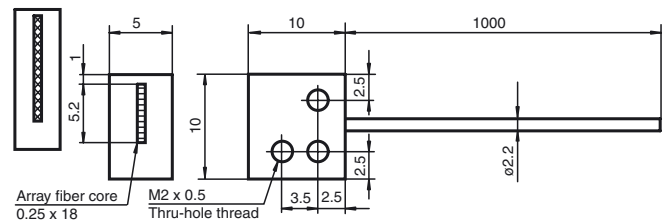


Fig. 25

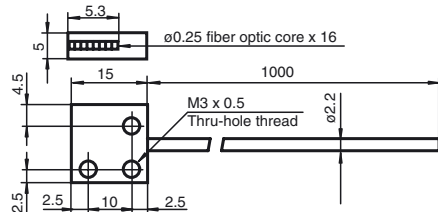


Fig. 26

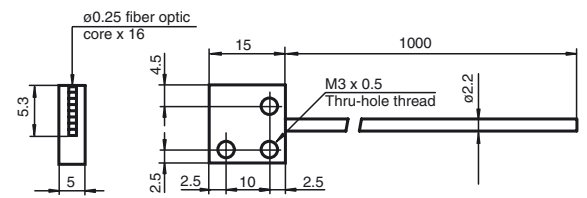


Fig. 27

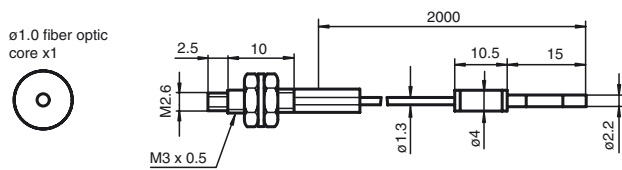
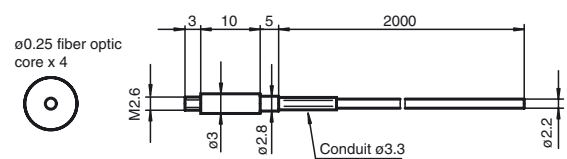


Fig. 28



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