



FAL BGS series

M18 LASER with adjustable background suppression

Cylindrical M18
LASER

features

- M18 Photoelectric sensor Background Suppression with Laser emission
- Models in Class I and Class II Laser emission power
- Axial and Right angle optic materials
- Sensing distance adjustment by trimmer
- Collimated Light spot
- Complete protection against electrical damages
- Nichel brass housing

web contents



- Application notes
- Photos
- Catalogue / Manuals



code description

FA L W / B P - 1 E 77

series	FA	M18 Cylindrical photoelectric sensor
emission	L	Laser emission
background suppression	S	Background Suppression (Laser Class 1)
	W	Background Suppression (Laser Class 2)
output	0	Lo/Do selectable output
	B	Complementary output (NO+NC)
NPN / PNP output	N	NPN output
	P	PNP output
housing	1	Axial version Metallic housing
	3	Right Angle (90°) version Metallic housing
plug	E	Connector M12 4 pins
version	77	Special version (Anti Reflex)

available models

model	distance (mm)	laser class	optical	output selectable (LO/DO)		complementary output (NO+NC)	
				NPN	PNP	NPN	PNP
background suppression	30...100	1	axial	FALS/0N-1E	FALS/0P-1E	FALS/BN-1E	FALS/BP-1E
	30...80		right angle	FALS/0N-3E	FALS/0P-3E	FALS/BN-3E	FALS/BP-3E
	30...150	2	axial	FALW/0N-1E	FALW/0P-1E	FALW/BN-1E	FALW/BP-1E
	30...130		right angle	FALW/0N-3E	FALW/0P-3E	FALW/BN-3E	FALW/BP-3E
	30...120		axial	-	-	FALW/BN-1E77	FALW/BP-1E77
	30...100		right angle	-	-	FALW/BN-3E77	FALW/BP-3E77



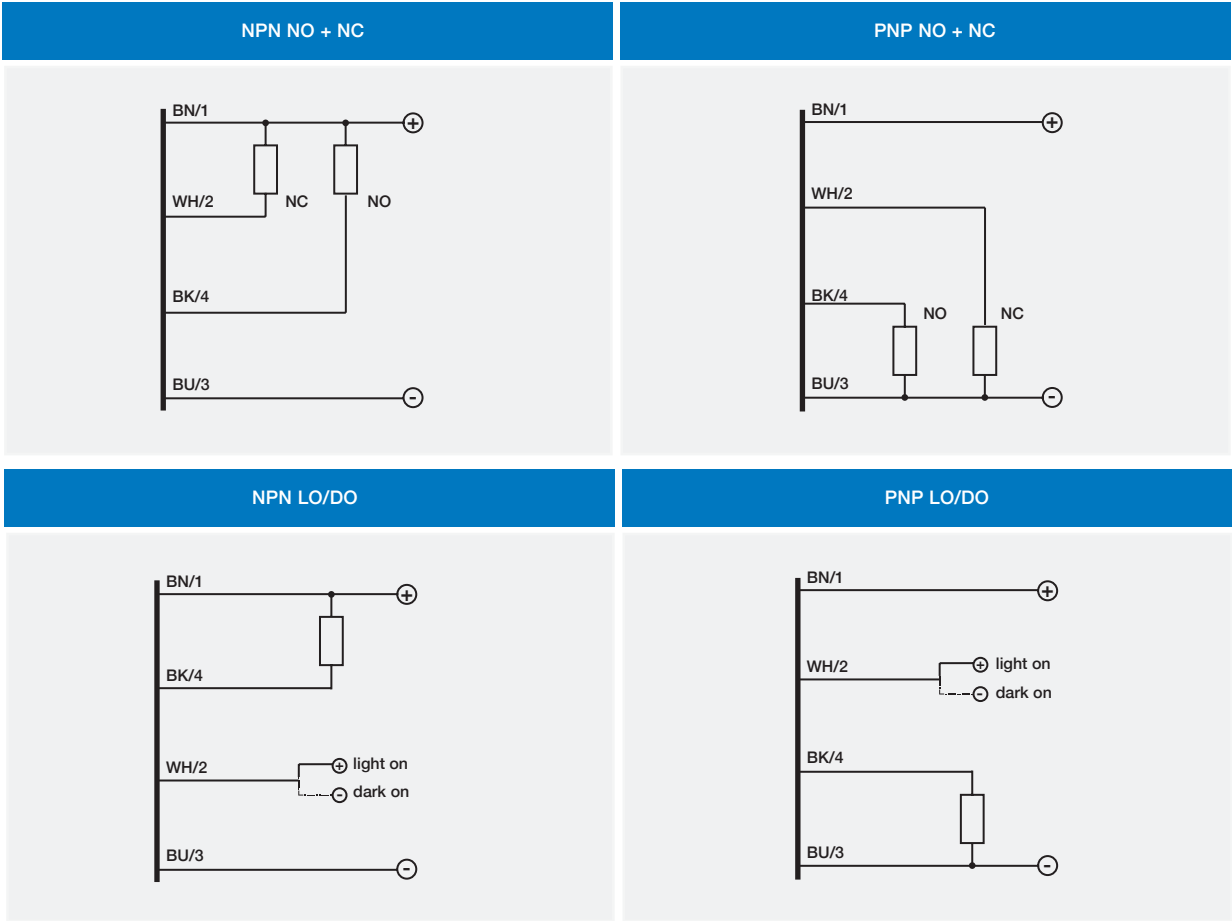
technical specification

according to IEC EN 60947-5-2

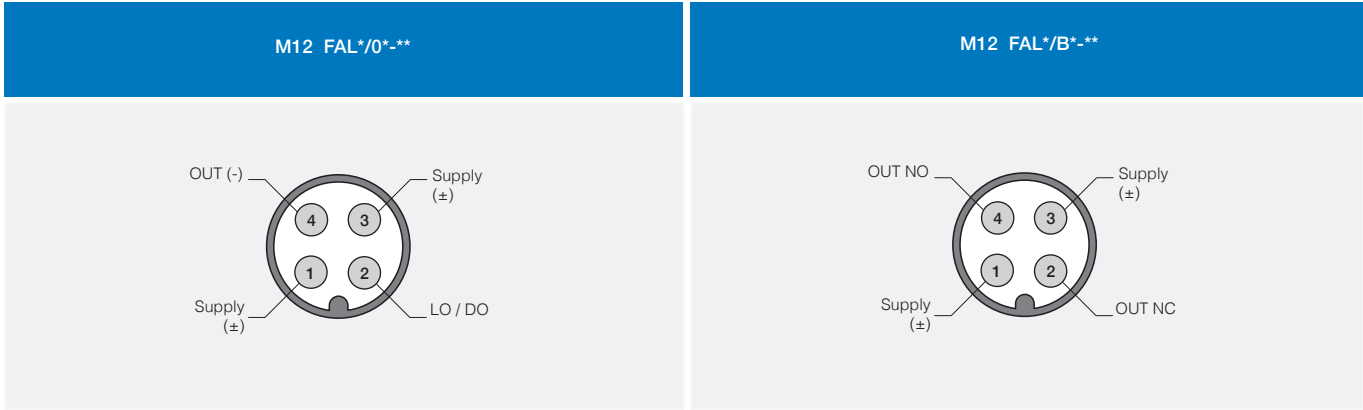
	axial		radial		axial		radial	
	FALS/**_**		FALS/**_**		FALW/**_**		FALW/**_**	
nominal sensing distance	25...100 mm		25...80 mm		25...150 mm		25...130 mm	
sensing range (Sd)	30...100 mm		30...80 mm		30...150 mm		30...130 mm	
emission	red laser diode (650 nm)							
Laser Protection Class EN60852-1	1				2			
adjustment	trimmer (270°)							
hysteresis	10 %							
repeatability	10 %							
operating voltage	10...30 Vdc							
ripple	≤ 10 %							
no-load current	≤ 40 mA							
output current	100 mA							
leakage current	≤ 10 µA (Vdc max)							
output voltage drop	2 V max. IL = 100 mA							
output type	NPN or PNP; NO + NC or LO/DO selectable							
switching frequency	1.5 kHz							
power on delay	250 ms							
power supply protections	polarity reversal, transient							
output protection	short circuit (auto reset), over voltage pulses							
temperature range	- 10°C...+ 50°C							
temperature drift	10 % Sn							
max. Capacitive Load	500 nF							
protection degree	IP67 (EN60529) ⁽¹⁾							
external light interference	15,000 lux (incandescent lamp)							
EMC	in conformity with the EMC Directive according to EN 60947-5-2							
LED indicator	yellow (output state)							
housing material	nickel plated brass							
optic materials	PMMA ABS		glass ABS				PMMA ABS	glass ABS
exit plug	grilamid (PA 12)							
tightening torque	40 Nm (metallic)							
weight	60 g							

⁽¹⁾ Protection guaranteed only with plug cable well mounted

electric diagrams of the connections



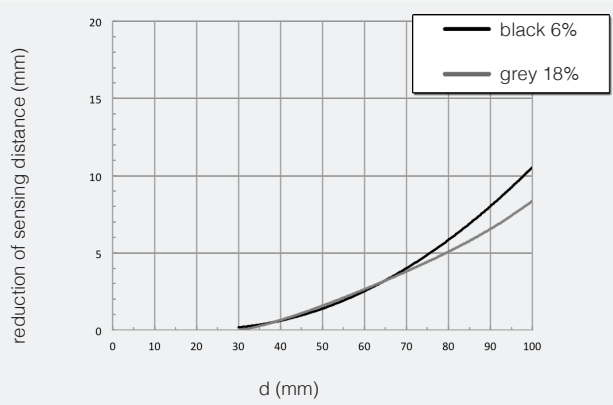
plug



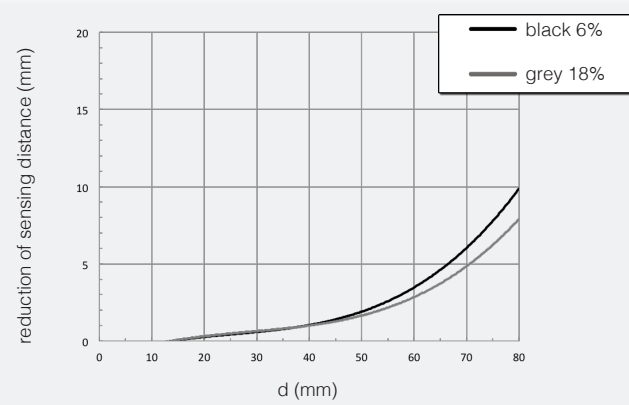


response diagram

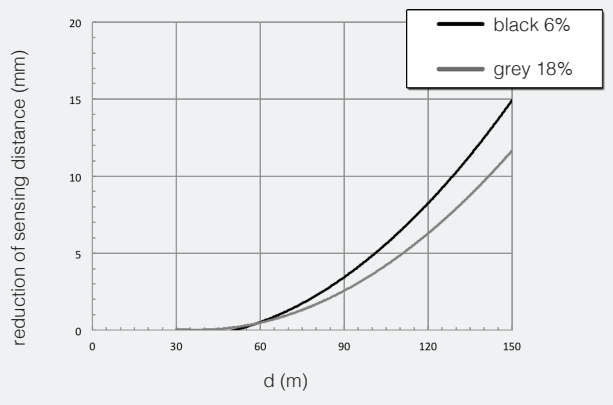
FALS/**-1E reduction of sensing distance



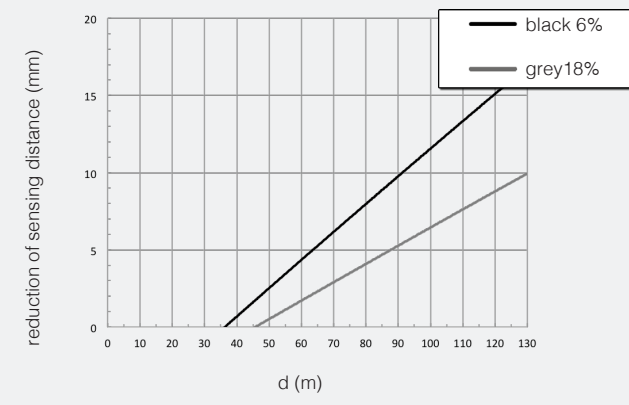
FALS/**-3E reduction of sensing distance



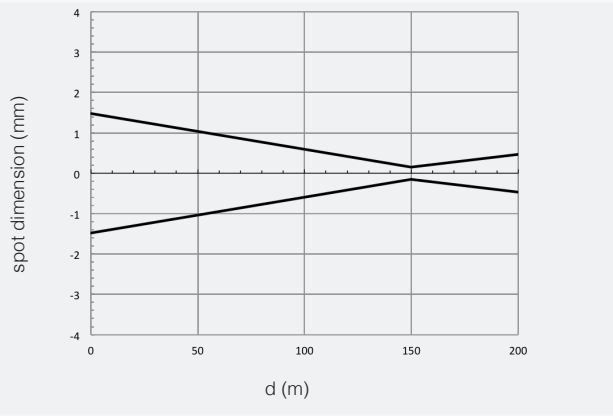
FALW/**-1E reduction of sensing distance



FALW/**-3E reduction of sensing distance



FALS/**-** spot dimension



dimensions (mm)

FALS/**-1E; FALW/**-1E	FALS/**-3E; FALW/**-3E
M12 X 1 14 80 50 M18 X 1 45° 1 Trimmer	M12 X 1 14 89.4 50 9.3 M18 X 1 45° 1 Trimmer

dimensions (mm)

accessories included in all models

