DM series

M12 cylindrical photoelectric sensors

features

- **Models diffuse reflection, polarized and through-beam**
- **Local and remote teach-in function**
- **Light-on / Dark-on selectable outputs**
- **IP67 protection degree**
- **Multifunction LED status indicator**
- **Complete protection against electrical damages**
- **Approvals: CE and cULus listed**



web contents

- **Application notes**
- **Photos**
- **Catalogue / Manuals**

code description (*)

DM 2 / 0 N - 1 A

series	DM	M12 cylindrical photoelectric sensor
type	2	Diffuse reflection 100 mm without sensitivity adjustment
	3	Diffuse reflection 100 mm with sensitivity adjustment
	7	Diffuse reflection 300 mm with sensitivity adjustment
	P	Polarized 2.5 m with sensitivity adjustment
	E	Emitter 4 m with power emission adjustment
	R	Receiver 4 m
emitter / receiver	0	Emitter without check - Receiver LO/DO selectable
	X	Emitter with check
function	0	Emitter
	N	NPN output
	P	PNP output
housing	1	Metal housing
cable	A	Axial cable exit
	H	M12 plug cable exit
version	25	DMP and DME without sensitivity adjustment
		Standard version

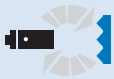
(*) ATEX models available, contact our Sales Dept. for further information.

MEDITECNA
Instrumentación | Proyectos | Servicios

available models

model	distance	adjustment	4 wires LO / DO NPN		4 wires LO / DO PNP	
			cable	plug	cable	plug
direct diffuse	100 mm	-	DM2/0N -1A	DM2/0N -1H	DM2/0P -1A	DM2/0P -1H
	100 mm	●	DM3/0N -1A	DM3/0N -1H	DM3/0P -1A	DM3/0P -1H
	300 mm		DM7/0N -1A	DM7/0N -1H	DM7/0P -1A	DM7/0P -1H
polarized	2.5 m		DMP/0N -1A	DMP/0N -1H	DMP/0P -1A	DMP/0P -1H
emitter	4 m		DME/00 -1A	DME/00 -1H	DME/00 -1A	DME/00 -1H
receiver		-	DMR/0N -1A	DMR/0N -1H	DMR/0P -1A	DMR/0P -1H

technical specification

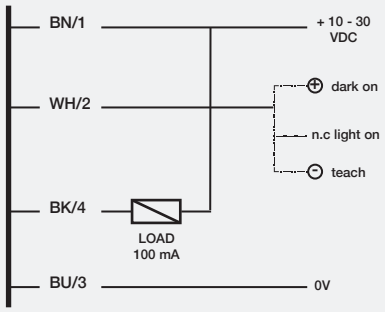
	diffuse reflection			polarized	through-beam	
	DM2/0*-1*	DM3/0*-1*	DM7/0*-1*	DMP/0*-1*	DMR/0*-1*	DME/0*-1*
						
nominal sensing distance	100 mm (1)		300 mm (2)	2.5 m (3)	4 m	
emission	infrared (880 nm)			red (660 nm)	infrared (880 nm)	
tolerance	+ 15 % / - 5 %					
hysteresis	≤ 10 %				≤ 20 %	
repeatability	5 %					
operating voltage	10...30 Vdc					
ripple	≤ 10 %					
no-load current	≤ 30 mA					
load current	100 mA					
leakage current	≤ 10 µA					
output voltage drop	2 V max. IL = 100 mA					
output type	NPN o PNP - LO / DO selectable					
switching frequency	400 Hz				250 Hz	
response time	1.1 ms				2 ms	
power on delay	150 ms					
power supply protections	polarity reversal, transient					
EMC	in conformity with the EMC Directive according to EN 60947-5-2					
output protection	short circuit (autoreset)					
temperature range	- 25°C...+ 70°C					
temperature drift	10 % Sr					
protection degree	IP67 (EN60529) (4)					
check input	-				decoupled input supply 10..30 Vdc	
external light interference	3000 lux (incandescent lamp), 10000 lux (sunlight)					
LEDs	yellow					
sensitivity adjustment	-	●			-	●
housing material	nickel-plated brass					
optic material	plastic					
tightening torque	10 Nm					
weight (approximate)	28 g connector / 60 g cable					

(1) With 100x100 mm white paper (2) With 200x200 mm white paper (3) With RL 110 reflector (4) Protection guaranteed only with plug cable well mounted

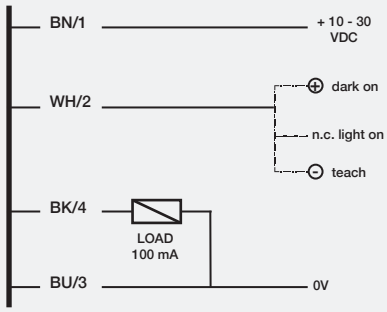
DM SERIES.

electrical diagrams of the connections

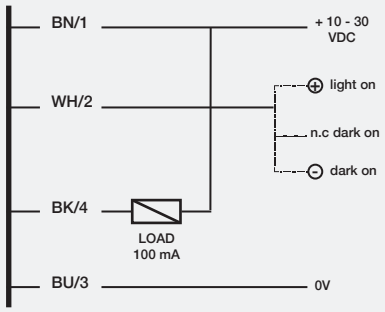
DM2/0N-** DM3/0N-** DM7/0N-**



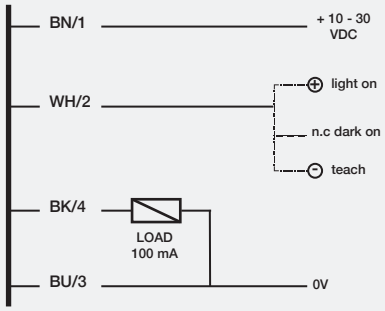
DM2/0P-** DM3/0P-** DM7/0P-**



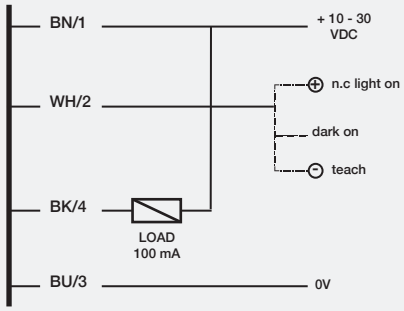
DMP/0N-**



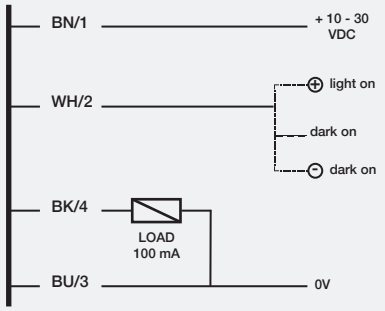
DMP/0P-**



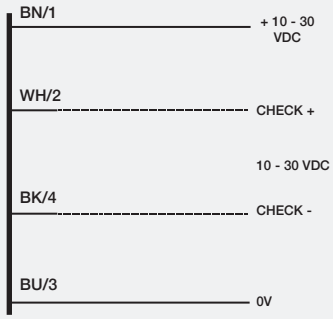
DMR/0N-1*



DMR/0P-1*



DME/X0-1*



BN	brown
BU	blue
BK	black
WH	white
PK	pink
GY	gray

Notes:

Models DM2/0N-** and DM2/0P-** without sensitivity adjustment.

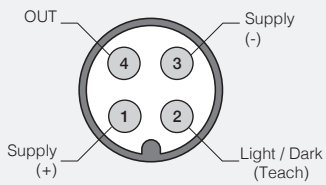
Models DMP/0N-**25 and DMP/0P-**25 without sensitivity adjustment.

Models DME/00-** without check.

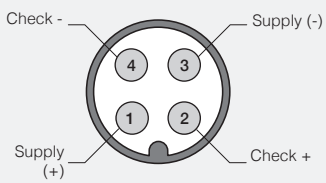
In case of combined load, resistive and capacitive, the maximum admissible capacity (C) is 0,1 µF for maximum output voltage and current.

plug

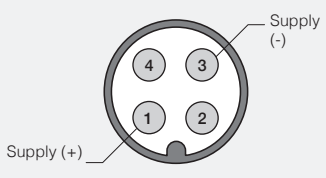
M12 diffuse reflection polarized receiver



M12 emitter with check



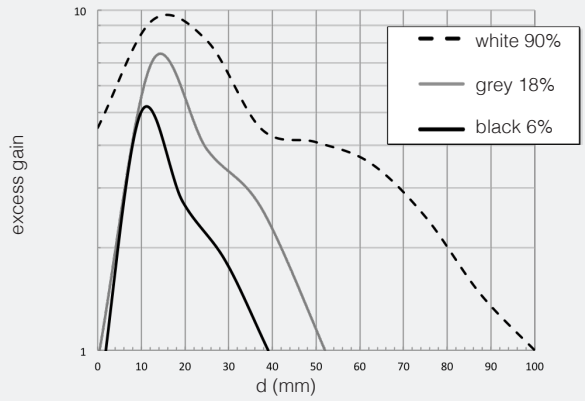
M12 emitter without check



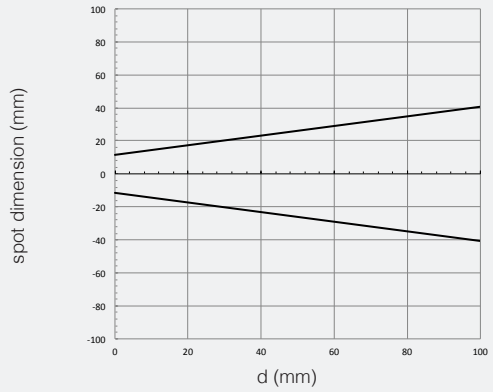
response diagrams

direct reflection models

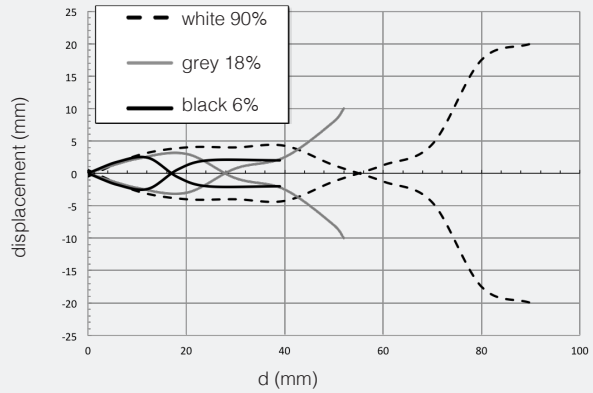
DM2/**-** excess gain



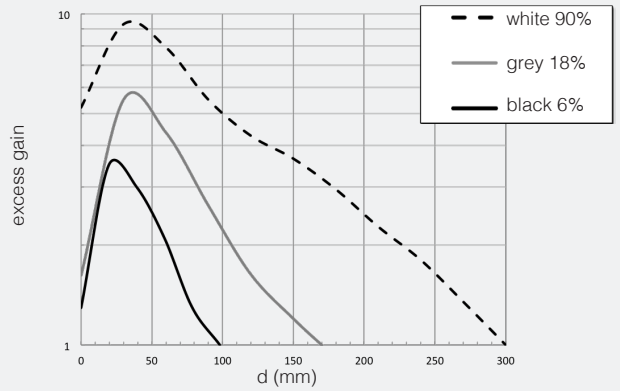
DM2/**-** spot dimension



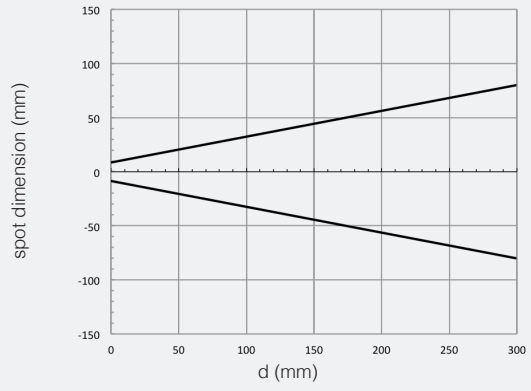
DM2/**-** parallel displacement



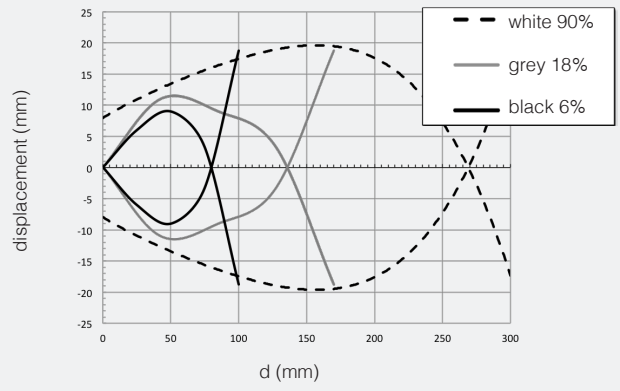
DM7/**-** excess gain



DM7/**-** spot dimension



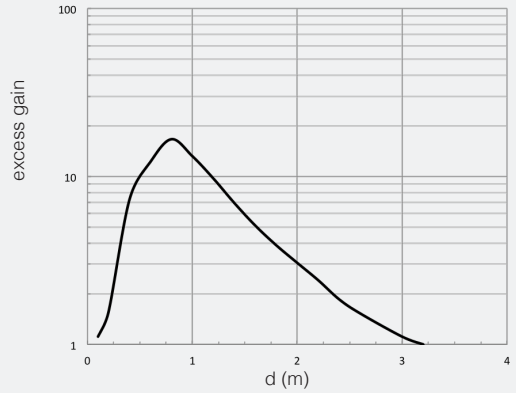
DM7/**-** parallel displacement



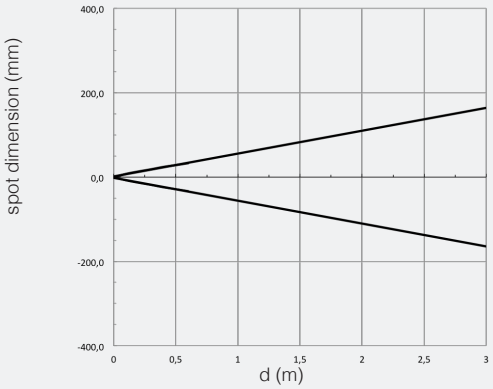
response diagrams

polarized models (diagrams calculated with RL110)

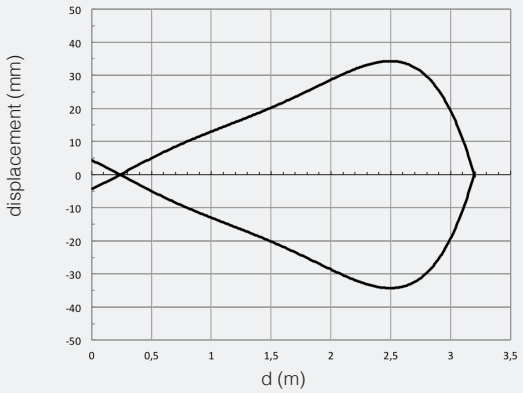
DMP/**-** excess gain



DMP/**-** spot dimension



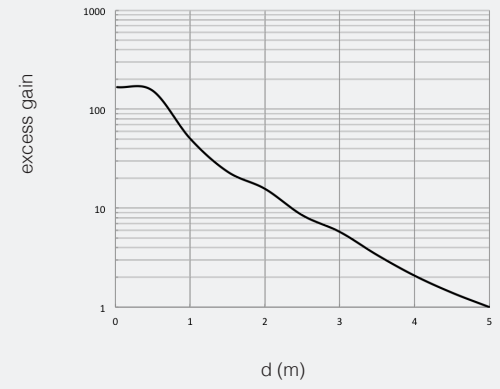
DMP/**-** parallel displacement



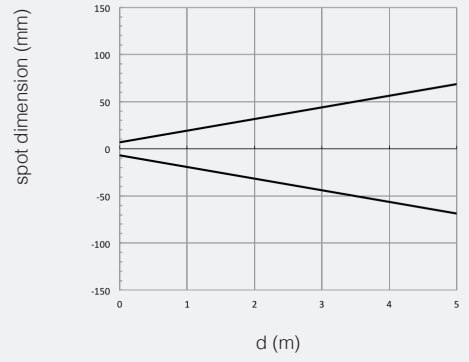
response diagrams

through-beam models

DMP/**-** excess gain



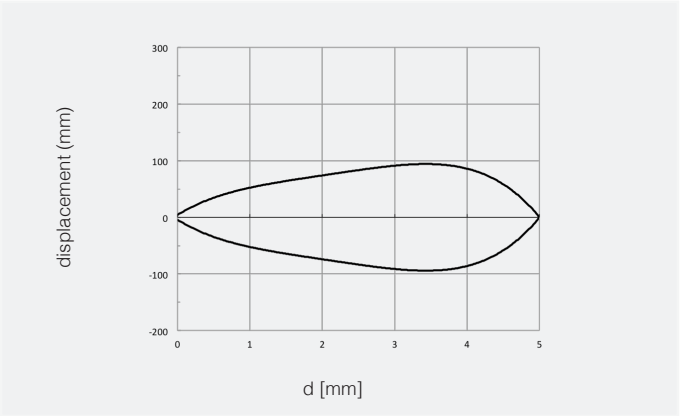
DMP/**-** spot dimension



response diagrams

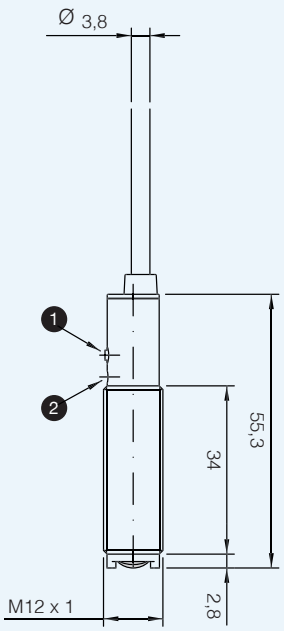
through-beam models

DMP/-** parallel displacement**

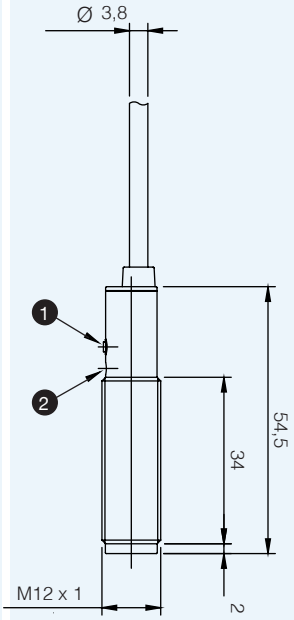


dimensions (mm)

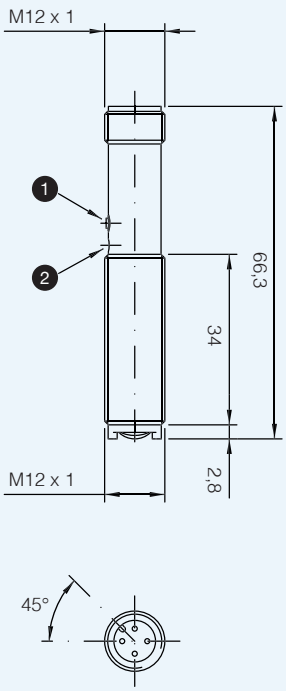
DMP/-1A**



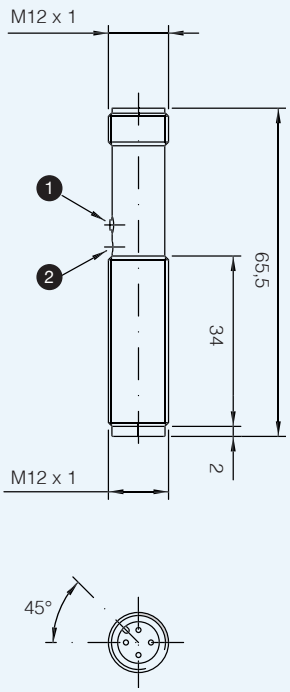
DM*/-1A**



DMP/-1H**



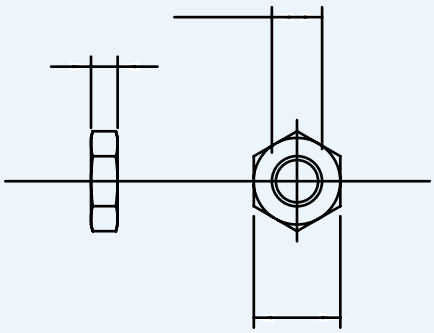
DM*/-1H**



1 Teach-In button 2 LED

dimensions (mm)

accessories included



metallic
nut (2 x)