



F series

Photoelectric sensors
for DIN-rail mounting

features

- Models with trimmer sensitivity
- Models with Teach-In
- Approvals: CE

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Photoelectric sensors
for DIN-rail mounting

code description

F 1 R / 0 P - 0 A

series	F	Optical fibres amplifier
type	1	Standard model, trimmer sens. adj.
	2	High speed model, trimmer sens. adj.
emission	R	Red emission
LO / DO output	0	LO/DO selectable output
PNP / NPN output	P	PNP output
	N	NPN output
housing	0	Plastic housing
cable exit	A	Cable exit 2 m

available models

uscita	regolazione	frequenza uscita	PNP output	NPN output
cavo	trimmer	standard	F1R/0P-0A	F1R/0N-0A
		alta velocità	F2R/0P-0A	F2R/0N-0A



technical specification

	standard F1R/0*-0A	high speed F2R/0*-0A
nominal sensing distance	depending on fibre used 36 mm	
emission	red (680 nm)	
differential travel	≤15 %	
repeat accuracy	5 %	
operating voltage	12...24 Vdc	
ripple	≤10 %	
no-load supply current	< 35 mA	
load current	50 mA max	
leakage current	< 10 µA	
output voltage drop	1 V max	
output type	NPN or PNP - LO / DO selectable	
responce time	200 µs max	ON: 20 µs OFF: 30 µs
power on delay	≤ 200 ms	
power supply protections	polarity reversal	
output electrical protections	short circuit	
sensitivity adjustment	trimmer (8 giri)	
operative Temperature range	-25...+55° C (without freeze)	
storage temperature	-30...+70° C (without freeze)	
EMC	in conformity with the EMC Directive according to EN 60947-5-2	
interference by external light	10.000 lux (incandescent lamp) 20.000 lux (sunlight)	
protection degree	IP50 (according to: IEC 60529)	
LEDs	orange (output active) green (n.4 - received signal level) red (no received signal)	
housing material	PBT (housing); PC (cover)	
weight (approximate)	70 g (approx.)	

value tabel

The values shown in the following tables are measured, by using our CF/CB1 optical fibre, set to obtain an hysteresis of about 15% with all type of amplifier.

glass optical fibres CV series (mm)

F1 series		F2 series		models
ON 90 %	OFF 90 %	ON 90 %	OFF 90 %	
-	-	70	90	CV-CB1
				CV-CB3
410	500	200	240	CV-RB4
				CV-RB6



plastic optical fibres cf series (mm)

F1 series		F2 series		models
ON 90 %	OFF 90 %	ON 90 %	OFF 90 %	
0	0	0	0	CF-CA1
40	47	15	18	CF-CA2
				CF-CA4
100	130	60	68	CF-RA4
				CF-RA7
150	180	70	90	CF-CB1
				CF-CB3
410	500	200	240	CF-RB3
				CF-RB4
				CF-RB6
4,000	4,000	2,400	2,800	CF-RB9
				CF-RBA
50	58	20	25	CF-CC1
350	400	190	220	CF-RC6
				CF-RC9
2,200	2,600	1,600	1,900	CF-RCA

accessories for CF series optical fibres (mm)

series F1	series F2	model fibres	models
Sn	Sn	CF-RB3-20	
400	200	CF-RB3-20	AF/ER9
1,500	1,000	CF-RBA-** CF-RCA-20	ST28

modular fibres for any application AF series (mm)

series F1	series F2	models
Sn	Sn	
1,500	700	AF/ER4
2,200	1,000	AF/ER5
		AF/ER6
4,500	2,000	AF/ER7

accessories for CV series optical fibres (mm)

series F1	series F2	models
Sn	Sn	
	20	AF/FC1
	30	AF/FC2
3,000	2,000	AF/ER1
4,000	3,000	AF/ER2
10,000	8,000	AF/ER3