

Opto Proximity Switches

SIMATIC PXO400

K31 form

Overview

Cubic molded plastic enclosure, IP65, connection using cable or M8 connector

Diffuse sensor; energetic sensor

- Sensing range 60 cm (adjustable using potentiometer)

Diffuse sensor with background suppression

- Sensing range 3 to 15 cm (adjustable using potentiometer)

Retroreflective sensor

- Sensing range 2 m (adjustable using potentiometer)
- Supplied without reflector

Thru-beam sensor

- Sensing range 6 m (adjustable using potentiometer)

Sensor for plastic optical fibers






- Sensing range depending on type of optical fiber

Rated operating voltage 24 V DC


Electronics output pnp or npn

Supplied without mounting material

Technical specifications

Operating mode		Diffuse sensor	Diffuse sensor with background suppression	Retroreflective sensor with polarization filter
				
Sensing range	cm	60 (adjustable)	3 ... 15 (adjustable)	200 (adjustable)
Standard target	mm	200 x 200 (white)	100 x 100 (white)	Reflector type D 84
Operating voltage range (DC)	V	10 ... 30 (max. 20% residual ripple)		
No-load current I_0 , max.	mA	15	25	15
Rated operating current I_e	mA	200		
Switching frequency	Hz	1000	500	1000
Switching time	ms	0.5	1	0.5
Wavelength (illuminant)	nm	880 (IR)	660 (red)	660 (red, polarized)
Displays		<ul style="list-style-type: none"> • Switching status • Surplus light 		
		Yellow LED Green LED		
Enclosure material		Molded plastic (PBTP, Crastin)		
Degree of protection		IP65		
Ambient temperature	°C	-25 ... +55		
Temperature coefficient	%/K	0.3		
Type		3RG70 10-...	3RG70 14-...	3RG70 11-...
Operating mode		Thru-beam sensor	Sensor for plastic optical fibers	
				
Sensing range	cm	600 (adjustable)	Depending on type of optical fiber	
Standard target	mm	-	100 x 100 (white)	
Operating voltage range (DC)	V	10 ... 30 (max. 20 % residual ripple)		
No-load current I_0 , max.	mA	15		
Rated operating current I_e	mA	200		
Switching frequency	Hz	1000		
Switching time	ms	0.5		
Wavelength (illuminant)	nm	880 (IR)	660 (red)	
Displays		<ul style="list-style-type: none"> • Switching status • Surplus light 		
		Yellow LED Green LED		
Enclosure material		Molded plastic (PBTP, Crastin)		
Degree of protection		IP65		
Ambient temperature	°C	-25 ... +55		
Temperature coefficient	%/K	0.3		
Type		3RG70 12-...	3RG70 13-...	

Selection and Ordering data

Operating mode	Sensing range	Illuminant	Wiring	Switching output	Ckt. diag. No.	Order No.	
	cm						nm
 Diffuse sensor	60 (adjustable via potentiometer)	880 (IR)	2 m cable, PUR, 3 0.14 mm ²	pnp, light-ON	1	A A	3RG70 10-0AB01
				pnp, dark-ON	1		3RG70 10-0AA01
			npn, light-ON	1	3RG70 10-0GB00		
			npn, dark-ON	1	3RG70 10-0GA00		
	M8 connector, 3-pole, type A	pnp, light-ON	1	3RG70 10-7AB01			
		pnp, dark-ON	1	3RG70 10-7AA01			
		npn, light-ON	1	3RG70 10-7GB00			
		npn, dark-ON	1	3RG70 10-7GA00			
Diffuse sensor with back-ground suppression	3 ... 15 (adjustable via potentiometer)	660 (red)	2 m cable, PUR, 3 0.14 mm ²	pnp, light-ON	1	A	3RG70 14-0AB00
				pnp, dark-ON	1		3RG70 14-0AA00
			npn, light-ON	1	3RG70 14-0GB00		
			npn, dark-ON	1	3RG70 14-0GA00		
	M8 connector, 3-pole, type A	pnp, light-ON	1	3RG70 14-7AB00			
		pnp, dark-ON	1	3RG70 14-7AA00			
		npn, light-ON	1	3RG70 14-7GB00			
		npn, dark-ON	1	3RG70 14-7GA00			
Retroreflective sensor	200 (adjustable via potentiometer)	660 (red, polarized)	2 m cable, PUR, 3 0.14 mm ²	pnp, light-ON	1	A	3RG70 11-0AB01
				pnp, dark-ON	1		3RG70 11-0AA01
			npn, light-ON	1	3RG70 11-0GB00		
			npn, dark-ON	1	3RG70 11-0GA00		
	M8 connector, 3-pole, type A	pnp, light-ON	1	3RG70 11-7AB01			
		pnp, dark-ON	1	3RG70 11-7AA01			
		npn, light-ON	1	3RG70 11-7GB00			
		npn, dark-ON	1	3RG70 11-7GA00			
Thru-beam sensor	600 (adjustable via potentiometer)	880 (IR)	2 m cable, PUR, 3 0.14 mm ²	pnp, light-ON	1	A	3RG70 12-0AB01
				pnp, dark-ON	1		3RG70 12-0AA01
			npn, light-ON	1	3RG70 12-0GB00		
			npn, dark-ON	1	3RG70 12-0GA00		
	M8 connector, 3-pole, type A	Emitter	2	3RG70 12-0BG01			
		pnp, light-ON	1	3RG70 12-7AB01			
		pnp, dark-ON	1	3RG70 12-7AA01			
		npn, light-ON	1	3RG70 12-7GB00			
Sensor for plastic optical fibers	Depends on FO conductor	660 (red)	2 m cable, PUR, 3 0.14 mm ²	pnp, light-ON	1	A	3RG70 13-0AB00
				pnp, dark-ON	1		3RG70 13-0AA00
			npn, light-ON	1	3RG70 13-0GB00		
			npn, dark-ON	1	3RG70 13-0GA00		
M8 connector, 3-pole, type A	pnp, light-ON	1	3RG70 13-7AB00				
	pnp, dark-ON	1	3RG70 13-7AA00				
	npn, light-ON	1	3RG70 13-7GB00				
	npn, dark-ON	1	3RG70 13-7GA00				

Accessories

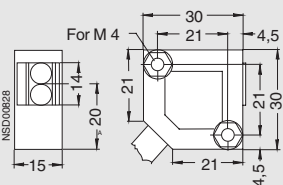
Mounting bracket for forms K30, K31

3RX7 910

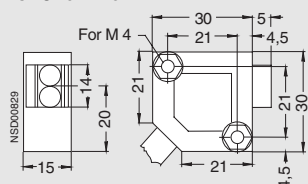
A: Subject to export regulations: AL = N and ECCN = EAR99H

Dimensions

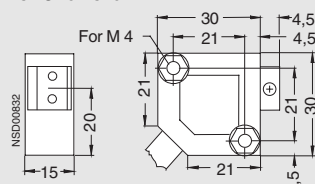
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3RG70 14-0....



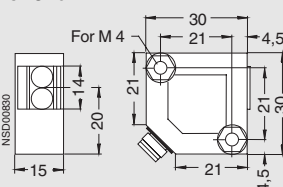
3RG70 11-0....



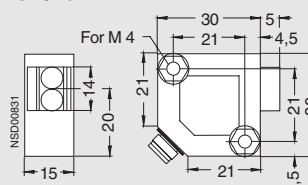
3RG70 13-0....



3RG70 10-7...., 3RG70 12-7....,
3RG70 14-7....



3RG70 11-7....



3RG70 13-7....

