

Overview

Cubic molded plastic enclosure, IP67, connection using M12 connector or Pg 11 cable gland

Versions for use in potentially explosive environments acc. to 94/9/EG (ATEX exists):

- Zone 2 (gases, vapors, mist) according to classification II 3G
- Zone 22 (dust atmosphere, non-conductive dust) according to classification II 3D

Diffuse sensor (energetic sensor)

- Sensing range 2 m (adjustable using potentiometer)

Diffuse sensor with background suppression

- Sensing range 0.2 to 1 m (adjustable using potentiometer)

Retroreflective sensor

- Sensing range 6 m (adjustable using potentiometer)
- Supplied without reflector
- "Advanced" version 1 to 12 m

Thru-beam sensor

- Sensing range 50 m (adjustable using potentiometer)



Rated operating voltage 24 V DC or 240 V AC/DC



Inputs and outputs

- Electronics output pnp or npn
- programmable as light-ON or dark-ON
- light-ON, dark-ON (antivalent)
- Relay output 20 V to 320 V AC/DC
- Timing function (delayed pick-up or drop-out, pulse shaping)
- Enabling input for test purposes

Supplied without mounting material

Technical specifications

Operating mode	Diffuse sensor				Diffuse sensor with background suppression				
									
Sensing range	m	2 (adjustable)				0,2 ... 1 (adjustable)			
Standard target	mm	400 × 400 (white)				200 × 200 (white)			
Operating voltage range (DC)	V	10 ... 36	–	10 ... 36	10 ... 36	–	10 ... 36	–	
No-load current I_0 , max.	mA	30	–	30	30	–	45	–	
Operating voltage range (AC/DC)	V	–	20 ... 265	200	–	–	–	–	
No-load power, max.	VA	–	2	–	–	–	–	–	
Rated operational current I_e	mA	200	2000 (at 240 V AC)	200	200	–	200	–	
Switching frequency, max.	Hz	1000	20	1000	250	–	250	–	
Switching time, max.	ms	0.5	20	0.5	2	–	2	–	
Wavelength (illuminant)	nm	880 (IR)				880 (IR)			
Switching state/surplus light function display		LED yellow/LED green				LED yellow/LED green			
Enclosure material		Formstoff (PBTP)				Formstoff (PBTP)			
Degree of protection		IP67				IP67			
Approval for Ex Zones 2/22		no	no	yes	no	no	yes	no	
Ambient temperature	°C	–5 ... +55	–5 ... +55	–5 ... +40	–5 ... +55	–5 ... +55	–5 ... +40	–5 ... +55	
Temperature coefficient	%/K	0.3				0.3			
Type		3RG72 00-...00, 3RG72 10-...00	3RG72 10-6MC00	3RG72 00-3CC00- 0XB4	3RG72 04-...00, 3RG72 14-...00	–	–	–	




Operating mode	Retroreflective sensor with polarization filter				Thru-beam sensor				
									
Sensing range	m	6/12 (adjustable)				50 (adjustable)			
Reflector	mm	Reflector type D 84				–			
Operating voltage range (DC)	V	10 ... 36	–	10 ... 36	10 ... 36	–	10 ... 36	–	
No-load current I_0 , max.	mA	30	–	30	30	–	–	–	
Operating voltage range (AC/DC)	V	–	20 ... 265	–	–	20 ... 320	–	–	
No-load power, max.	VA	–	2	–	–	2	–	–	
Rated operational current I_e	mA	200	2000 (at 240 V AC)	200	200	2000 (at 240 V AC)	200	–	
Switching frequency, max.	Hz	1000	20	1000	1000	20	1000	–	
Switching time, max.	ms	0.5	20	0.5	0.5	20	0.5	–	
Wavelength (illuminant)	nm	660 (red, polarized)				880 (IR)			
Switching state/surplus light function display		LED yellow/LED green				LED yellow/LED green			
Enclosure material		Molded plastic (PBTP)				Molded plastic (PBTP)			
Degree of protection		IP67				IP67			
Approval for Ex Zones 2/22		no	no	yes	no	no	yes	no	
Ambient temperature	°C	–5 ... +55	–5 ... +55	–5 ... +40	–5 ... +55	–5 ... +55	–5 ... +40	–5 ... +55	
Temperature coefficient	%/K	0.3				0.3			
Type		3RG72 01-...00, 3RG72 01-...61, 3RG72 11-...00, 3RG72 11-...61	3RG72 11-6MC00, 3RG72 11-6MC61	3RG72 01-3CC... 0XB4	3RG72 02-...00, 3RG72 12-...00	3RG72 12-6MC00, 3RG72 02-6FG00	3RG72 02-...- 0XB4, 3RG72 12-...- 0XB4	–	

Opto Proximity Switches

SIMATIC PXO600


K80 form


Selection and Ordering data

	Operating mode	Sensing range	Illuminant	Wiring	Switching output	Ckt. diag. No.	Order No.	
		m	nm					
K80 form								
	Diffuse sensor	2 (adjustable via potentiometer)	880 (IR)	M12 plug, 4-pole, type F	Light-ON and dark-ON (antivalent)	pnp nnp	5 5	3RG72 00-3CC00 3RG72 00-3HC00
				M12 plug, 5-pole, type G	Light-On or Dark-On and surplus light, with timing function (0.01 ... 1 s)	pnp nnp	8 8	3RG72 10-3DK00 3RG72 10-3EK00
				Pg 11, 4-pole	Light-ON and dark-ON (antivalent)	pnp nnp		3RG72 00-6CC00 3RG72 00-6HC00
				Pg 11, with enabling input, 5-pole	Light-On or Dark-On and surplus light, with timing function (0.01 ... 1 s)	pnp nnp	11 11	3RG72 10-6DK00 3RG72 10-6EK00
				Pg 11, 5-pole	Relay, light-ON and dark-ON, with timing function (0.1 ... 10 s)	Relay	10	3RG72 10-6MC00
K80 form								
	Diffuse sensor with background suppression	0,2 ... 1 (adjustable via potentiometer)	880 (IR)	M12 plug, 4-pole, type F	Light-ON and dark-ON (antivalent)	pnp nnp	5 5	3RG72 04-3CC00 3RG72 04-3HC00
				M12 plug, 5-pole, type G	Light-On or Dark-On and surplus light, with timing function (0.01 ... 1 s)	pnp nnp	8 8	3RG72 14-3DK00 3RG72 14-3EK00
				Pg 11, 4-pole	Light-ON and dark-ON (antivalent)	pnp nnp		3RG72 04-6CC00 3RG72 04-6HC00
				Pg 11, with enabling input, 5-pole	Light-On or Dark-On and surplus light, with timing function (0.01 ... 1 s)	pnp nnp	11 11	3RG72 14-6DK00 3RG72 14-6EK00
K80 form								
	Retroreflective sensor	6 (adjustable via potentiometer)	660 (red, polarized)	M12 plug, 4-pole, type F	Light-ON and dark-ON (antivalent)	pnp nnp	5 5	3RG72 01-3CC00 3RG72 01-3HC00
				M12 plug, 5-pole, type G	Light-On or Dark-On and surplus light, with timing function (0.01 ... 1 s)	pnp nnp	8 8	3RG72 11-3DK00 3RG72 11-3EK00
				Pg 11, 4-pole	Light-ON and dark-ON (antivalent)	pnp nnp	11 11	3RG72 01-6CC00 3RG72 01-6HC00
				Pg 11, with enabling input, 5-pole	Light-On or Dark-On and surplus light, with timing function (0.01 ... 1 s)	pnp nnp	11 11	3RG72 11-6DK00 3RG72 11-6EK00
				Pg 11, 5-pole	Relay, light-ON and dark-ON, with timing function (0.1 ... 10 s)	–	10	3RG72 11-6MC00
		12 (adjustable via potentiometer)	660 (red, polarized)	M12 plug, 4-pole, type F	Light-ON and dark-ON (antivalent)	pnp	5	3RG72 01-3CC61
		Pg 11, 4-pole		Light-ON and dark-ON (antivalent)	pnp		3RG72 01-6CC61	
		Pg 11, 5-pole		Relay, light-ON and dark-ON, with timing function (0.1 ... 10 s)	Relay	10	3RG72 11-6MC61	

Opto Proximity Switches SIMATIC PXO600

K80 form

Operating mode	Sensing range	Illuminant	Wiring	Switching output	Ckt. diag. No.	Order No.	
	m	nm					
K80 form							
	Thru-beam sensor	50 (adjustable via potentiometer)	880 (IR)	M12 plug, 4-pole, type F	Light-ON and dark-ON (antivalent)	pnp 5	3RG72 02-3CC00
						nnp 5	3RG72 02-3HC00
					Light-On or Dark-On and surplus light, with timing function (0.01 ... 1 s)	pnp 6	3RG72 12-3DK00
					Light-ON and dark-ON (antivalent)	pnp 11	3RG72 02-6CC00
						nnp 11	3RG72 02-6HC00
					Light-On or Dark-On and surplus light, with timing function (0.01 ... 1 s)	pnp 11	3RG72 12-6DK00
	nnp 11	3RG72 12-6EK00					
			Pg 11, 4-pole	Relay, light-ON and dark-ON, with timing function (0.1 ... 10 s)	- 10	3RG72 12-6MC00	
Thru-beam sensor Emitter	50 (adjustable via potentiometer)	880 (IR)	M12 plug, 4-pole, type F	Emitter DC with enabling input	- 7	3RG72 02-3BG00	
				Emitter DC with enabling input	- 11	3RG72 02-6BG00	
				Emitter AC/DC with enabling input	- 11	3RG72 02-6FG00	

Operating mode	Sensing range	Illuminant	Wiring	Switching output	Ckt. diag. No.	Order No.	
	m	nm					
K80 ATEX form							
	Diffuse sensor	2 (can be set with potentiometer)	880 (IR)	M12 plug, 4-pole, type F	Light-ON and dark-ON (antivalent)	pnp 5	3RG72 00-3CC00-0XB4
					Light-ON and dark-ON (antivalent)	pnp 5	3RG72 01-3CC00-0XB4
					Light-ON and dark-ON (antivalent)	pnp 5	3RG72 01-3CC61-0XB4
					Light-ON and dark-ON (antivalent)	pnp 5	3RG72 02-3CC00-0XB4
					Light-On or Dark-On and surplus light, with timing function (0.01 ... 1 s)	pnp 6	3RG72 12-3DK00-0XB4
				Sender with enable input	- 7	3RG72 02-3BG00-0XB4	
Retroreflective sensor	6 (can be set with potentiometer)	660 (red, polarized)	M12 plug, 4-pole, type F	Light-ON and dark-ON (antivalent)	pnp 5	3RG72 01-3CC00-0XB4	
				Light-ON and dark-ON (antivalent)	pnp 5	3RG72 01-3CC61-0XB4	
Thru-beam sensor	50 (can be set with potentiometer)	880 (IR)	M12 plug, 4-pole, type F	Light-ON and dark-ON (antivalent)	pnp 5	3RG72 02-3CC00-0XB4	
				Light-On or Dark-On and surplus light, with timing function (0.01 ... 1 s)	pnp 6	3RG72 12-3DK00-0XB4	

Communication-capable proximity switches with K80 IQ-Sense form

Diffuse sensor	2	880 (IR)	M12 plug, 4-pole, type F	for connection to the 4IQ-Sense sensor module	9	3SF72 10-3JQ00
Diffuse sensor with background suppression	0.2 ... 1	880 (IR)	M12 plug, 4-pole, type F	for connection to the 4IQ-Sense sensor module	9	3SF72 14-3JQ00
Retroreflective sensor	8	660 (red, polarized)	M12 plug, 4-pole, type F	for connection to the 4IQ-Sense sensor module	9	3SF72 11-3JQ00

Accessories

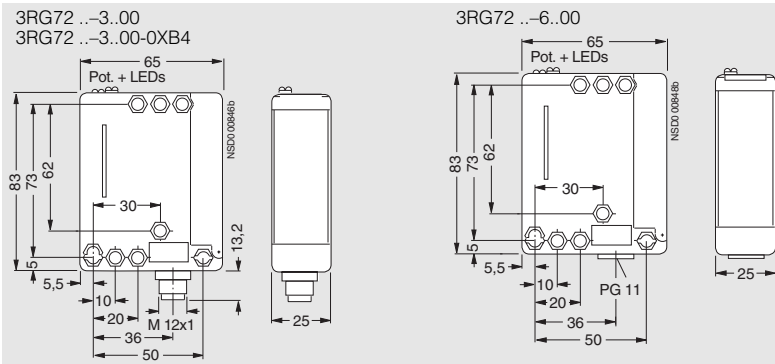
Mounting bracket for form K80	3RX7 303
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K80 form

Dimensions



2