

Retroflective sensing sensor, Sn=7600mm, 4L, 10-30VDC, NPN, PNP, M18, insulated material, line 2m



Part no. 14102A6517 Article no. 135655 Catalog No. 14102A6517

Delivery programme

Basic function			Optical sensors
Product range			Comet Series
For connection of:			2 m connection cable
Design (outer dimensions)		mm	M18 x 1
Rated operational voltage	U _e		10 - 30 V DC
Rated switching distance	S_n	mm	7600
Description			for combination with reflector non-polarized Beam: straight
Connection			4-wire
Function			Reflex photoelectric sensor
Type of light			Visible red
Material			Insulated material
Switching type			NPN PNP
Switching principle			Adjustable bright/dark switching

Technical data

General

Standards		IEC/EN 60947-5-2
Ambient temperature		-40 - +70
Mechanical shock resistance	g	100 Shock duration 3 ms
Degree of Protection		IP67
Characteristics		

Degree of Protection			IP67
Characteristics			
Rated switching distance			
Rated switching distance	S_n	mm	7600
Range		mm	7.6
Rated operational voltage	U _e		10 - 30 V DC
Operating current in the switched state at 24 V DC	I _b	mA	30
Maximum load current	l _e	mA	< PNP: 100 NPN: 250 (120 > 55 °C)
Response time		ms	1
Switching state display		LED	Red
Protective functions			Short-circuit protective device Protection against polarity reversal
Connection			4-wire
Style			
Design (outer dimensions)		mm	M18 x 1
For connection of:			2 m connection cable
Material			Insulated material

Design verification as per IEC/EN 61439

Technical data for design verification		
Operating ambient temperature min.	°C	-40
Operating ambient temperature max.	°C	70

Technical data ETIM 6.0

Sensors (EG000026) / Reflection light barrier (EC002717)

Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Optoelectronic sensor / Reflection light barrier (ecl@ss8.1-27-27-09-02 [AKP251010])

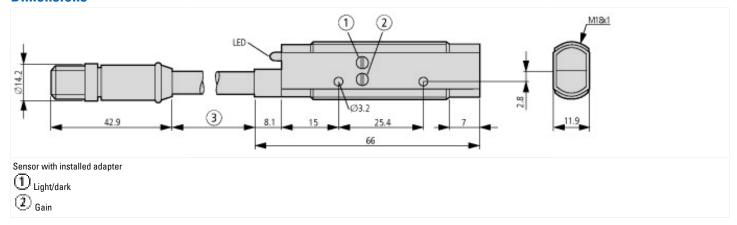
	Pre failure notice		No
Rote ordering distance Image: 100 mg march or 100 mg			
Max. cardeting distance (**) (*			
Relieutor recibided IMA IRICAL CONTRICATION IRIC			
Reference included Images coupt of N - 2 min Images co			
Analogue marper 0 A - 2 ma		mA	
Analogue august 0 MA - 20mA Inc. No.			
Analogue output -1 VV - 10 V Na <			No
Analogoe segurt - 10 V - + 10 V Nemera analog segurt Nemera segurt - 10 V - 10 M			No
With other annolog grouper Manual Arighment Soming precedure 4 manual Arighment With communication interface A Shirdrage 9	Analogue output 4 mA 20 mA		No
Setting procedure Image: 100 Main animation an	Analogue output -10 V +10 V		No
With communication interface Achierations Image: Imag	With other analog output		No
With communication interface As-Interface	Setting procedure		Manual adjustment
With communication interface Developed	With communication interface analog		No
With communication interface Ehrener No With communication interface Ehrener No With communication interface Ehrener No With communication interface PROFBUS No With communication interface PROFBUS No With communication interface PROFBUS No With communication interface RS-422 No With communication interface RS-458 No	With communication interface AS-Interface		No
With communication interface Ethernet In a communication interface PROFINESUS No With communication interface PROFINESUS No No With communication interface RS-322 No No With communication interface RS-422 No No With communication interface RS-428 No No With communication interface SSI No No With communication interface SSI No No Number of senic enductor curptus with signalling function 2 No Number of protected contact energized cutputs 0 No Number of protected contact energized cutputs No No Number of protected contact energized cutputs No No Number of protected contact energized cutputs No No <td>With communication interface CANOpen</td> <td></td> <td>No</td>	With communication interface CANOpen		No
With communication interface RPGPIBUS Kondead With communication interface RPGPIBUS No With communication interface RPS-322 No With communication interface RS-425 No With communication interface RS-485 No Winterface RTS-485 No Winter	With communication interface DeviceNet		No
With communication interface RS-0224 No With communication interface RS-4225 No With communication interface RS-4285 No With communication interface RS-4865 No With communication interface RS-1865 No With communication interface RS-1865 No With communication interface RS-1865 No With communication interface RS-1866 No With communication interface RS-1866 No With communication interface RS-1866 No Number of protected semiconductor outputs with signalling function No Number of protected semiconductor outputs with signalling function No Number of protected semiconductor outputs No Number of protected contact energized outputs No Number of protected semiconductor outputs with signalling function No Number of protected semiconductor	With communication interface Ethernet		No
With communication interface RS-222 No With communication interface RS-425 No With communication interface RS-485 No With communication interface RS-1485 No With communication interface RS-1485 No Number of semiconductor outputs with signalling function 2 Number of protected semiconductor outputs with signalling function 0 Number of protected semiconductor outputs 1 Number of protected semiconductor outputs 2 Type of lestificate on self-you communication 2 Type of self-you communication 2 Type of self-you communication 2 Type of self-you cases 3	With communication interface INTERBUS		No
With communication interface RS-429 No With communication interface RS-459 No With communication interface SSD No With communication interface SSD No Number of semiconductor outputs with signalling function 2 Number of contact energized outputs with signalling function 0 Number of protected semiconductor outputs with signalling function 0 Number of protected semiconductor outputs None Seposition semicorus output outputs 0 Number of protected output 0 Material of optical surface 0 Material of protected output 0 <t< td=""><td>With communication interface PROFIBUS</td><td></td><td>No</td></t<>	With communication interface PROFIBUS		No
With communication interface RS-485 No With communication interface SSD No With communication interface SSD No Number of semiconductor outputs with signalling function 2 Number of protected semiconductor outputs 0 Number of protected connect energized outputs 0 Number of protected connect energized outputs 0 Type of interface for safety communication 0 Type of switching output 2 No 2 Operation spent safety category for dust 2 Construction type housing 2 Width search 2 Huight of sensor 3	With communication interface RS-232		No
White communication interface SSI No Wind communication interface SSI No Number of semiconductor outputs with signalling function 2 Number of protected semiconductor outputs 6 Type of interface for safety communication 6 Type of switch function 6 Type of switch function 6 Operation agent-safety class 6 Epplosion safety category for gas 7 Explosion safety category for dust 7 Construction type housing 7 Width sensor 7 Diameter sensor 7 Buther of sensor 7 Switch function 7 Matorial Opucleuride 7 Matori	With communication interface RS-422		No
With communication interface SSI No Number of semiconductor outputs with signalling function 2 Number of protected control twith signalling function 0 Number of protected control twith signalling function 0 Number of protected contact conserpized outputs 0 Type of interface for safety communication 0 Type of electric connection Cable Type of electric connection PNP/NPN Operation agent-safety class 0 Explosion safety category for gas 0 Explosion safety category for dust None Construction type housing 0 Width sansor m Begint of sensor m Switch function 0 It is a safety category for dust 0 Construction type housing m Width sansor m Beging it a sensor m Beging it a sensor m Switch function 1 Material flowing 1 Max. output current at protected output m Min. reflector distance m <td>With communication interface RS-485</td> <td></td> <td>No</td>	With communication interface RS-485		No
Number of semiconductor outputs with signalling function Image: Contact energized outputs with signalling function Image: Contact energized outputs with signalling function Image: Contact energized outputs Image: Contact energized energized outputs Image: Contact energized ener	With communication interface SSD		No
Number of contact energized outputs with signalling function Image: Control of protected semiconductor outputs Image: Control output protected semiconductor outputs Image: Control output protected semiconductor outputs Image: Control output protected output protecte	With communication interface SSI		No
Number of protected semiconductor outputs Image: Communication of the protected contact energized outputs Image: Communication of the protected output of the protect	Number of semiconductor outputs with signalling function		2
Number of protected contact energized outputs Image: Contact of Safety communication Image: Contact of Safety configurable Image: Contact of Safety con	Number of contact energized outputs with signalling function		0
Type of interface for safety communication Cable Type of electric connection Cable Type of switching output PNPNPN Type of switch function Programmable/configurable Operation agent-safety class None Explosion safety category for dust None Explosion safety category for dust Vinider, screw-thread Onestruction type housing Mm 18 Width sensor Mm 18 Leight of sensor Mm 18 Leight of sensor Mm 18 Switch function Mm 18 Material footial surface Mm 18 Material footial surface Mm 18 Material footial surface Mm 18 Material footing Mm 18 Material footing Mm 18 Macrotiput current at protected output Mm 19 Min. reflector distance Mm 0 Amient temperature Mm 0 Tonsmission range of the safety field Mm 50 <	Number of protected semiconductor outputs		0
Type of electric connection Cable Type of switching output PNP/NPN Type of switch function Programmable/configurable Operation agent-safety class	Number of protected contact energized outputs		0
Type of switching output PNP/NPN Type of switch function Programmable/configurable Operation agent-safety class - Explosion safety category for gas None Explosion safety category for dust Viinder, screw-thread Construction type housing Min 0 Width sensor mm 0 Leight of sensor mm 6 Leight of sensor mm 6 Switch function mm 6 Material of optical surface mm 6 Material fo optical surface max 0 Max. output current at protected output mm 0 Max. output current at protected output mm 0 Min. reflector distance mm 0 Ambient temperature mm 0 Time of reaction ms 0 Switching frequency ms 50 Type of safety acc. IEC 61496-1 y 0 Switching voltage of OSSD at state *high* y 0 Rated control supply voltage Us at AC 50HZ	Type of interface for safety communication		
Type of switch function Operation agent-safety class Explosion safety category for gas Explosion safety category for dust Construction type housing Width sensor Diameter sensor Height of sensor Length of sensor Length of sensor Material of optical surface Material of optical surface Material for businace Material of optical surface Material for sensor Material of optical surface Material of optical surface Material for sensor Material of optical surface Material for sensor Material of optical surface Material for sensor Material of optical surface Material for sensor Material of optical surface Material for sensor Material of optical surface Materi	Type of electric connection		Cable
Type of switch function Programmable/configurable Operation agent-safety class - Explosion safety category for gas None Explosion safety category for dust Construction type housing Cylinder, screw-thread Width sensor mm 0 Diameter sensor mm 18 Height of sensor mm 0 Length of sensor mm 66 Switch function plastic Material of optical surface plastic Material of optical surface mm 0 Material protected output mm 0 Max. output current at protected output mm 0 Min. reflect of distance mm 0 Ambient temperature °C 40-70 Transmission range of the safety field ms 0 Switching frequency tg 50 Type of safety ac. IEC 61496-1 V 0 Switching voltage of OSSD at state "high" V 0 Rated control supply voltage Us at AC 60HZ V 0 -0	Type of switching output		PNP/NPN
Operation agent-safety class Feet plosion safety category for gas None Explosion safety category for dust Vone Construction type housing Cylinder, screw-thread Width sensor mm 0 Diameter sensor mm 18 Height of sensor mm 0 Length of sensor mm 6 Switch function mm 66 Switch function plastic Material of optical surface mm 0 Material of uncertainty of control surface mm 0 Max. output current at protected output mm 0 Min. reflect of distance mm 0 Ambient temperature c 40-70 Time of reaction ms 0 Transmission range of the safety field ms 0 Switching frequency t t Type of safety ac. IEC 61496-1 t 0 Switching voltage of OSSD at state 'high' t 0 Retact control supply voltage Us at AC 50HZ t 0 </td <td></td> <td></td> <td>Programmable/configurable</td>			Programmable/configurable
Explosion safety category for dust None Construction type housing Cylinder, screw-thread Width sensor mm 0 Diameter sensor mm 18 Height of sensor mm 6 Switch function mm 66 Switch function mm 69 Material of optical surface plastic Material housing mA 0 Max. output current at protected output mA 0 Min. reflector distance mm 0 Ambient temperature "C 40 - 70 Time of reaction ms 0 Transmission range of the safety field m 0 Switching frequency Hz 500 Type of safety acc. IEC 61496-1 V 0 Switching voltage of OSSD at state "high" V 0 Rated control supply voltage Us at AC 50HZ V 0 - 0	Operation agent-safety class		
Explosion safety category for dust None Construction type housing Cylinder, screw-thread Width sensor mm 0 Diameter sensor mm 18 Height of sensor mm 6 Switch function mm 66 Switch function plastic Material housing plastic Max. output current at protected output mA 0 Min. reflector distance mm 0 Ambient temperature °C 40 - 70 Time of reaction ms 0 Transmission range of the safety field m 0 Switching frequency Hz 500 Type of safety acc. IEC 61496-1 v 0 Switching voltage of OSSD at state 'high' v 0 Rated control supply voltage Us at AC 50HZ V 0 - 0 Rated control supply voltage Us at AC 60HZ V 0 - 0	Explosion safety category for gas		None
Construction type housing Width sensor In m 0 Diameter sensor Height of sensor Length of sensor Material of optical surface Material housing Max. output current at protected output Min. reflector distance Min. reflector di			None
Width sensormm0Diameter sensormm18Height of sensormm0Length of sensormm66Switch functionLight-/dark switchingMaterial of optical surfaceLight-/dark switchingMaterial housingPlasticMax. output current at protected outputmA0Min. reflector distancemm0Ambient temperature°C-40 - 70Time of reactionms0Transmission range of the safety fieldm0Switching frequencyHz500Type of safety acc. IEC 61496-1Switching voltage of OSSD at state "high"V0Rated control supply voltage Us at AC 50HZV0 - 0Rated control supply voltage Us at AC 50HZV0 - 0			
Diameter sensor mm 18 Height of sensor mm 0 Length of sensor mm 66 Switch function Material of optical surface Material housing Plastic Material housing mm 0 Min. reflector distance mm 0 Min. reflector distance mm 0 Ambient temperature cetted output mm 0 Min. reflector distance mm 0 Switching frequency cetted output ms 0 Transmission range of the safety field m 0 Switching frequency Hz 500 Switching frequency Hz 500 Switching voltage of OSSD at state "high" V 0 Rated control supply voltage Us at AC 50HZ V 0 - 0 Rated control supply voltage Us at AC 60HZ V 0 - 0		mm	
Height of sensor Length of sensor Switch function Material of optical surface Material housing Max. output current at protected output Min. reflector distance Ambient temperature Time of reaction Transmission range of the safety field Switching frequency Type of safety acc. IEC 61496-1 Switching voltage of OSSD at state "high" Rated control supply voltage Us at AC 50HZ Rated control supply voltage Us at AC 60HZ Mm 0 O C			
Length of sensor Switch function Material of optical surface Material housing Max. output current at protected output Min. reflector distance Ambient temperature Time of reaction Transmission range of the safety field Switching frequency Type of safety acc. IEC 61496-1 Switching voltage of OSSD at state "high" Rated control supply voltage Us at AC 50HZ Rated control supply voltage Us at AC 60HZ mm 66 Light-/dark switching Plastic Plastic MA 0 0 4 0 0 0 0 0 0 0 0 0 0			
Switch function Material of optical surface Material housing Max. output current at protected output Min. reflector distance Ambient temperature Time of reaction Transmission range of the safety field Switching frequency Type of safety acc. IEC 61496-1 Switching voltage of OSSD at state "high" Rated control supply voltage Us at AC 50HZ Rated control supply voltage Us at AC 60HZ Light-/dark switching Plastic Plastic Plastic MA 0 C 40 Plastic MB 0 C 40 -40-70 Twm 0 -40-70 Two 0 -40-70 Type of safety field M 0 C 40 -0 -0 Switching frequency V 0 -0 Rated control supply voltage Us at AC 50HZ Rotel Control supply voltage Us at AC 60HZ V 0-0			
Material of optical surface Material housing Plastic Max. output current at protected output Min. reflector distance Min. reflector distance Ambient temperature "C" -40 - 70 Time of reaction Transmission range of the safety field """""""""""""""""""""""""""""""""""			
Material housing Max. output current at protected output mA 0 Min. reflector distance mm 0 Ambient temperature °C -40 - 70 Time of reaction ms 0 Transmission range of the safety field mi 0 Switching frequency Hz 500 Type of safety acc. IEC 61496-1 Switching voltage of OSSD at state "high" Rated control supply voltage Us at AC 50HZ Rated control supply voltage Us at AC 50HZ V 0 - 0 Rated control supply voltage Us at AC 60HZ V 0 - 0			
Max. output current at protected output Min. reflector distance mm 0 Ambient temperature °C -40 - 70 Time of reaction ms 0 Transmission range of the safety field m 0 Switching frequency Hz 500 Type of safety acc. IEC 61496-1 Switching voltage of OSSD at state "high" V 0 Rated control supply voltage Us at AC 50HZ V 0 - 0 Rated control supply voltage Us at AC 60HZ V 0 - 0			
Min. reflector distance mm 0 Ambient temperature °C -40 - 70 Time of reaction ms 0 Transmission range of the safety field m 0 Switching frequency Hz 500 Type of safety acc. IEC 61496-1 - Switching voltage of OSSD at state "high" V 0 Rated control supply voltage Us at AC 50HZ V 0 - 0 Rated control supply voltage Us at AC 60HZ V 0 - 0		mΑ	
Ambient temperature °C -40 - 70 Time of reaction ms 0 Transmission range of the safety field m 0 Switching frequency Hz 500 Type of safety acc. IEC 61496-1 Switching voltage of OSSD at state "high" V 0 Rated control supply voltage Us at AC 50HZ V 0 - 0 Rated control supply voltage Us at AC 60HZ			
Time of reaction ms 0 Transmission range of the safety field m 0 Switching frequency Hz 500 Type of safety acc. IEC 61496-1 - Switching voltage of OSSD at state "high" V 0 Rated control supply voltage Us at AC 50HZ V 0 - 0 Rated control supply voltage Us at AC 60HZ V 0 - 0			
Transmission range of the safety field m 0 Switching frequency Hz 500 Type of safety acc. IEC 61496-1 - Switching voltage of OSSD at state "high" V 0 Rated control supply voltage Us at AC 50HZ V 0 - 0 Rated control supply voltage Us at AC 60HZ V 0 - 0			
Switching frequency Hz 500 Type of safety acc. IEC 61496-1 - Switching voltage of OSSD at state "high" V 0 Rated control supply voltage Us at AC 50HZ V 0 - 0 Rated control supply voltage Us at AC 60HZ V 0 - 0			
Type of safety acc. IEC 61496-1 - Switching voltage of OSSD at state "high" V 0 Rated control supply voltage Us at AC 50HZ V 0 - 0 Rated control supply voltage Us at AC 60HZ V 0 - 0			
Switching voltage of OSSD at state "high" V 0 Rated control supply voltage Us at AC 50HZ V 0 - 0 Rated control supply voltage Us at AC 60HZ V 0 - 0		ПZ	300
Rated control supply voltage Us at AC 50HZ V 0 - 0 Rated control supply voltage Us at AC 60HZ V 0 - 0		V	
Rated control supply voltage Us at AC 60HZ V 0 - 0			
Rated control supply voltage Us at DU V 10 - 30			
N. I			
Voltage type DC	Voltage type		טנ

With monitoring function downstream switching devices		No
Laser protection class		None
Wavelength of the sensor	nn	nm 0
Type of light		Polarity free red light
Light dot	mı	mm² 0
With restart blockage		No
Suitable for safety functions		No
Degree of protection (IP)		IP67

Approvals

Product Standards	UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
UL File No.	E117028
UL Category Control No.	NRKH, NRKH7
CSA File No.	50513
CSA Class No.	3211-07
North America Certification	UL listed, CSA certified
Max. Voltage Rating	30 V DC
Degree of Protection	IEC: IP68, IP69K; UL/CSA Type: 1, 4, 6

Dimensions



Additional product information (links)

IL05305002Z Comet Series Optical Sensors

IL05305002Z Comet Series Optical Sensors

ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05305002Z2012_08.pdf