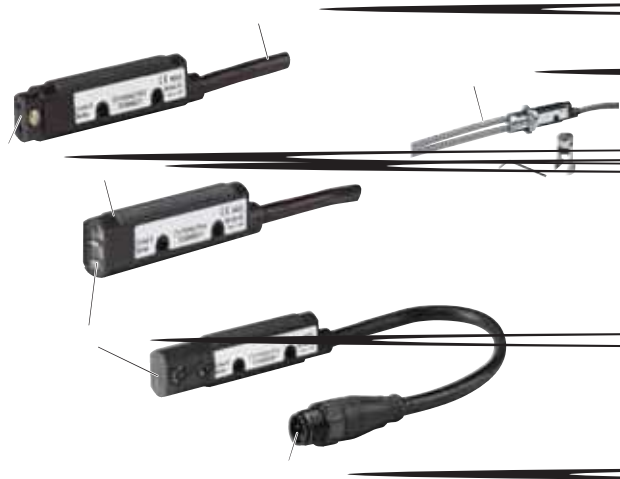


## Description



- ① FO cable versions possible.
- ② Bright/dark selector switch on all models.
- ③ Models with M12 plug connector.
- ④ Sensing beam 0° or 90°.
- ⑤ Solid Polyurethane Body for Rugged Use.

### Short Description

Eaton's high-performance light barriers feature a tubular enclosure with a diameter of 18 mm and are available in a range of versions to solve virtually any sensing problem. The sensors are available in thru-beam, reflex, polarized reflex, diffuse reflective, focused diffuse reflective, wide-angle diffuse reflective, Perfect Prox<sup>®</sup>\_x, Fine Spot Perfect Prox<sup>®</sup>\_x and fiber optic sensing versions. Perfect Prox<sup>®</sup>\_x light barriers are among the most powerful on the market. These sensors can reliably detect targets of different color, reflectance, contrast or surface shape at the same range, while ignoring background objects just a fraction of an inch away. The Comet model series includes AC/DC and DC-only models with 2-, 3- and 4-wire circuitry, and with cable or M 12 micro-connector. Each light barrier features a Light/ Dark changeover switch and a gain control to provide for quick adjustment to peak optical performance. The unique threaded housing with flat sides allows quick mounting in a 3/4 mm hole or against any flat surface. Internal components are rigidly sealed in a solid encapsulated package for excellent performance in high vibration and high-shock applications.
















### Product Features

- Industry standard 18 mm diameter threaded body has flat sides allowing it to be mounted like a tubular sensor or against any flat surface.
- Models with a 90° measurement direction can be installed in holes with a depth of only 152 mm.
- Perfect Prox<sup>®</sup>\_x technology provides exceptional background rejection and application problem-solving.
- Visible sensing beams let you see where the light barrier is aimed for quick flush mounting and alignment.
- Solid polyurethane housing completely encapsulates internal circuits for high resistance to shock and vibration
- Adaptable modulation circuit provides immunity to crosstalk from other closely mounted sensors
- Models available with both AC and DC operation in a single unit – up to 264 volts AC.
- 4-wire DC sensors offer both NPN and PNP outputs.
- Output status indicator visible from a wide 270° angle.



### Approvals







Ordering

	Rated operational voltage $U_e$	Switching type	Rated switching distance $S_n$ mm	For connection of:	Description	Type of light	Part no. Article no.	Price see price list	Std. pack					
<b>Comet series</b>														
M18 x 1, Light/dark switching adjustable, Insulated material														
3-wire														
Thru-beam photoelectric sensor, Beam: straight														
	20 - 264 V AC 15 - 30 V DC	NPN	6000	2 m connection cable	Detector (for combination with source)	Visible red	12100A6513 135566		1 off  					
				Plug-in connection M12 x 1			12100AQD03 135568							
			24000	2 m connection cable	Source (for combination with detector)	Visible red	12102A6513 135574							
				Plug-in connection M12 x 1			12102AQD03 135576							
			6000	2 m connection cable	Source (for combination with detector)	Visible red	11100A6513 135554							
				Plug-in connection M12 x 1			11100AQD03 135556							
			24000	2 m connection cable	Source (for combination with detector)	Visible red	11102A6513 135562							
				Plug-in connection M12 x 1			11102AQD03 135564							
Thru-beam photoelectric sensor, Beam: right-angled														
	20 - 264 V AC 15 - 30 V DC	NPN	6000	2 m connection cable	Detector (for combination with source)	Visible red	12100R6513 135570		1 off  					
							Plug-in connection M12 x 1			12100RQD03 135572				
							2 m connection cable			Source (for combination with detector)	Visible red	11100R6513 135558		
							Plug-in connection M12 x 1					11100RQD03 135560		
Reflex photoelectric sensor, Beam: straight														
	20 - 264 V AC 15 - 30 V DC	NPN	4500	2 m connection cable	Polarized light for combination with reflector	Visible red	14101A6513 135646		1 off  					
							Plug-in connection M12 x 1			14101AQD03 135648				
			7600	2 m connection cable	non-polarized for combination with reflector	Infra-red	14100A6513 135642							
							Plug-in connection M12 x 1			14100AQD03 135644				
						2 m connection cable	non-polarized for combination with reflector			Visible red	14102A6513 135654			
						Plug-in connection M12 x 1					14102AQD03 135656			
Reflex photoelectric sensor, Beam: right-angled														
	20 - 264 V AC 15 - 30 V DC	NPN	3000	2 m connection cable	Polarized light for combination with reflector	Visible red	14101R6513 135650		1 off  					
							Plug-in connection M12 x 1			14101RQD03 135652				
			4500	2 m connection cable	non-polarized for combination with reflector	Visible red	14102R6513 135658							
							Plug-in connection M12 x 1			14102RQD03 135660				
Reflected-light beam, Beam: focused, forward viewing														
	20 - 264 V AC 15 - 30 V DC	NPN	40	2 m connection cable		Visible red	13102A6513 135590		1 off  					
			40	Plug-in connection M12 x 1			13102AQD03 135592							

Information relevant for export to North America























 	Product Standards	UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
	UL File No.	E117028
	UL CCN	NRKH, NRKH7
	CSA File No.	50513
	CSA Class No.	3211-07
	NA Certification	UL listed, CSA certified
	Max. Voltage Rating	264 V AC, 30 V DC
	Degree of Protection	IEC: IP68, IP69K; UL/CSA Type: 1, 4, 6

	Rated operational voltage $U_e$	Switching type	Rated switching distance $S_n$ mm	For connection of:	Description	Type of light	Part no. Article no.	Price see price list	Std. pack
<b>Reflected-light beam, Beam: straight</b>									
	20 - 264 V AC 15 - 30 V DC	NPN	50	2 m connection cable	with background suppression (Perfect Prox)	Visible red	13104A6513		1 off  
				Plug-in connection M12 x 1			13104A0D03		
			100	2 m connection cable	with background suppression (Perfect Prox) Fine Spot Sensors	Infra-red	13105A6513		
				Plug-in connection M12 x 1			13105A0D03		
			150	2 m connection cable	Detection of transparent objects	Infra-red	13107A6513		
				Plug-in connection M12 x 1			13107AS0D03		
			200	2 m connection cable	with background suppression (Perfect Prox)	Infra-red	13108A6513		
				Plug-in connection M12 x 1			13108A0D03		
			225	2 m connection cable	Expandable with fiber optic cable → Accessories	Infra-red	13106A6513		
				Plug-in connection M12 x 1			13106A0D03		
			610	2 m connection cable	with background suppression (Perfect Prox)	Infra-red	13103A6513		
				Plug-in connection M12 x 1			13103A0D03		
			610	2 m connection cable	Expandable with fiber optic cable → Accessories	Infra-red	13100A6513		
				Plug-in connection M12 x 1			13100A0D03		
<b>Reflected-light beam, Beam: right-angled</b>									
	20 - 264 V AC 15 - 30 V DC	NPN	50	2 m connection cable	with background suppression (Perfect Prox)	Visible red	13104R6513		1 off  
				Plug-in connection M12 x 1			13104R0D03		
			100	Plug-in connection M12 x 1	with background suppression (Perfect Prox)	Visible red	13104RS5003		
				2 m connection cable			13104RS5013		
			150	2 m connection cable	Detection of transparent objects	Infra-red	13107RS6513		
				Plug-in connection M12 x 1			13107RS0D03		
			200	2 m connection cable	with background suppression (Perfect Prox)	Infra-red	13108R6513		
				Plug-in connection M12 x 1			13108R0D03		
			225	2 m connection cable	Expandable with fiber optic cable → Accessories	Infra-red	13106R6513		
				Plug-in connection M12 x 1			13106R0D03		
			610	2 m connection cable	with background suppression (Perfect Prox)	Infra-red	13103R6513		
				Plug-in connection M12 x 1			13103R0D03		
			610	2 m connection cable	Expandable with fiber optic cable → Accessories	Infra-red	13100R6513		
				Plug-in connection M12 x 1			13100R0D03		

## Information relevant for export to North America






Product Standards	UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
UL File No.	E117028
UL CCN	NRKH, NRKH7
CSA File No.	50513
CSA Class No.	3211-07
NA Certification	UL listed, CSA certified
Max. Voltage Rating	264 V AC, 30 V DC
Degree of Protection	IEC: IP68, IP69K; UL/CSA Type: 1, 4, 6

	Rated operational voltage $U_e$	Switching type	Rated switching distance $S_n$ mm	For connection of:	Description	Type of light	Part no. Article no.	Price see price list	Std. pack	
<b>Comet series</b>										
M18 x 1, Light/dark switching adjustable, Insulated material										
4-wire										
Thru-beam photoelectric sensor, Beam: straight										
	10 - 30 V DC	NPN PNP	6000	2 m connection cable	Detector (for combination with source)	Visible red	12100A6517 135567		1 off  	
				Plug-in connection M12 x 1						
			24000	2 m connection cable						12102A6517 135575
				Plug-in connection M12 x 1						
	6000	NPN PNP	6000	2 m connection cable	Source (for combination with detector)	Visible red	11100A6517 135555		1 off  	
				Plug-in connection M12 x 1						
			24000	2 m connection cable						11102A6517 135563
				Plug-in connection M12 x 1						
24000	NPN PNP	24000	2 m connection cable	Source (for combination with detector)	Visible red	11100A6517 135555		1 off  		
			Plug-in connection M12 x 1							
		6000	2 m connection cable						12100R6517 135571	
			Plug-in connection M12 x 1							
6000	NPN PNP	6000	2 m connection cable	Source (for combination with detector)	Visible red	11100R6517 135559		1 off  		
			Plug-in connection M12 x 1							
		24000	2 m connection cable						11102R6517 135561	
			Plug-in connection M12 x 1							
Thru-beam photoelectric sensor, Beam: right-angled										
	10 - 30 V DC	NPN PNP	6000	2 m connection cable	Detector (for combination with source)	Visible red	12100R6517 135571		1 off  	
				Plug-in connection M12 x 1						
			24000	2 m connection cable						11100R6517 135559
				Plug-in connection M12 x 1						
	24000	NPN PNP	24000	2 m connection cable	Source (for combination with detector)	Visible red	11100R6517 135559		1 off  	
				Plug-in connection M12 x 1						
			6000	2 m connection cable						14101R6517 135651
				Plug-in connection M12 x 1						
6000	NPN PNP	6000	2 m connection cable	Polarized light for combination with reflector	Visible red	14101R6517 135651		1 off  		
			Plug-in connection M12 x 1							
		4500	2 m connection cable						14102R6517 135653	
			Plug-in connection M12 x 1							
4500	NPN PNP	4500	2 m connection cable	non-polarized for combination with reflector	Visible red	14102R6517 135659		1 off  		
			Plug-in connection M12 x 1							
		7600	2 m connection cable						14101A6517 135647	
			Plug-in connection M12 x 1							
7600	NPN PNP	7600	2 m connection cable	non-polarized for combination with reflector	Infra-red	14100A6517 135643		1 off  		
			Plug-in connection M12 x 1							
		24000	2 m connection cable						14100A6517 135645	
			Plug-in connection M12 x 1							
24000	NPN PNP	24000	2 m connection cable	non-polarized for combination with reflector	Visible red	14102A6517 135655		1 off  		
			Plug-in connection M12 x 1							
		6000	2 m connection cable						14102A6517 135655	
			Plug-in connection M12 x 1							

**Information relevant for export to North America**





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

	Rated operational voltage $U_e$	Switching type	Rated switching distance $S_n$ mm	For connection of:	Description	Type of light	Part no. Article no.	Price see price list	Std. pack
<b>Comet series</b>									
M18 x 1, Light/dark switching adjustable, Insulated material									
	10 - 30 V DC	NPN PNP	40	2 m connection cable	with background suppression (Perfect Prox)	Visible red	<b>13102A6517</b> 135591		1 off  
				Plug-in connection M12 x 1					
			50	2 m connection cable	with background suppression (Perfect Prox)	Visible red	<b>13104A6517</b> 135603		
				Plug-in connection M12 x 1					
				2 m connection cable	with background suppression (Perfect Prox) Fine Spot Sensors		<b>13105A6517</b> 135615		
				Plug-in connection M12 x 1					
			100	2 m connection cable	with background suppression (Perfect Prox)	Infra-red	<b>13101A6517</b> 135587		
				Plug-in connection M12 x 1					
			150	2 m connection cable	Detection of transparent objects		<b>13107AS6517</b> 135627		
				Plug-in connection M12 x 1					
				2 m connection cable	with background suppression (Perfect Prox)		<b>13108A6517</b> 135635		
				Plug-in connection M12 x 1					
			200	2 m connection cable	Expandable with fiber optic cable → Accessories		<b>13106A6517</b> 135619		
				Plug-in connection M12 x 1					
			225	2 m connection cable	with background suppression (Perfect Prox)		<b>13103A6517</b> 135595		
				Plug-in connection M12 x 1					
			610	2 m connection cable	Expandable with fiber optic cable → Accessories		<b>13100A6517</b> 135579		
				Plug-in connection M12 x 1					

## Information relevant for export to North America



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

	Rated operational voltage $U_e$	Switching type	Rated switching distance $S_n$ mm	For connection of:	Description	Type of light	Part no. Article no.	Price see price list	Std. pack
<b>Comet series</b>									
M18 x 1, Light/dark switching adjustable, Insulated material									
	10 - 30 V DC	NPN PNP	50	2 m connection cable	with background suppression (Perfect Prox)	Visible red	13104R6517		1 off 
				Plug-in connection M12 x 1			135607		
			100	Plug-in connection M12 x 1		Visible red	13104RQD07		
				2 m connection cable			135609		
			150	2 m connection cable	Detection of transparent objects	Infra-red	13104RS5007		
				Plug-in connection M12 x 1			135611		
			200	2 m connection cable	with background suppression (Perfect Prox)	Infra-red	13104RS5020		
				Plug-in connection M12 x 1			135613		
			225	2 m connection cable	with background suppression (Perfect Prox)	Infra-red	13107RS6517		
				Plug-in connection M12 x 1			135631		
			610	2 m connection cable		Infra-red	13107RSQD07		
				Plug-in connection M12 x 1			135633		
			610	2 m connection cable		Infra-red	13108R6517		
				Plug-in connection M12 x 1			135639		
610	2 m connection cable		Infra-red	13108RQD07					
	Plug-in connection M12 x 1			135641					
610	2 m connection cable		Infra-red	13106R6517					
	Plug-in connection M12 x 1			135623					
610	2 m connection cable		Infra-red	13106RQD07					
	Plug-in connection M12 x 1			135625					
610	2 m connection cable		Infra-red	13103R6517					
	Plug-in connection M12 x 1			135599					
610	2 m connection cable		Infra-red	13103RQD07					
	Plug-in connection M12 x 1			135601					
610	2 m connection cable		Infra-red	13100R6517					
	Plug-in connection M12 x 1			135583					
610	2 m connection cable		Infra-red	13100RQD07					
	Plug-in connection M12 x 1			135585					

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UL File No.	E117028
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CSA File No.	50513
CSA Class No.	3211-07
NA Certification	UL listed, CSA certified
Max. Voltage Rating	30 V DC
Degree of Protection	IEC: IP68, IP69K; UL/CSA Type: 1, 4, 6

## Description



### Short Description

Eaton's Plastic Fiber Optic Cables from offer a lower-cost alternative to glass fibers.











Single fiber optic cable is normally used for thru-beam sensing and duplex fiber optic cable (two isolated cables running in parallel) for diffuse reflective.

Pre-assembled fiber optic cables are special purpose cables to solve a variety of fiber optic sensing applications.
















### Product Features

- Fiber optic cables allow remote sensing in areas where space is restricted or tight viewing angles are required
- Single cable styles are ideal for thru-beam sensing.
- Duplex fiber optic cable styles are typically used for diffuse reflective sensing
- Pre-assembled cables are available in 0.5 mm for sensing extremely small targets

## Ordering

	Design (outer dimensions) mm	Material	Sheathing	Part no. Article no.	Price see price list	Std. pack
<b>Glass fibre-Component adapter</b>						
In combination with reflex sensors 13106A... or 13100A... and E51KF fiber optic						
	-	Metal	-	<b>6235A-6501</b> 135759		1 off
<b>Glass fiber duplex cable</b>						
	2.4 Ø x 914	-	PVC	<b>E51KF163</b> 135761		1 off
	2.4 Ø x 914	-	Stainless steel	<b>E51KF563</b> 135783		
	1.6 Ø x 914	-	PVC	<b>E51KF183</b> 135763		
	1.6 Ø x 914	-	Stainless steel	<b>E51KF583</b> 135785		
	0.5 x 3.9 Ø x 914	-	PVC	<b>E51KF193</b> 135764		
	0.5 x 3.9 Ø x 914	-	Stainless steel	<b>E51KF593</b> 135786		
	3.2 Ø x 914	-	PVC	<b>E51KF323</b> 135771		
	3.2 Ø x 914	-	Stainless steel	<b>E51KF723</b> 135793		
	3.2 Ø x 914	-	PVC	<b>E51KF313</b> 135770		
	3.2 Ø x 914	-	Stainless steel	<b>E51KF713</b> 135792		
	0.8 x 9.7 Ø x 914	-	PVC	<b>E51KF343</b> 135773		
	0.8 x 9.7 Ø x 914	-	Stainless steel	<b>E51KF743</b> 135795		
	0.5 x 3.9 Ø x 914	-	Stainless steel	<b>E51KF553</b> 135782		
	0.5 x 3.9 Ø x 914	-	PVC	<b>E51KF153</b> 135760		
	1.6 Ø x 914	-	Stainless steel	<b>E51KF573</b> 135784		
	3.2 Ø x 914	-	Stainless steel	<b>E51KF733</b> 135794		
	1.6 Ø x 914	-	PVC	<b>E51KF173</b> 135762		
	3.2 Ø x 914	-	PVC	<b>E51KF333</b> 135772		
	3.2 Ø x 914	-	Stainless steel	<b>E51KF7A3</b> 135796		
	3.2 Ø x 914	-	PVC	<b>E51KF3A3</b> 135774		
	3.2 Ø x 914	-	Stainless steel	<b>E51KF7B3</b> 135797		
	3.2 Ø x 914	-	PVC	<b>E51KF3B3</b> 135775		

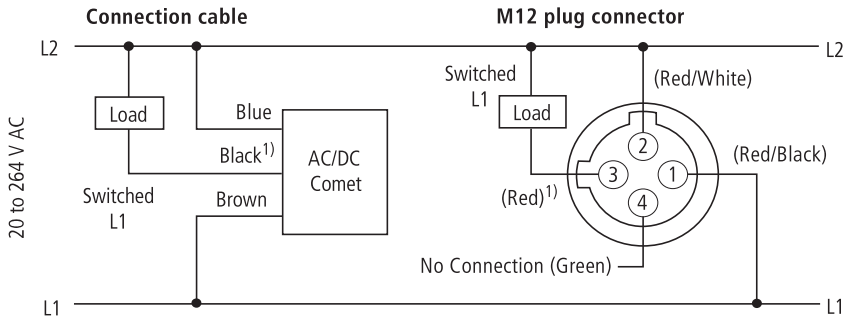


	Design (outer dimensions) mm	Material	Sheathing	Part no. Article no.	Price see price list	Std. pack
<b>Glass fiber simplex cable</b>						
	2.4 Ø x 914	-	Stainless steel	<b>E51KF663</b> 135788		1 off
	2.4 Ø x 914	-	PVC	<b>E51KF263</b> 135766		
	1.6 Ø x 914	-	Stainless steel	<b>E51KF683</b> 135790		
	1.6 Ø x 914	-	PVC	<b>E51KF283</b> 135768		
	0.5 x 3.9 Ø x 914	-	Stainless steel	<b>E51KF693</b> 135791		
	3.2 Ø x 914	-	Stainless steel	<b>E51KF823</b> 135799		
	3.2 Ø x 914	-	PVC	<b>E51KF423</b> 135777		
	0.5 x 3.9 Ø x 914	-	PVC	<b>E51KF293</b> 135769		
	3.2 Ø x 914	-	Stainless steel	<b>E51KF813</b> 135798		
	3.2 Ø x 914	-	PVC	<b>E51KF413</b> 135776		
	0.8 x 9.7 Ø x 914	-	Stainless steel	<b>E51KF843</b> 135801		
	0.8 x 9.7 Ø x 914	-	PVC	<b>E51KF443</b> 135779		
	0.5 x 3.9 Ø x 914	-	Stainless steel	<b>E51KF653</b> 135787		
	0.5 x 3.9 Ø x 914	-	PVC	<b>E51KF253</b> 135765		
	1.6 Ø x 914	-	Stainless steel	<b>E51KF673</b> 135789		
	3.2 Ø x 914	-	Stainless steel	<b>E51KF833</b> 135800		
	1.6 Ø x 914	-	PVC	<b>E51KF273</b> 135767		
	3.2 Ø x 914	-	PVC	<b>E51KF433</b> 135778		
	3.2 Ø x 914	-	Stainless steel	<b>E51KF8A3</b> 135802		
	3.2 Ø x 914	-	PVC	<b>E51KF4A3</b> 135780		
	3.2 Ø x 914	-	Stainless steel	<b>E51KF8B3</b> 135803		
	3.2 Ø x 914	-	PVC	<b>E51KF4B3</b> 135781		
<b>Safety bar</b>						
	-	Metal	-	<b>E58KS5200</b> 135757		1 off
<b>Fixing bracket</b>						
	53 x 44	Stainless steel	-	<b>6161AS5296</b> 135738		1 off
	53 x 44	Stainless steel	-	<b>6161AS5297</b> 135739		1 off

Engineering

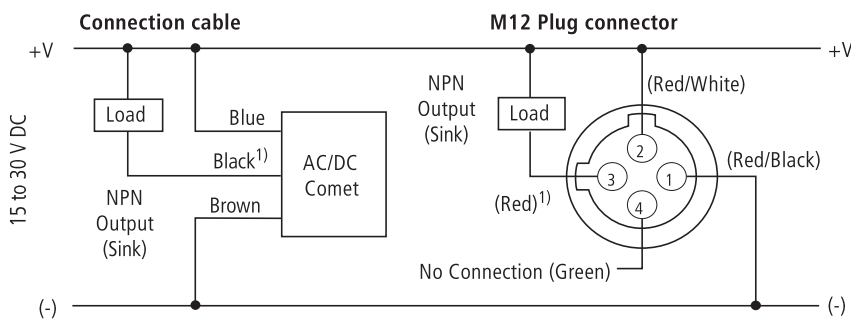
Circuit diagrams

AC/DC Models (AC Connection)



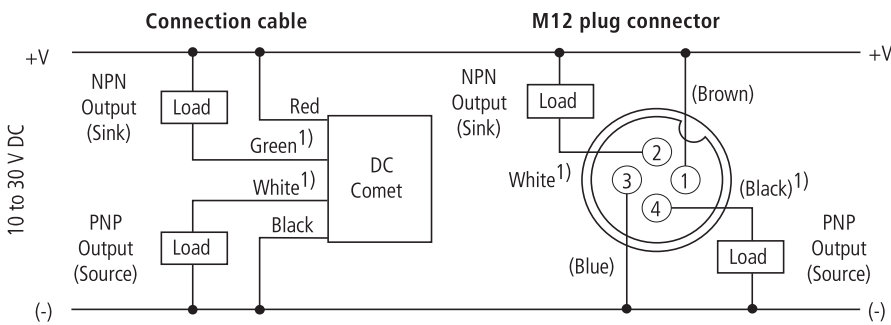
1) Note: Cable not connected on source of thru-beam sensors.

AC/DC Models (DC Connection)



1) Note: Cable not connected on source of thru-beam sensors.

DC Models (DC Connection)



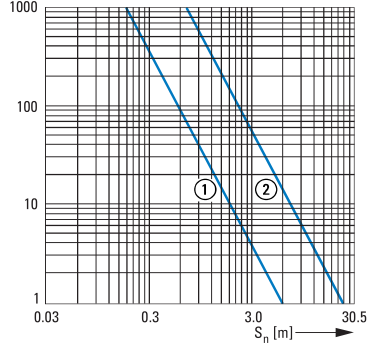
1) Note: Cable not connected on source of thru-beam sensors.

**Note:** AC/DC sensors have AC plug connectors. Take into account when using with DC voltage.

Excess gain chart

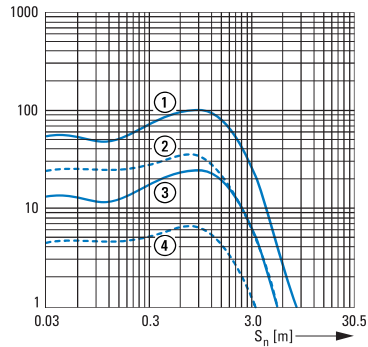
**Thru-beam photoelectric sensor**

- ① Detector 12100A and 12100R with source 11100A or 11100R
- ② Detector 12102A with source 11102A



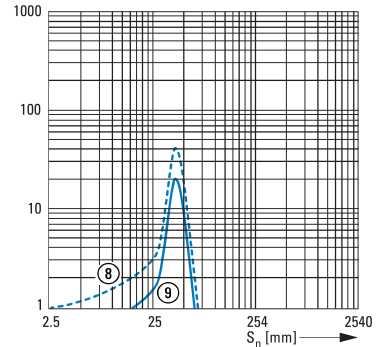
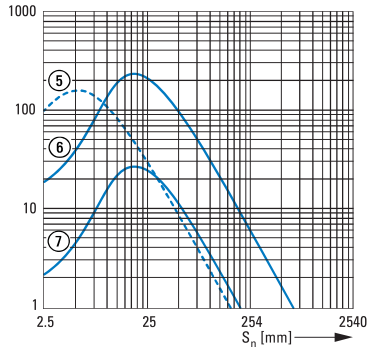
**Retroreflective sensing sensor (84-mm-Reflector)**

- ① 14100A/14102A
- ② 14102R
- ③ 14101A
- ④ 14101R



**Diffuse reflective sensor (90% reflex test card)**

- ⑤ 13107
- ⑥ 13100
- ⑦ 13106

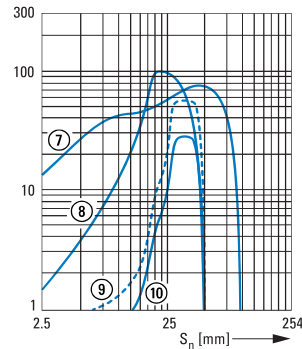
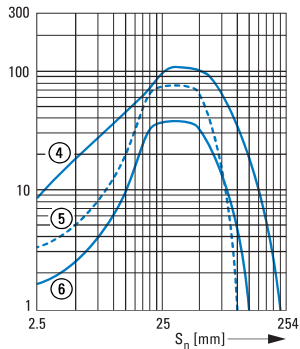
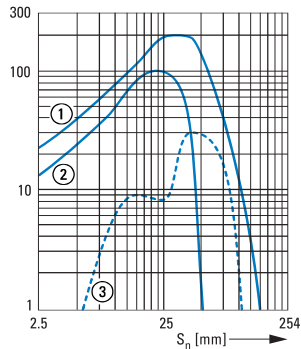


**Focused diffuse reflective sensor (90% reflex test card)**

- ⑧ 13102A typ.
- ⑨ 13102A minimum

**Perfect Prox®**

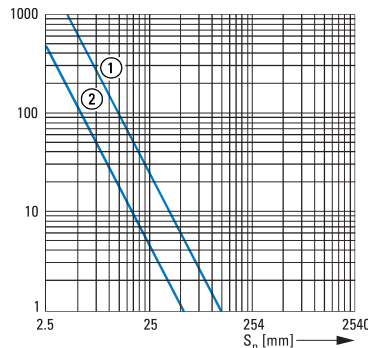
- ① 13108A/13108R
- ② 13104A
- ③ 14104RS
- ④ 13103A/13103R
- ⑤ 13101A typ.
- ⑥ 13101A minimum
- ⑦ 13102A typ.
- ⑧ 13102A min.
- ⑨ 13105A typ.
- ⑩ 13105A minimum



**Fibre optic sensors**

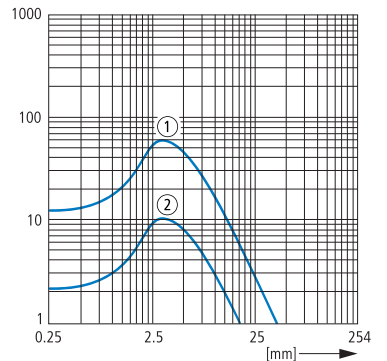
**Thru-beam photoelectric sensor**

- With single FO cable E51KF823
- ① 13100A Comet
- ② 13106A Comet



**Diffuse reflective sensor**

- With duplex FO cable E51KF723
- ③ 13100A Comet
- ④ 13106A Comet



## Technical data

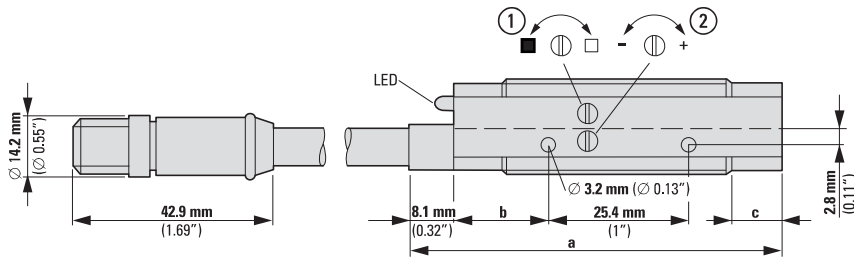
			3-wire 111-Part no.	121 Part no.	131-Part no.	141-Part no.
<b>General</b>						
Standards			IEC/EN 60947-5-2			
Ambient temperature		°C	- 20 - + 70	- 20 - + 70	- 40 - + 70	- 40 - + 70
Protection type			IP67	IP67	IP67	IP67
Mechanical shock resistance		g	100 Shock duration 3 ms			
<b>Characteristics</b>						
Rated operational voltage		U <sub>e</sub>	20 - 264 V AC 15 - 30 V DC	20 - 264 V AC 15 - 30 V DC	20 - 264 V AC 15 - 30 V DC	20 - 264 V AC 15 - 30 V DC
Operating current in the switched state at 24 V DC	I <sub>b</sub>	mA	30	30	30	30
Maximum load current	I <sub>e</sub>	mA	< 300	< 300	< 300	< 300
Response time		ms	10	10	10	10
Switching state display		LED	Red	Red	Red	Red
Operating voltage display		LED	-	-	-	-
Protective functions			Short-circuit protective device Protection against polarity reversal			
Connection			3-wire	3-wire	3-wire	3-wire
Design (outer dimensions)		mm	M18 x 1	M18 x 1	M18 x 1	M18 x 1
For connection of:			2 m connection cable			
Material			Insulated material			

			4-wire 111-Part no.	121 Part no.	131-Part no.	141-Part no.
<b>General</b>						
Standards			IEC/EN 60947-5-2			
Ambient temperature		°C	- 20 - + 70	- 20 - + 70	- 40 - + 70	- 40 - + 70
Protection type			IP67	IP67	IP67	IP67
Mechanical shock resistance		g	100 Shock duration 3 ms			
<b>Characteristics</b>						
Rated operational voltage		U <sub>e</sub>	10 - 30 V DC	10 - 30 V DC	10 - 30 V DC	10 - 30 V DC
Operating current in the switched state at 24 V DC	I <sub>b</sub>	mA	25	30	30	30
Maximum load current	I <sub>e</sub>	mA	PNP: 100 NPN: 250 (120 > 55 °C)	PNP: 100 NPN: 250 (120 > 55 °C)	PNP: 100 NPN: 250 (120 > 55 °C)	PNP: 100 NPN: 250 (120 > 55 °C)
Response time		ms	3.5	3.5	1	1
Switching state display		LED	-	Red	Red	Red
Operating voltage display		LED	red	-	-	-
Protective functions			Short-circuit protective device Protection against polarity reversal			
Connection			4-wire	4-wire	4-wire	4-wire
Design (outer dimensions)		mm	M18 x 1	M18 x 1	M18 x 1	M18 x 1
For connection of:			2 m connection cable			
Material			Insulated material			

## Notes

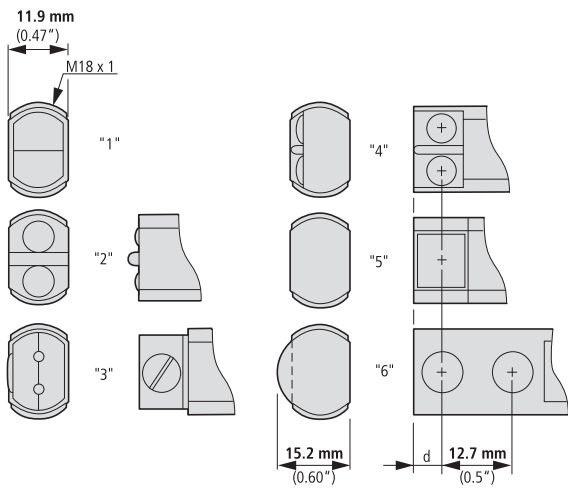
Further technical data can be found in the Online Catalog at <http://de.ecat.moeller.net>

Dimensions



- ① Brightness setting
- ② Gain adjustment

Type	a_x mm (inch)_x	b_x mm (inch)_x	c_x mm (inch)_x	d_x mm (inch)_x	Settings		Enclosure style
					① Light/dark	② Gain	
11100A...	56 (2.2)	17 (0.67)	6 (0.24)	-	-	-	2
11100R...	65 (2.56)	17 (0.67)	15 (0.59)	5 (0.197)	-	-	4
11102A...	70 (2.78)	17 (0.67)	28 (1.10)	-	-	-	1
12100A...	56 (2.2)	17 (0.67)	6 (0.24)	-	x	x	2
12100R...	65 (2.56)	17 (0.67)	15 (0.59)	5 (0.197)	x	x	4
12102A...	66 (2.60)	15 (0.59)	7 (0.28)	-	x	x	1
13100A..., 13106A...	56 (2.2)	17 (0.67)	6 (0.24)	-	x	x	2
13100R..., 13106R...	65 (2.56)	17 (0.67)	15 (0.59)	5 (0.197)	x	x	4
13101A..., 13104A...	66 (2.60)	15 (0.59)	6 (0.24)	-	x	-	1
13102A..., 13103A..., 13105A..., 13108A...	66 (2.60)	15 (0.59)	6 (0.24)	-	x	x	1
13104R...	77 (3.03)	15 (0.59)	28 (1.10)	5 (0.197)	x	-	6
14100A..., 14102A...	66 (2.60)	15 (0.59)	7 (0.28)	-	x	x	1
14101R..., 14102R...	76 (2.99)	15 (0.59)	18 (0.71)	5 (0.197)	x	x	5
14101A...	67 (2.64)	15 (0.59)	7 (0.28)	-	x	x	1
15100A..., 15101A...	73 (2.87)	15 (0.59)	15 (0.59)	-	x	x	3

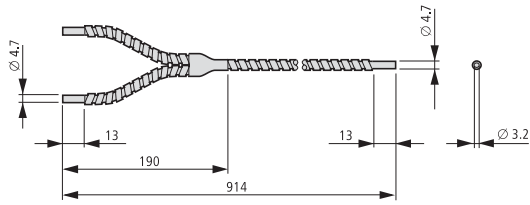


Enclosure style

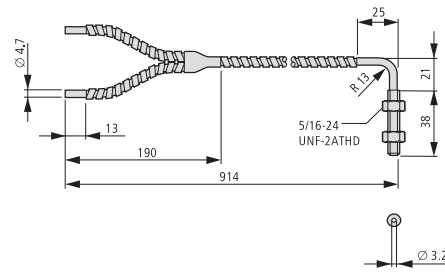
Type	S_xn_x mm (inch)_x
13104A..., 13104R6..., 13104RQ..., 131055_x	50 (1.97)
13104RS..., 13101..._X	100 (3.94)
13107..., 13108...	150 (5.91)
13106...	200 (7.87)
13103...	225 (8.86)
13100...	610 (24.02)
14101R...	3000 (118.11)
14101A..., 14102R..._x	4500 (177.17)
11100..., 12100...	6000 (236.22)
14100A..., 14102A...	7600 (299.21)
11102..., 12102...	24000 (944.88)

Glass fiber duplex cable

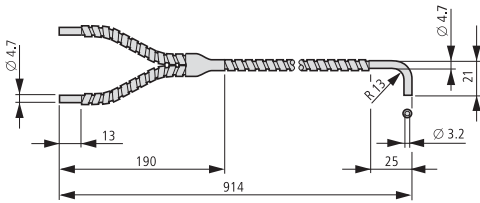
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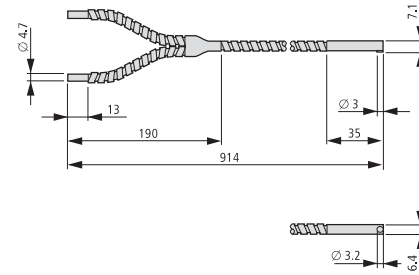
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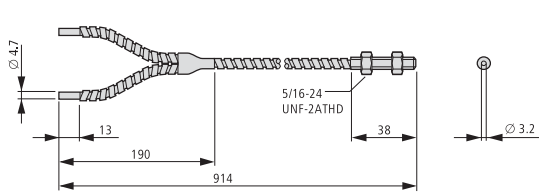
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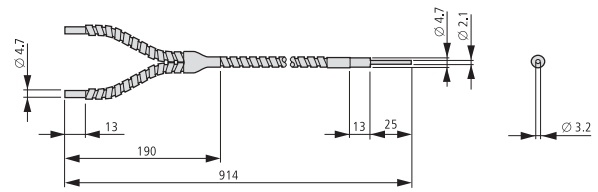
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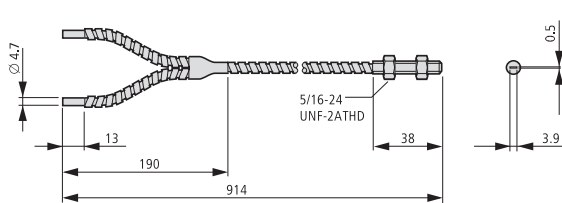
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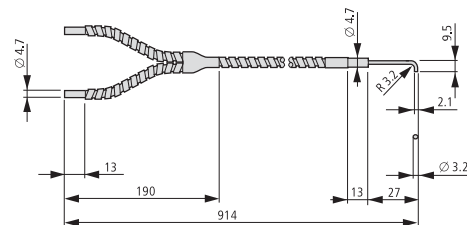
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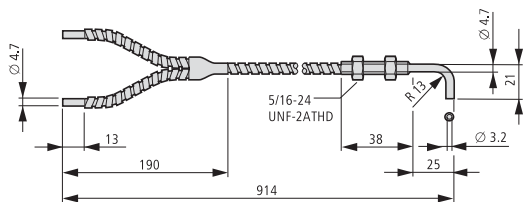
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E51KF173  
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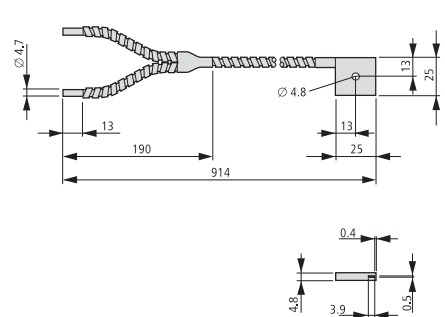
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E51KF7A3



E51KF343  
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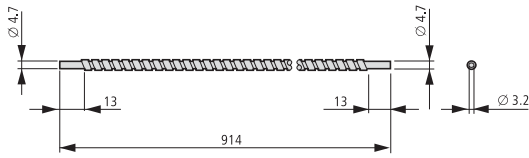


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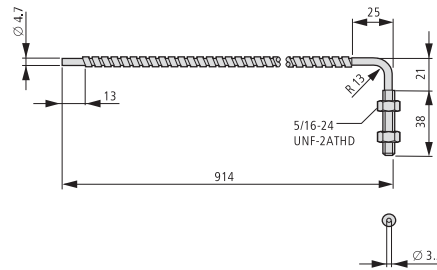


Glass fiber simplex cable

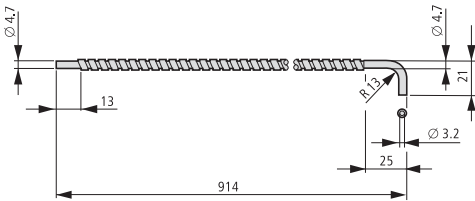
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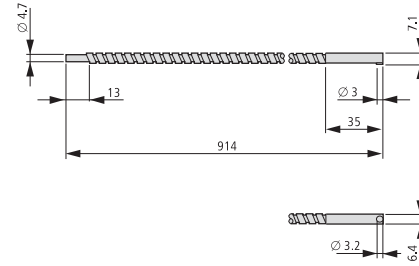
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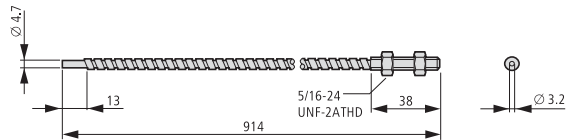
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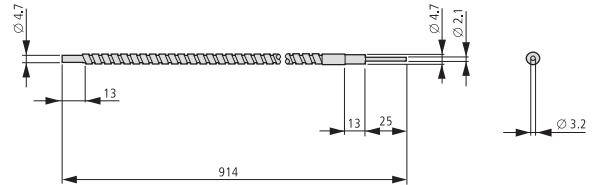
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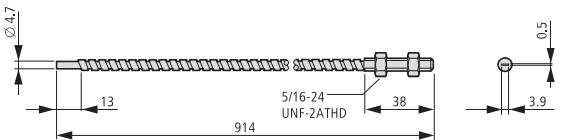
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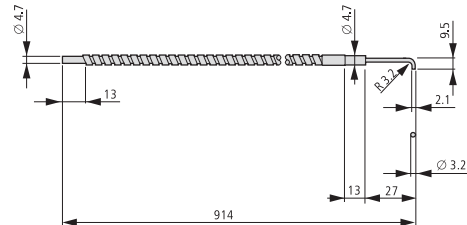
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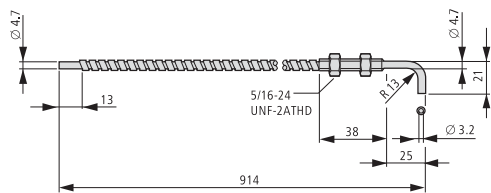
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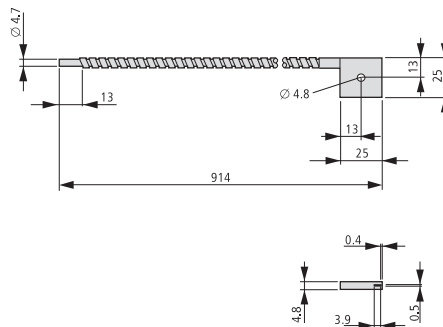
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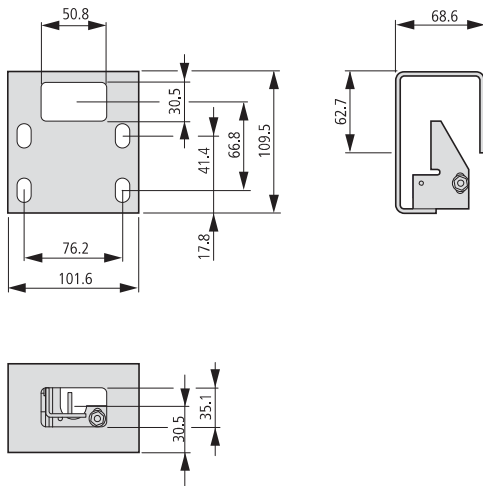
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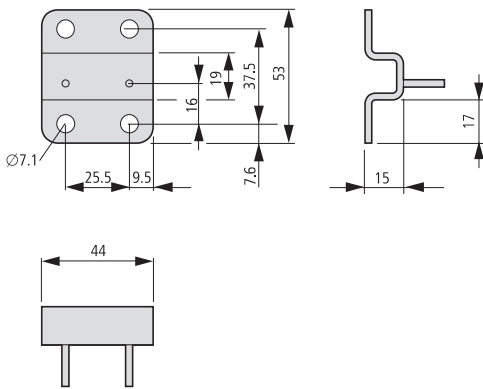
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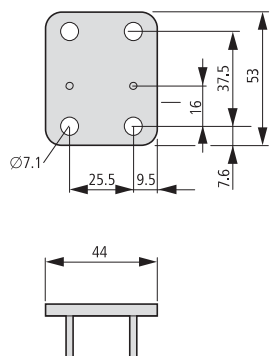
Safety bar, adjustable



Clip-type fixing bracket, increased



Clip-type fixing bracket, flat





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