



GR18

Reliable cylindrical photoelectric sensors with a wide range of application possibilities

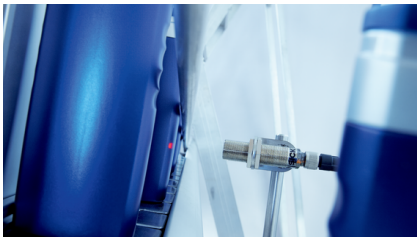
SICK
Sensor Intelligence.

Advantages



Reliable object detection and easy operation

The cylindrical photoelectric sensors of the GR18 product family offer exceptional optical and electronic reliability. Thanks to intelligent signal evaluation, they do not react to ambient light, dirt, moisture or electromagnetic fields. The sensors work reliably even under harsh conditions. Their bright status display and the quickly adjustable sensing distance also enable easy operation.



Due to the highly reliable design, the sensors are trouble-free and insensitive to disturbing influences



Thanks to the bright status indicator LED, the operating status can also be seen from a long distance



Sensing distance adjustment is quick and easy with a standard Phillips-head screwdriver



Use in harsh or hygienic environments

The cylindrical photoelectric sensor are optionally available in an Inox variant. The stainless-steel housing and high chemical material resistance means make these variants a reliable option when faced with cleaning agents containing alcohols and alkalis as well as standard oils and lubricants used in industry. This variant also complies with strict hygienic regulations without any problems.



The stainless-steel housing with special coating ensures high mechanical ruggedness and resistance



The use of chemically resistant seals and special high-performance adhesives ensures reliable sealing



Thanks to their properties, the stainless-steel sensors are also suitable for use in industries with strict hygiene regulations



Versatile application possibilities

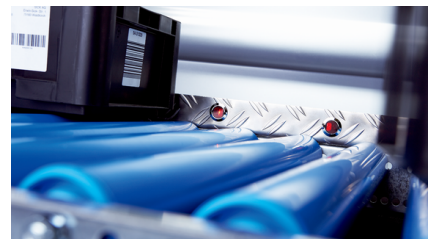
Thanks to the standardized M18 dimensioning and the large selection of designs, there is an ideal cylindrical photoelectric sensor for every mounting situation. With the addition of a plastic or metal housing as well as radial and axial optical openings, a wide range of applications is possible.



For housings with an angled radial design, installation space is reduced, which opens up additional mounting options



The housings are available in plastic or metal and are very flexible in use



The sensors are available with an optional flush mounting system and allow the objects to be detected to pass without obstruction



Technical data overview

Dimensions (W x H x D)	18 mm x 18 mm x 73.5 mm 18 mm x 18 mm x 71.5 mm 18 mm x 18 mm x 38.1 mm 18 mm x 18 mm x 55.9 mm
Functional principle detail	Background suppression Energetic With minimum distance to reflector (dual lens system) (depending on type)
Light source	PinPoint LED / LED (depending on type)
Type of light	Visible red light Visible blue light Infrared light (depending on type)
Enclosure rating	IP67 / IP67 / IP68 / IP69K (depending on type)
Housing material	Metal Plastic Stainless steel (depending on type)
Adjustment	Potentiometer / none (depending on type)

Product description

Cylindrical photoelectric sensors from the GR18 family are characterized by their universal application possibilities, reliable object detection and a very good price-performance ratio. The sensors have a cylindrical M18 housing available either in plastic or metal. The cylindrical photoelectric sensors are also available in different housing shapes and therefore offer a high level flexibility for mounting and application options. The PinPoint LED and intelligent electronics ensure high availability of the product family. It can be used in many applications. For instance, the rugged variant in the stainless steel housing can also be used in applications where it comes into contact with chemicals and cleaning agents.

At a glance

- Different housing shapes based on standardized M18 design
- Housing made of either plastic or metal
- Bright, multi-color status LED
- PinPoint LED and intelligent, interference-resistant signal evaluation
- High tightening torque of the fully-flush variant

Your benefits

- High level of flexibility thanks to diverse mounting and application options
- Very easy to use thanks to simple assembly, commissioning, operation and maintenance
- High detection reliability thanks to rugged optics and electronics
- Very resistant, meaning they are suitable for conveyor applications, for instance

Ordering information

Other models and accessories → www.sick.com/GR18

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
3 mm ... 100 mm	NPN	None	Cable, 4-wire, 2 m ¹⁾	GRTB18-N1131V	1085938
				GRTB18S-N1131V	1085820
			Male connector M12, 4-pin	GRTB18-N2431V	1085824
				GRTB18S-N2431V	1085748
	PNP	None	Cable, 4-wire, 2 m ¹⁾	GRTB18-P1131V	1085937
				GRTB18S-P1131V	1085747
			Cable, 4-wire, 6 m ¹⁾	GRTB18S-P1031VS20	1111239
				Male connector M12, 4-pin	GRTB18-P2431V
			GRTB18S-P2406S01		1077945
			GRTB18S-P2431V	1085746	
3 mm ... 200 mm	PNP	None	Male connector M12, 4-pin	GRTB18S-P2421V	1085745
3 mm ... 250 mm	PNP	None	Cable, 4-wire, 5 m ¹⁾	GRTB18S-P1201VS23	1122447
3 mm ... 300 mm	NPN	Potentiometer	Cable, 4-wire, 2 m ¹⁾	GRTB18-N1112	1076119
				GRTB18-N1112V	1085936
				GRTB18-N1117	1076118
				GRTB18S-N1112	1076105
				GRTB18S-N1112V	1085744
				GRTB18S-N1117	1076104
			Male connector M12, 4-pin	GRTB18-N2412	1076121
				GRTB18-N2412V	1085750
				GRTB18-N2417	1076120

¹⁾ Do not bend below 0 °C.

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.			
				GRTB18S-N2412	1076108			
				GRTB18S-N2412V	1085743			
				GRTB18S-N2417	1076107			
				GRTB18S-N241Z	1076109			
	PNP	Potentiometer	Cable, 4-wire, 2 m ¹⁾	GRTB18-P1112	1076115			
				GRTB18-P1112V	1085822			
				GRTB18-P1117	1076114			
				GRTB18S-P1112	1076099			
				GRTB18S-P1112V	1085819			
				GRTB18S-P1117	1076098			
				GRTB18S-P111Z	1076100			
				Cable, 4-wire, 6 m ¹⁾	GRTB18-P1012VS21	1113801		
				Male connector M12, 4-pin	GRTB18-P2412	1076117		
					GRTB18-P2412V	1085749		
					GRTB18-P2417	1076116		
					GRTB18S-P2412	1076102		
			GRTB18S-P2412V		1085742			
			GRTB18S-P2412VS01		1098275			
							GRTB18S-P2417	1076101
							GRTB18S-P241Z	1076103

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible blue light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
3 mm ... 300 mm	NPN	Potentiometer	Cable, 4-wire, 2 m ¹⁾	GRTB18-N1187	1130501
	PNP	Potentiometer	Cable, 4-wire, 400 mm ¹⁾	GRTB18-P1087S22	1135761
			Male connector M12, 4-pin	GRTB18-P2487	1101819

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Energetic
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.	
3 mm ... 115 mm	NPN	Potentiometer	Cable, 4-wire, 2 m ¹⁾	GRTE18-N1112	1066541	
				GRTE18-N1112V	1085864	
				GRTE18-N1117	1066539	
				GRTE18S-N1112	1069584	
				GRTE18S-N1112V	1085796	
				GRTE18S-N1117	1069581	
			Male connector M12, 4-pin	GRTE18-N2412	1067972	
				GRTE18-N2412V	1085821	
				GRTE18-N2417	1067971	
	PNP	Potentiometer	Cable, 4-wire, 0.4 m ¹⁾	GRTE18-P1017S19	1143704	
				Cable, 4-wire, 2 m ¹⁾	GRTE18-P1112	1066542
					GRTE18-P1112V	1085686
				Potentiometer	Cable, 4-wire, 2 m ¹⁾	GRTE18-P1117
		GRTE18S-P1112V	1085678			
		Male connector M12, 4-pin	GRTE18-P2412		1066543	
			GRTE18-P2412V		1085683	
		5 mm ... 550 mm	NPN	Potentiometer	Cable, 4-wire, 2 m ¹⁾	GRTE18-N1142

¹⁾ Do not bend below 0 °C.

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
				GRTE18-N1142V	1085933
				GRTE18-N1147	1066544
				GRTE18S-N1142	1069580
				GRTE18S-N1142V	1085861
				GRTE18S-N1147	1062024
				GRTE18-N2442	1064243
				GRTE18-N2442V	1085932
				GRTE18-N2447	1067973
				GRTE18S-N2442V	1085817
				GRTE18S-N2442VS16	1102422
	PNP	Potentiometer	Cable, 4-wire, 2 m ¹⁾	GRTE18-P1142	1066548
				GRTE18-P1142V	1085689
				GRTE18-P1147	1066545
				GRTE18S-P1142V	1085818
				GRTE18-P2442	1066549
			Male connector M12, 4-pin	GRTE18-P2442V	1085688
				GRTE18-P2447	1066546
				GRTE18S-P2442	1069579
				GRTE18S-P2442V	1085679
				GRTE18S-P2447	1069073
GRTE18S-P2449	1069074				

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Energetic
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.	
3 mm ... 350 mm	NPN	Potentiometer	Cable, 4-wire, 2 m ¹⁾	GRTE18-E1132	1094774	
				GRTE18-N1132	1094756	
				GRTE18-N1137	1094749	
				GRTE18S-E1137	1094747	
				GRTE18S-N1132	1094784	
				GRTE18S-N1137	1094578	
				GRTE18S-N113Z	1094789	
		Potentiometer	Cable, 4-wire, 5 m ¹⁾	GRTE18S-E1232	1097488	
				Male connector M12, 4-pin	GRTE18-E2432	1104188
					GRTE18-N2432	1094779

¹⁾ Do not bend below 0 °C.

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.		
	PNP	Potentiometer		GRTE18-N2437	1094782		
				GRTE18S-N2432	1094791		
				GRTE18S-N2437	1094785		
				GRTE18S-N243Z	1094783		
			Cable, 4-wire, 2 m ¹⁾	GRTE18-P1132	1094780		
				GRTE18-P1137	1094781		
				GRTE18-P1137S16	1104590		
				GRTE18S-P1132	1094601		
				GRTE18S-P1137	1094787		
				GRTE18S-P113Z	1094788		
			Cable, 4-wire, 5 m ¹⁾	GRTE18-P1237	1121486		
				GRTE18S-P1232	1108637		
			Male connector M12, 4-pin	GRTE18-F2432	1104192		
				GRTE18-F2437	1094773		
				GRTE18-P2432	1094776		
				GRTE18-P2437	1094750		
				GRTE18S-F2432	1094695		
				GRTE18S-P2432	1094792		
			5 mm ... 1,000 mm	NPN	Potentiometer	Cable, 4-wire, 2 m ¹⁾	GRTE18-N1172
PNP	GRTE18-P1177	1073145					
	GRTE18-P1277	1104721					
	5 mm ... 550 mm	NPN		GRTE18-N1152			1091354
PNP				GRTE18-P1152			1074997
		Male connector M12, 4-pin		GRTE18S-P2452V			1097227
		Male connector M12, 4-pin ¹⁾		GRTE18-P2452			1081995

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Energetic
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.			
5 mm ... 1,000 mm	NPN	Potentiometer	Cable, 4-wire, 2 m ¹⁾	GRTE18-N1162	1066551			
				GRTE18-N1162V	1085935			
				GRTE18-N1167	1064925			
				GRTE18S-N1162	1069578			
				GRTE18S-N1162V	1085862			
				GRTE18S-N1167	1069121			
			Male connector M12, 4-pin	GRTE18-N2462	1067978			
				GRTE18-N2462V	1085934			
				GRTE18-N2467	1067975			
				GRTE18S-N2462V	1085681			
				PNP	Potentiometer	Cable, 4-wire, 2 m ¹⁾	GRTE18-P1162	1067976
							GRTE18-P1162V	1085705
	GRTE18-P1167	1067974						
	GRTE18S-P1162V	1085682						
	Male connector M12, 4-pin	GRTE18-P2462	1066552					
		GRTE18-P2462V	1085704					
		GRTE18-P2467	1066550					
		GRTE18S-P2462V	1085680					
		GRTE18S-P2467	1069122					
		GRTE18S-P246Z	1069123					

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** With minimum distance to reflector (dual lens system)
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.		
0.03 m ... 7.2 m	NPN	Potentiometer	Cable, 4-wire, 2 m	GRL18SG-N1137	1062031		
				GRL18SG-N1157	1068942		
			Cable, 4-wire, 2 m ¹⁾	GRL18-N1132	1067980		
				GRL18-N1137	1066553		
				GRL18-N1152	1076985		
				GRL18-N1157	1076979		
				GRL18-N2432	1067981		
			Male connector M12, 4-pin	GRL18-N2437	1067979		
				GRL18-N2452	1076986		
				GRL18-N2457	1076984		
			None	Cable, 4-wire, 2 m ¹⁾	GRL18-N1131V	1085965	
			0.03 m ... 7.2 m	NPN	None	Cable, 4-wire, 2 m ¹⁾	GRL18S-N1131
		GRL18S-N1131V					1085863
GRL18S-N1136	1069585						
Male connector M12, 4-pin	GRL18-N2431V	1085826					
	GRL18S-N2431V	1085715					
	GRL18S-N2436	1077674					
PNP	Potentiometer	Cable, 4-wire, 2 m				GRL18SG-P1137	1066421
						GRL18SG-P1157	1066940
		Cable, 4-wire, 2 m ¹⁾				GRL18-P1132	1066556
						GRL18-P1137	1066554

¹⁾ Do not bend below 0 °C.

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.	
			Male connector M12, 4-pin	GRL18-P1152	1076982	
				GRL18-P1157	1076980	
				GRL18-F2452	1116605	
				GRL18-P2432	1066557	
				GRL18-P2437	1066555	
				GRL18-P2452	1076983	
				GRL18-P2457	1076981	
				GRL18S-F245X	1116636	
				GRL18-P1131V	1085825	
				GRL18S-P1131V	1085707	
		None	Cable, 4-wire, 2 m ¹⁾	GRL18-P1131V	1085825	
				GRL18S-P1131V	1085707	
			Cable, 4-wire, 70 mm ¹⁾	GRL18S-P1036S03	1069609	
				Male connector M12, 4-pin	GRL18-P2431V	1085716
					GRL18S-K2431V	1106933
					GRL18S-K2436	1069997
					GRL18S-K2438	1069996
				GRL18S-P2431	1069586	
				GRL18S-P2431V	1085706	
				GRL18S-P2436	1069072	
GRL18S-P2438	1069071					
GRL18S-P2438S07	1127937					

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** With minimum distance to reflector (dual lens system)
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0.03 m ... 7.2 m	NPN	Potentiometer	Connector M12, 3-pin	GRL18SG-E233Z	1061927
		None	Cable, 3-wire, 2 m ¹⁾	GRL18S-E1331	1059537
				GRL18S-E1336	1059530
				GRL18S-E1356	1064143
			Connector M12, 3-pin	GRL18S-E2336	1097041
	PNP	Potentiometer	Cable, 3-wire, 2 m	GRL18SG-F1337	1062231
				Connector M12, 3-pin	GRL18SG-F2332
			Connector M12, 3-pin	GRL18SG-F2337	1059553
				GRL18SG-F2339	1059554
				GRL18SG-F233X	1059557

¹⁾ Do not bend below 0 °C.

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
				GRL18SG-F233Z	1059556
		None	Cable with M8 male connector, 4-pin, 300 mm ¹⁾	GRL18S-F3036S02	1067943
				Cable, 3-wire, 2 m ¹⁾	GRL18S-F1331
			GRL18S-F1336		1059532
			GRL18S-F1338		1059535
			GRL18S-F1351		1064155
			GRL18S-F1356		1064145
			GRL18S-F1358		1064149
			Cable, 3-wire, 5 m ¹⁾	GRL18S-F1431	1078580
			Connector M12, 3-pin	GRL18-F2336	1079784
				GRL18S-F2331	1058198
				GRL18S-F2336	1059533
				GRL18S-F2338	1058211
				GRL18S-F233W	1058209
				GRL18S-F233Y	1058206
				GRL18S-F2351	1064156
				GRL18S-F2356	1064146
				GRL18S-F2358	1064150
				GRL18S-F235W	1064161
				GRL18S-F235Y	1064159

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Through-beam photoelectric sensor
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 15 m	NPN	Potentiometer	Cable, 4-wire, 2 m ¹⁾	GRSE18-N1142	1066572
				GRSE18-N1147	1066558
				GRSE18S-N1142	1069630
				GRSE18S-N1147	1069124
			Male connector M12, 4-pin	GRSE18-N2442	1067985
				GRSE18-N2447	1067983
				GRSE18S-N2442	1069628
				GRSE18S-N2447	1069625
	PNP	Potentiometer	Cable, 4-wire, 2 m ¹⁾	GRSE18S-N1136	1062122
				GRSE18-P1142	1067984
			Male connector M12, 4-pin	GRSE18-P1147	1067982
				GRSE18S-P1142	1069629
				GRSE18S-P1147	1069626
				GRSE18-P2442	1066573
				GRSE18-P2447	1064921
				GRSE18S-P2442	1069125
GRSE18S-P2447	1069627				

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Through-beam photoelectric sensor
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 15 m	NPN	Potentiometer	Cable, 4-wire, 2 m ¹⁾	GRSE18-N1122	1068334
				GRSE18-N1127	1068331
				GRSE18S-N1127	1069634

¹⁾ Do not bend below 0 °C.

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.	
			Male connector M12, 4-pin	GRSE18-N2422	1068335	
				GRSE18-N2427	1068332	
				GRSE18S-N2422	1069635	
				GRSE18S-N2427	1069631	
			None	Cable, 4-wire, 2 m ¹⁾	GRSE18-N1121V	1085939
					GRSE18S-N1121V	1085783
				Male connector M12, 4-pin	GRSE18-N2421V	1085787
					GRSE18S-N2421V	1085766
		PNP	Potentiometer	Cable, 4-wire, 2 m ¹⁾	GRSE18-P1122	1068333
					GRSE18-P1127	1068329
					GRSE18S-P1122	1069637
					GRSE18S-P1127	1069632
	Male connector M12, 4-pin			GRSE18-P2422	1068336	
				GRSE18-P2427	1064922	
				GRSE18S-P2422	1069636	
				GRSE18S-P2427	1069633	
	None	Cable, 4-wire, 2 m ¹⁾		GRSE18-P1121V	1085785	
				GRSE18S-P1121V	1085767	
		Male connector M12, 4-pin		GRSE18-P2421V	1085784	
				GRSE18S-P2421V	1085765	

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
3 mm ... 300 mm	PNP	Potentiometer	Male connector M12, 4-pin	GRTB18S-P2402S11	1094930

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Light switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
3 mm ... 300 mm	NPN	Potentiometer	Cable with M8 male connector, 4-pin, 300 mm ¹⁾	GRTB18S-N3017S13	1118880
			Cable, 3-wire, 2 m ¹⁾	GRTB18S-N1317	1076096
			Cable, 3-wire, 5 m ¹⁾	GRTB18S-N1417	1077894
			Connector M12, 3-pin	GRTB18S-N2317	1076097
	PNP	Potentiometer	Cable, 3-wire, 2 m ¹⁾	GRTB18S-P1317	1076094
			Cable, 3-wire, 5 m ¹⁾	GRTB18S-P1417	1077893
			Connector M12, 3-pin	GRTB18S-P2317	1076095

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
3 mm ... 300 mm	NPN	Potentiometer	Connector M12, 3-pin	GRTB18S-E2317	1076113
			PNP	Potentiometer	Cable with M8 male connector, 4-pin, 300 mm ¹⁾
	Cable, 3-wire, 2 m ¹⁾	GRTB18S-F1317			1076110
	Cable, 3-wire, 5 m ¹⁾	GRTB18S-F1417			1081695
		GRTB18S-F1417S09			1090652
	Connector M12, 3-pin	GRTB18S-F2317	1076111		

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Energetic
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Light switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
3 mm ... 115 mm	NPN	Potentiometer	Cable, 3-wire, 2 m ¹⁾	GRTE18S-N1312	1058201
				GRTE18S-N1317	1058194
			Connector M12, 3-pin	GRTE18S-N2312	1059408
				GRTE18S-N2317	1059378
				GRTE18S-N231Z	1059432
				GRTE18S-N231Z	1059432
	PNP	Potentiometer	Cable, 3-wire, 2 m ¹⁾	GRTE18S-P1312	1058203
				GRTE18S-P1317	1058195
				GRTE18S-P131Z	1102602
			Connector M12, 3-pin	GRTE18S-P2312	1058204
				GRTE18S-P2312S02	1066165
				GRTE18S-P2317	1058196
				GRTE18S-P2319	1059407
				GRTE18S-P231X	1059440
GRTE18S-P231Z	1059436				
5 mm ... 550 mm	NPN	Potentiometer	Cable, 3-wire, 2 m ¹⁾	GRTE18S-N1342	1058202
				GRTE18S-N1347	1058393
			Cable, 3-wire, 5 m ¹⁾	GRTE18S-N1442	1094936
				GRTE18S-N1447	1136513
				GRTE18S-N1447	1136513
			Connector M12, 3-pin	GRTE18S-N2342	1059482
				GRTE18S-N2347	1059441
				GRTE18S-N234Z	1059484
			PNP	Potentiometer	Cable, 3-wire, 2 m ¹⁾
	GRTE18S-P1347	1058197			
	GRTE18S-P134Z	1064171			
	Connector M12, 3-pin	GRTE18S-P2342			1058200
		GRTE18S-P2347			1058193
		GRTE18S-P2349			1059481
GRTE18S-P234X		1059489			
GRTE18S-P234Z	1059487				

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Energetic
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
5 mm ... 1,000 mm	NPN	Potentiometer	Cable, 3-wire, 2 m ¹⁾	GRTE18S-N1362	1069500
				GRTE18S-N1367	1069494
			Connector M12, 3-pin	GRTE18S-N2362	1069501
				GRTE18S-N2367	1069495
				GRTE18S-N236Z	1069555
				GRTE18S-P1362	1069503
	PNP	Potentiometer	Cable, 3-wire, 2 m ¹⁾	GRTE18S-P1367	1069496
				GRTE18S-P2362	1069504
			Connector M12, 3-pin	GRTE18S-P2367	1069497
				GRTE18S-P2369	1069499
				GRTE18S-P236X	1069559
				GRTE18S-P236Z	1069557

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Energetic
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
3 mm ... 115 mm	NPN	Potentiometer	Connector M12, 3-pin	GRTE18S-E231Z	1059409
	PNP	Potentiometer	Connector M12, 3-pin	GRTE18S-F2319	1059406
				GRTE18S-F231X	1059438
				GRTE18S-F231Z	1059435
5 mm ... 550 mm	NPN	Potentiometer	Connector M12, 3-pin	GRTE18S-E234Z	1059483
	PNP	Potentiometer	Cable, 3-wire, 2 m ¹⁾	GRTE18S-F134Z	1062423
			Connector M12, 3-pin	GRTE18S-F2349	1059480
				GRTE18S-F234X	1059488
				GRTE18S-F234Z	1059486

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Energetic
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
5 mm ... 550 mm	NPN	Potentiometer	Cable, 3-wire, 2 m ¹⁾	GRTE18S-N1307S20	1111632
	PNP	Potentiometer	Cable, 3-wire, 2 m ¹⁾	GRTE18S-P135ZS01	1065711

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Energetic
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
5 mm ... 1,000 mm	NPN	Potentiometer	Connector M12, 3-pin	GRTE18S-E236Z	1069554
	PNP	Potentiometer	Connector M12, 3-pin	GRTE18S-F2369	1069498
				GRTE18S-F236X	1069558
				GRTE18S-F236Z	1069556

- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** With minimum distance to reflector (dual lens system)
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Light switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.	
0.03 m ... 7.2 m	NPN	Potentiometer	Connector M12, 3-pin	GRL18SG-N233Z	1061928	
		None	Cable, 3-wire, 2 m ¹⁾	GRL18S-N1331	1059538	
				GRL18S-N1336	1059531	
				GRL18S-N1351	1064154	
	PNP	Potentiometer	Cable with M8 male connector, 4-pin, 300 mm ¹⁾	GRL18S-N1356	1064144	
				GRL18SG-P3037S07	1123142	
				Cable, 3-wire, 2 m ¹⁾	GRL18SG-P1339	1095616
				Connector M12, 3-pin	GRL18SG-P2332	1060323

¹⁾ Do not bend below 0 °C.

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.	
		None		GRL18SG-P2339	1122432	
				GRL18SG-P233Z	1068113	
			Cable, 3-wire, 2 m ¹⁾	GRL18S-P1331	1059542	
				GRL18S-P1336	1059534	
				GRL18S-P1338	1059536	
				GRL18S-P133Y	1072117	
				GRL18S-P1351	1064157	
				GRL18S-P1356	1064147	
				GRL18S-P1358	1064151	
				GRL18S-P1436	1091255	
			Cable, 3-wire, 5 m ¹⁾	Connector M12, 3-pin	GRL18S-P2331	1058199
					GRL18S-P2336	1058192
					GRL18S-P2338	1058212
					GRL18S-P233W	1058210
					GRL18S-P233Y	1058207
					GRL18S-P2351	1064158
					GRL18S-P2356	1064148
					GRL18S-P2358	1064152
					GRL18S-P235W	1064162
					GRL18S-P235Y	1064160

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Through-beam photoelectric sensor
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.	
0 m ... 15 m	NPN	None	Cable, 3-wire, 2 m ¹⁾	GRSE18S-E1331	1059548	
				GRSE18S-E1336	1059543	
	PNP	None	Connector M12, 3-pin	GRSE18S-F2332	1119329	
				Cable, 3-wire, 2 m ¹⁾	GRSE18S-F1336	1059544
					Connector M12, 3-pin	GRSE18S-F2331
				GRSE18S-F2336		1058214
				GRSE18S-F2338		1059546
				GRSE18S-F233W		1059551

¹⁾ Do not bend below 0 °C.

- **Functional principle:** Through-beam photoelectric sensor
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Light switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 15 m	PNP	None	Cable, 3-wire, 2 m ¹⁾	GRSE18S-P1336	1059545
				GRSE18S-P133Y	1062422
			Connector M12, 3-pin	GRSE18S-P2331	1059550
				GRSE18S-P2336	1058215
				GRSE18S-P2338	1059547
				GRSE18S-P233W	1059552
				GRSE18S-P233Y	1062420

¹⁾ Do not bend below 0 °C.

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