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OPTOELECTRONIC SENSORS

NOTES



DESIGNATION CODE

Example: **K OES 2000- M 8 M B 48- D M A- V1- IR**

1
2
3
4
5
6
7
8
9
10
11
12

1 = Working principle

O	Photoelectronic
OES	One-way light barrier
OLL	Fibre optic device universal*
ORF	Reflex light probe focussed
ORG	Reflex light barrier for transparent objects
ORH	Reflex light probe with background suppression
ORK	Contrast probe
ORP	Polarized reflex light barrier
ORS	Reflex light barrier
ORT	Reflex light probe
OU	Universal
OV	Amplifier

2 = Switching distance / range

...	axial
...W	radial

3 = Housing

G	Cylindrical, without thread
M	Cylindrical, with metrical thread
Q	Square housing

4 = Housing diameter resp. edge lengths of active fields

5 = Housing material

A	Aluminium
E	Stainless steel
K	Plastic
M	Brass, nickel-plated

6 = Mounting

B	Flush
N	Non flush

7 = Dimension in mm

8 = Operating voltage

A	AC alternating voltage
D	DC direct voltage
V	AC/DC

* One-way glas KOLLEG One-way plastic KOLLEP
 Reflex probe glas KOLLTG Reflex light probe plastic KOLLTP
 Reflex light barrier glas KOLLRG
 Reflex light barrier plastic KOLLRP

9 = Type of output signal

blank	Transmitter		
AN	Analogue	ANI	Current output
		ANU	Voltage output
H	semi-conductor relay		
M	PNP + NPN		
N	NPN		
P	PNP		
R	Relay		
Z	Two-wire		

10 = Output signal

blank	Transmitter
A	Antivalent
D	Data interface
I	Pulse output
Ö	N.C.
S	N.O.
U	Reversible

11 = Type of connection

V1	M8 Screw-/Snap-in
V2	M12 Metal
V2/1	M12 Plastic
V3	M5 Metal
V4	Amphenol Tuchel
V6	Brad Harrison
V7	Valve connector type A
V8	only M8 Snap-in
V9	Torson
V10	Valve connector type C
V11	AC-connector 1/2"
V12	M18 plastic
VE	Euchner connector
RS232	Data interface
PG	Thread joint PG
Mxx	Thread joint metrical
NPT	Thread joint 1/2" NPT
W	2m cable, outgoing line on the side
ZW	Connection box 90°

12 = Additional signs

BL	Blue light	RT	Red light
GN	Green light	UV	Ultraviolet light
IR	Infrared	W	White light



SELECTION CHART RANGE

Cylinder

Page	M5 7	M8 8	M12 9	M18 12	M30 15
Reflex light probe	50mm	80mm	200/300/400mm	150/500/600mm	
Reflex light probe fixed focus					
Reflex light probe wide angle					
Reflex light probe with background suppression				120mm	200/400/600mm
Reflex light barrier			2m	3m	
Polarized reflex light barrier			1/1,5m	1/2m	6m
Reflex light barrier for transparent objects					
One-way light barrier	250mm	2m	5,2m	15m	60/200m
Fibre optic device					

Square

Page	Q20 17	Q30 19	Q31 22	Q32 25	Q36 27	Q43 29	Q62 31	Q64 33	Q76 35
Reflex light probe	200mm	600/1200mm	130/300/380	400mm	350mm		700mm		800mm
Reflex light probe fixed focus	10/20mm		16/43mm	90mm	110mm				
Reflex light probe wide angle	50mm								
Reflex light probe with background suppression		150mm				100/ 300mm		300/ 500mm	300mm
Reflex light barrier	2m		5m				7m		
Polarized reflex light barrier	1m	2/4m	2m	4m	2,5m	9m	5m	13m	10m
Reflex light barrier for transparent objects				500mm	700mm				
One-way light barrier	4m	6/12m	3/30m	8,5m	1,5/6m	22m	10/30m	22m	28m
Fibre optic device		Red	Red/IR						Red

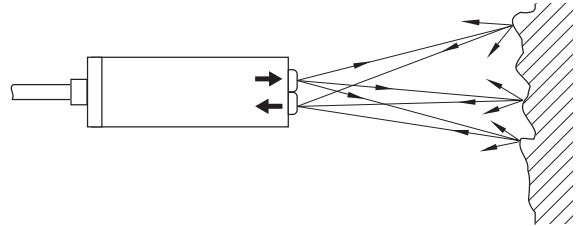


FUNCTIONAL DESCRIPTION

Operating types

Reflex light probe

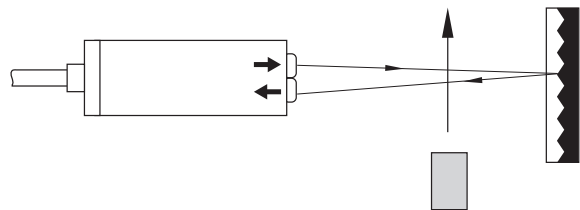
The clocked light of the transmitting diode impinges on the object on which it is reflected diffusely. A part of the reflected light reaches the light receiver situated in the same device. If there is a sufficient receiving energy the output switches (energetic reflex light probe). The maximum range depends on the dimension, colour and surface characteristics of the object.



The function of reflex light probes with background suppression is similar to energetic reflex light probes. The difference is that not the quantity but the angle of incidence of the reflected light is evaluated. Thus the dimension, the colour and the surface characteristics of the object hardly influence the switching distance. This is why objects can also be detected without any problem in front of a bright background.

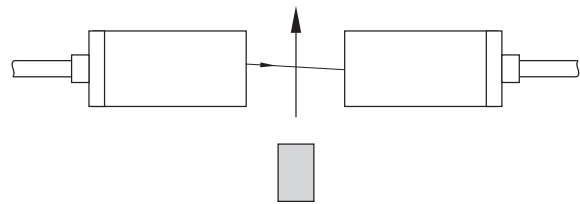
Reflex light barriers (polarized)

The clocked light of the transmitting diode is focussed through a lens and directed on a reflector via a polarisation filter (principle of triple mirror). A part of the light which is reflected there reaches the receiver via another polarisation filter. The arrangement of the filters takes care for only the light which is reflected by the reflector reaching the receiver. This avoids the problem that bright and shining objects are not detected due to direct reflection. An object interrupting the course of beam from the transmitter to the reflector causes the switching of the output. As simplified versions reflex light barriers are also available without polarisation filter.



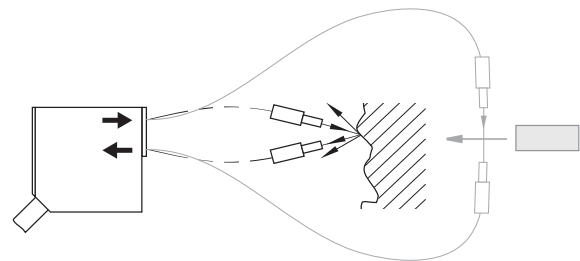
One-way light barriers

One-way light barriers consist of a transmitter and a receiver in two separate housings. The arrangement of the transmitter aims at a maximum part of the clocked light reaching the receiver. An interruption of the light beam between transmitter and receiver causes the switching of the output.



Fibre optic devices

Fibre optic devices are mounted in front of the transmitter and the receiver. They work as the extended eye of the photoelectric sensor. As light conductors are very small and flexible, they are appropriate for sensing applications in places that are difficult to access. There is no transmission of any electric potential. That is why sensing tasks can be realised without special precautions, also in explosive environment and in the presence of high electric potentials (high-voltage plants, electric welding machines). Using fiber optic cables the user realises the function of an one-way light barrier as well as of a reflex light probe.



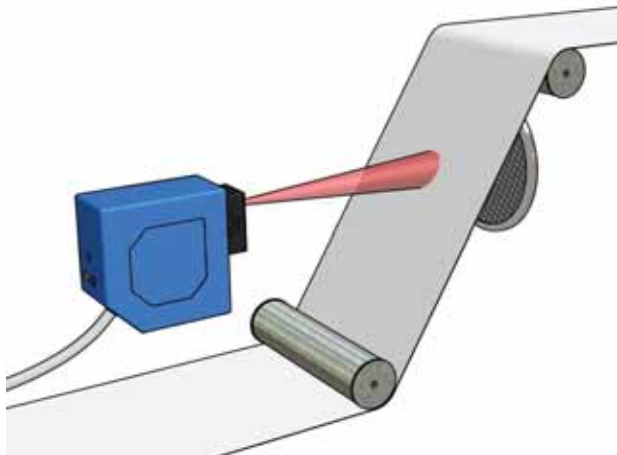
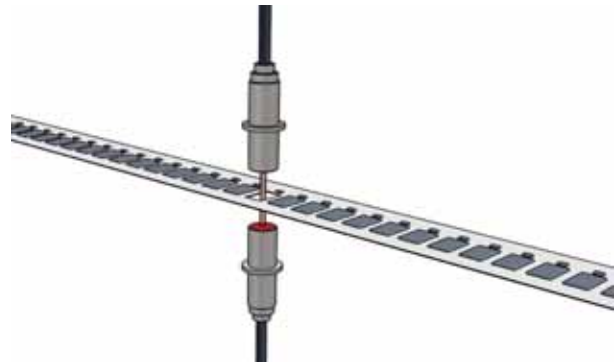


OPTOELECTRONIC SENSORS

APPLICATIONS

Feed control in stamping machines

A one-way light barrier controls the stamping stripe during stamping. Transmitter and receiver are situated in two separate housings. The transmitter emits light on the stamping strip. If the stamping process was successful and the feed correct, the light of the transmitter passes the breakthrough, reaches the receiver and the sensor switches. If the stamping pieces has remained in the strip or the feed was incorrect, the light does not reach the receiver and the sensor does not switch. The light barrier in this application operates light-on. The application could also be realised using a dark-on light barrier that switches when the light does not reach the receiver.

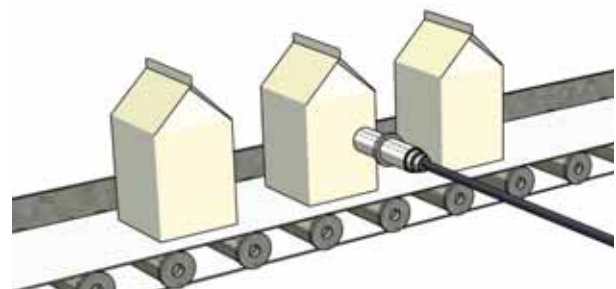


Monitoring roll goods

A reflex light barrier indicates the flaw or the end of a paper web. Transmitter and receiver are situated in one housing. In front of both polarisation filters are mounted. The filter of the receiver only lets pass light to the receiver which is turned about 90° in comparison to the transmitted light. When the light of the transmitter impinges on the paper web, the web reflects it on the same plane to the receiver. The polarisation filter in front of the receiver prevents this light from reaching the receiver. If the paper web breaks, the transmitted light reaches the reflector which is situated behind the paper web. The reflector turns the light about 90° and reflects it in a polarisation plane for which the receiver is permeable. The sensor switches when the light of the reflector reaches the receiver. Thus the receiver only reacts on the light coming from the reflector.

Object counting

A reflex light probe counts liquid packaging boards on a conveyor belt. Transmitter and receiver are situated in one housing. The transmitted light impinges on the object and is reflected on its' surface. The sensor switches when this light reaches the receiver. If there is no object in front of the sensor, the transmitted light is not reflected and the sensor does not switch.



Control of thread bore

A fibre optic device checks of there is a thread in a bore. The fibre optics cable in front of the sensor works as reflex light probe: Via two separate fiber bundels it transmits the light from the transmitter to the object and the reflected light from the object back to the receiver. The head of the fiber optics cable is arranged in a position that makes the transmitted light impinging vertically on the thread flank (if a thread exists). On the flank it is reflected and the sensor switches when the light reaches the receiver. If there is no thread in the bore, the light is reflected in another direction (away from the sensor head) and does not reach the receiver.



OPTICAL SENSORS CYLINDER

CYLINDER M5

General data

Operating voltage	10 ... 30V DC
Max. switching frequency	250Hz
Wave lengths	880nm infrared
Max. load current	100mA
Off-state current	< 5mA
Protection functions	Short circuit, overload, reverse voltage
Operating temperature	0°C ... +55°C
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Housing material	brass, nickel-plated
Connection	2m cable PVC 3 x 0,14mm ² connector M8 3-pole
LED	Yes



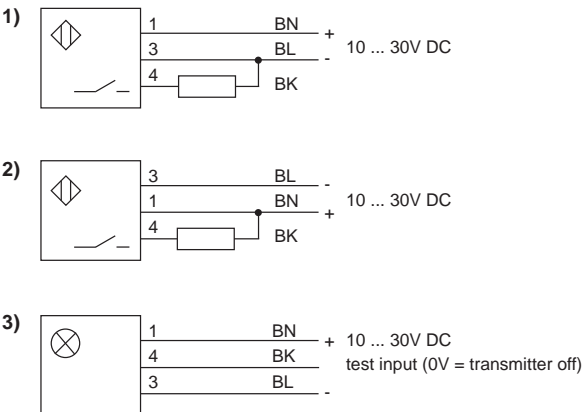
Selection chart reflex light probes

Article number	Designation	Output signal	Sensitivity fixed	Connection	Circuit diagram / Dimensions
08361800100	KORT50-M5MB35-DPS-IR	PNP light-on	50mm	2m cable	1 / A
08361800164	KORT50-M5MB45-DPS-V1-IR	PNP light-on	50mm	connector M8	1 / B
08361800200	KORT50-M5MB35-DNS-IR	NPN light-on	50mm	2m cable	2 / A
08361800264	KORT50-M5MB45-DNS-V1-IR	NPN light-on	50mm	connector M8	2 / B

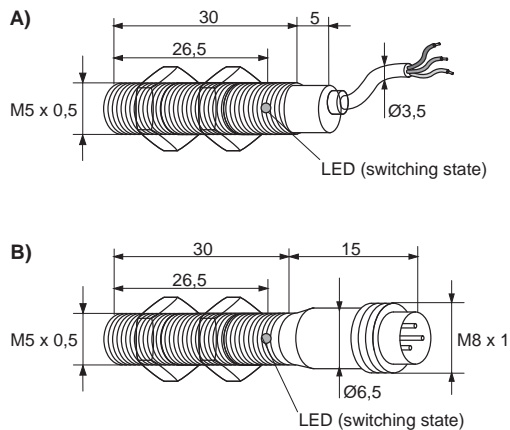
Selection chart one-way light barriers

Article number	Designation	Output signal * with test input	Sensitivity fixed	Connection	Circuit diagram / Dimensions
08363801700	KOES250-M5MB35-DPS-IR	PNP dark-on	250mm	2m cable	1 / A
08363801764	KOES250-M5MB45-DPS-V1-IR	PNP dark-on	250mm	connector M8	1 / B
08363801800	KOES250-M5MB35-D-IR	transmitter*	250mm	2m cable	3 / A
08363801864	KOES250-M5MB45-D-V1-IR	transmitter*	250mm	connector M8	3 / B

Circuit diagrams



Dimensions



all data in mm



CYLINDER M8

General data

Operating voltage	10 ... 30V DC
Max. switching frequency	500Hz reflex light probe 400Hz one-way light barrier
Wave length	880nm infrared
Max. load current	100mA
Off-state current	< 50mA
Protection functions	short-circuit, overload, reverse voltage
Operating temperature	-10°C ... +55°C
Protection class	IP65
EMV-standard	according to EN 60947-5-2
Housing material	brass, nickel-plated
Connection	2m cable PUR 3 x 0,09mm ² connector M8 3-pole



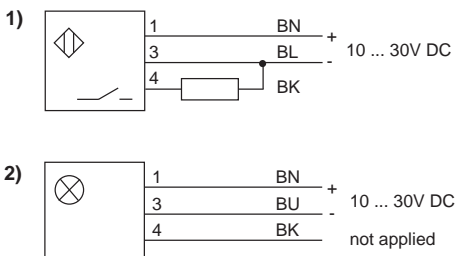
Selection chart reflex light probe

Article number	Designation	Output signal	Sensitivity fixed	Connection	Circuit diagram / Dimensions
08361817500	KORT80-M8MB48-DPS-IR	PNP light-on	80mm	2m cable	1 / A
08361817564	KORT80-M8MB57-DPS-V1-IR	PNP light-on	80mm	connector M8	1 / B

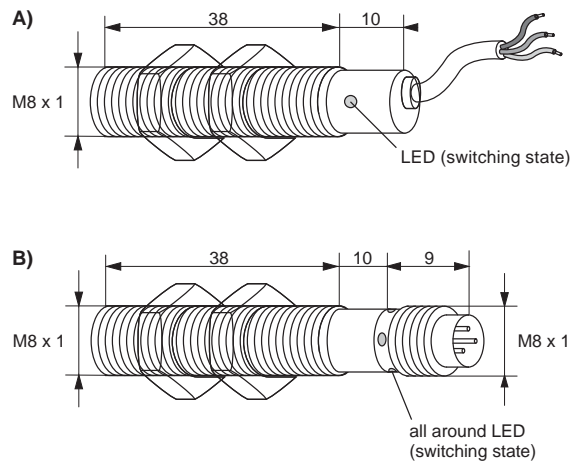
Selection chart one-way light barriers

Article number	Designation	Output signal	Sensitivity fixed	Connection	Circuit diagram / Dimensions
08363817600	KOES2000-M8MB48-D-IR	transmitter	2m	2m cable	2 / A
08363817700	KOES2000-M8MB48-DPS-IR	PNP dark-on	2m	2m cable	1 / B
08363817664	KOES2000-M8MB57-D-V1-IR	transmitter	2m	connector M8	2 / A
08363817764	KOES2000-M8MB57-DPS-V1-IR	PNP dark-on	2m	connector M8	1 / B

Circuit diagrams



Dimensions



all data in mm

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CYLINDER M12

General data

Operating voltage	10 ... 30V DC (* 10 ... 36V DC)
Max. load current	150mA (* 200mA)
Off-state current	< 30mA (* < 15mA)
Protection functions	short circuit, overload, reverse voltage
Operating temperature	-25°C ... +70°C (* -25°C ... +55°C)
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Housing material	brass, nickel-plated
Connection	see selection chart



* for KORT300... and KORP1500...

Selection chart reflex light probe

Article number	Designation infrared 880nm	Output signal	Sensitivity fixed	Max. switching frequency	Connection	Circuit diagram Dimensions
08361245122	KORT200-M12MB64-DNA-IR	NPN	200mm	500Hz	2m cable	1 / A
08361245123	KORT200-M12MB64-DPA-IR	PNP	200mm	500Hz	2m cable	2 / A
08361245124	KORT200-M12MB73-DNA-V1-IR	NPN	200mm	500Hz	connector M8	1 / B
08361245125	KORT200-M12MB73-DPA-V1-IR	PNP	200mm	500Hz	connector M8	2 / B
08361245126	KORT200-M12MB75-DNA-V2-IR	NPN	200mm	500Hz	connector M12	1 / C
08361245127	KORT200-M12MB75-DPA-V2-IR	PNP	200mm	500Hz	connector M12	2 / C

2m cable: PVC 4 x 0,14mm²

connector M8 / M12: 4-pole

	Designation red light 660nm		Sensitivity fixed			
08369671100	KORT300-M12MB50-DPS-RT	PNP light-on	300mm	1000Hz	2m cable	3 / D
08361820050	KORT300-M12MB60-DPS-V2-RT	PNP light-on	300mm	1000Hz	connector M12	3 / E

2m cable: PVC 3 x 0,34mm²

connector M12: 4-pole

	Designation infrared 880nm		Sensitivity fixed			
08361245223	KORT400-M12MB64-DPÖ-IR	PNP dark-on	400mm	200Hz	2m cable	5 / A
08361245323	KORT400-M12MB64-DPS-IR	PNP light-on	400mm	200Hz	2m cable	3 / A

2m cable: PVC 4 x 0,14mm²

Continuation on the next page



CYLINDER M12

Selection chart reflex light barriers

Article number	Designation infrared 880nm	Output signal	Sensitivity fixed	Max. switching frequency	Connection	Circuit diag. / Dimensions
08362245158	KORS2000-M12MB64-DNA-IR	NPN	2m	500Hz	2m cable	1 / A
08362245159	KORS2000-M12MB64-DPA-IR	PNP	2m	500Hz	2m cable	2 / A
08362245160	KORS2000-M12MB73-DNA-V1-IR	NPN	2m	500Hz	connector M8	1 / B
08362245161	KORS2000-M12MB73-DPA-V1-IR	PNP	2m	500Hz	connector M8	2 / B
08362245162	KORS2000-M12MB75-DNA-V2-IR	NPN	2m	500Hz	connector M12	1 / C
08362245163	KORS2000-M12MB75-DPA-V2-IR	PNP	2m	500Hz	connector M12	2 / C

	Designation red light 650nm, polarized		Sensitivity fixed			
08362245122	KORP1000-M12MB64-DNA-RT	NPN	2m	500Hz	2m cable	1 / A
08362245123	KORP1000-M12MB64-DPA-RT	PNP	2m	500Hz	2m cable	2 / A
08362245124	KORP1000-M12MB73-DNA-V2-RT	NPN	2m	500Hz	connector M8	1 / B
08362245125	KORP1000-M12MB73-DPA-V2-RT	PNP	2m	500Hz	connector M8	2 / B
08362245126	KORP1000-M12MB75-DNA-V2-RT	NPN	2m	500Hz	connector M12	1 / C
08362245127	KORP1000-M12MB75-DPA-V2-RT	PNP	2m	500Hz	connector M12	2 / C

2m cable: PVC 4 x 0,14mm²

connector M8 / M12: 4-pole

	Designation red light 660nm, polarized		Sensitivity adjustable			
08362820100	KORP1500-M12MB50-DPS-RT	PNP dark-on	1,5m	1000Hz	2m cable	3 / D
08362820150	KORP1500-M12MB60-DPS-V2-RT	PNP dark-on	1,5m	1000Hz	connector M12	3 / E

2m cable: 3 x 0,34mm²

connector M12: 4-pole

Selection chart one-way light barriers

Article number	Designation infrared 880nm	Output signal * with test input	Sensitivity fixed	Max. switching frequency	Connection	Circuit diag. / Dimensions
08363245133	KOES5200-M12MB64-D-IR	transmitter*	5,2m	-	2m cable	4 / A
08363245134	KOES5200-M12MB64-DNA-IR	NPN	5,2m	500Hz	2m cable	1 / A
08363245135	KOES5200-M12MB64-DPA-IR	PNP	5,2m	500Hz	2m cable	2 / A
08363245136	KOES5200-M12MB73-D-V1-IR	transmitter*	5,2m	-	connector M8	4 / B
08363245137	KOES5200-M12MB73-DNA-V1-IR	NPN	5,2m	500Hz	connector M8	1 / B
08363245138	KOES5200-M12MB73-DPA-V1-IR	PNP	5,2m	500Hz	connector M8	2 / B
08363245139	KOES5200-M12MB75-D-V2-IR	transmitter*	5,2m	-	connector M12	4 / C
08363245140	KOES5200-M12MB75-DNA-V2-IR	NPN	5,2m	500Hz	connector M12	1 / C
08363245141	KOES5200-M12MB75-DPA-V2-IR	PNP	5,2m	500Hz	connector M12	2 / C
08363245145	KOES5200W-M12MB64-D-IR	transmitter*	5,2m	-	2m cable	4 / F
08363245146	KOES5200W-M12MB64-DNA-IR	NPN	5,2m	500Hz	2m cable	1 / F
08363245147	KOES5200W-M12MB64-DPA-IR	PNP	5,2m	500Hz	2m cable	2 / F
08363245148	KOES5200W-M12MB73-D-V1-IR	transmitter*	5,2m	-	connector M8	4 / G
08363245149	KOES5200W-M12MB73-DNA-V1-IR	NPN	5,2m	500Hz	connector M8	1 / G
08363245150	KOES5200W-M12MB73-DPA-V1-IR	PNP	5,2m	500Hz	connector M8	2 / G
08363245151	KOES5200W-M12MB75-D-V2-IR	transmitter*	5,2m	-	connector M12	4 / H
08363245152	KOES5200W-M12MB75-DNA-V2-IR	NPN	5,2m	500Hz	connector M12	1 / H
08363245153	KOES5200W-M12MB75-DPA-V2-IR	PNP	5,2m	500Hz	connector M12	2 / H

2m cable antivalent: 4 x 0,14mm²

connector M8 / M12 antivalent: 4-pole

2m cable transmitter: 3 x 0,14mm²

connector M8 transmitter: 4-pole

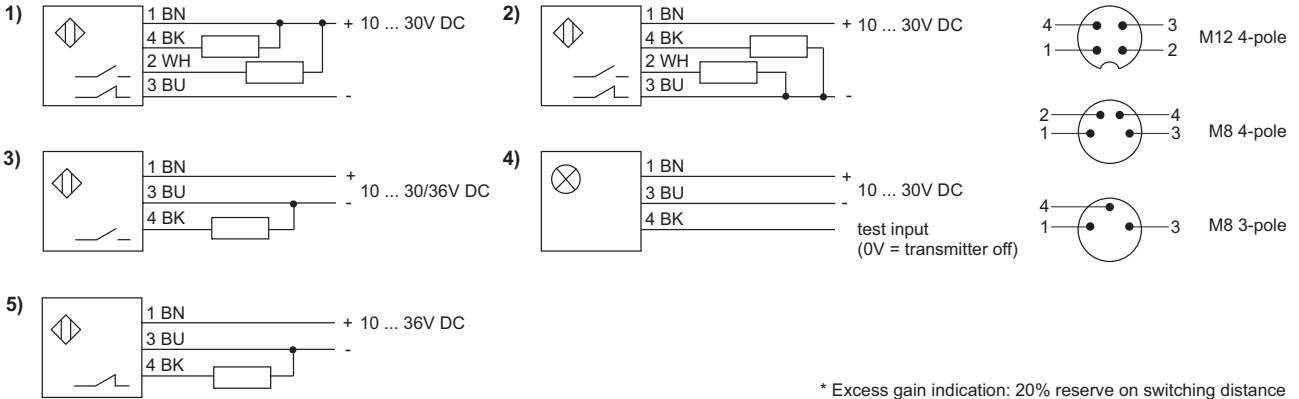
connector M12 transmitter: 4-pole

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CYLINDER M12

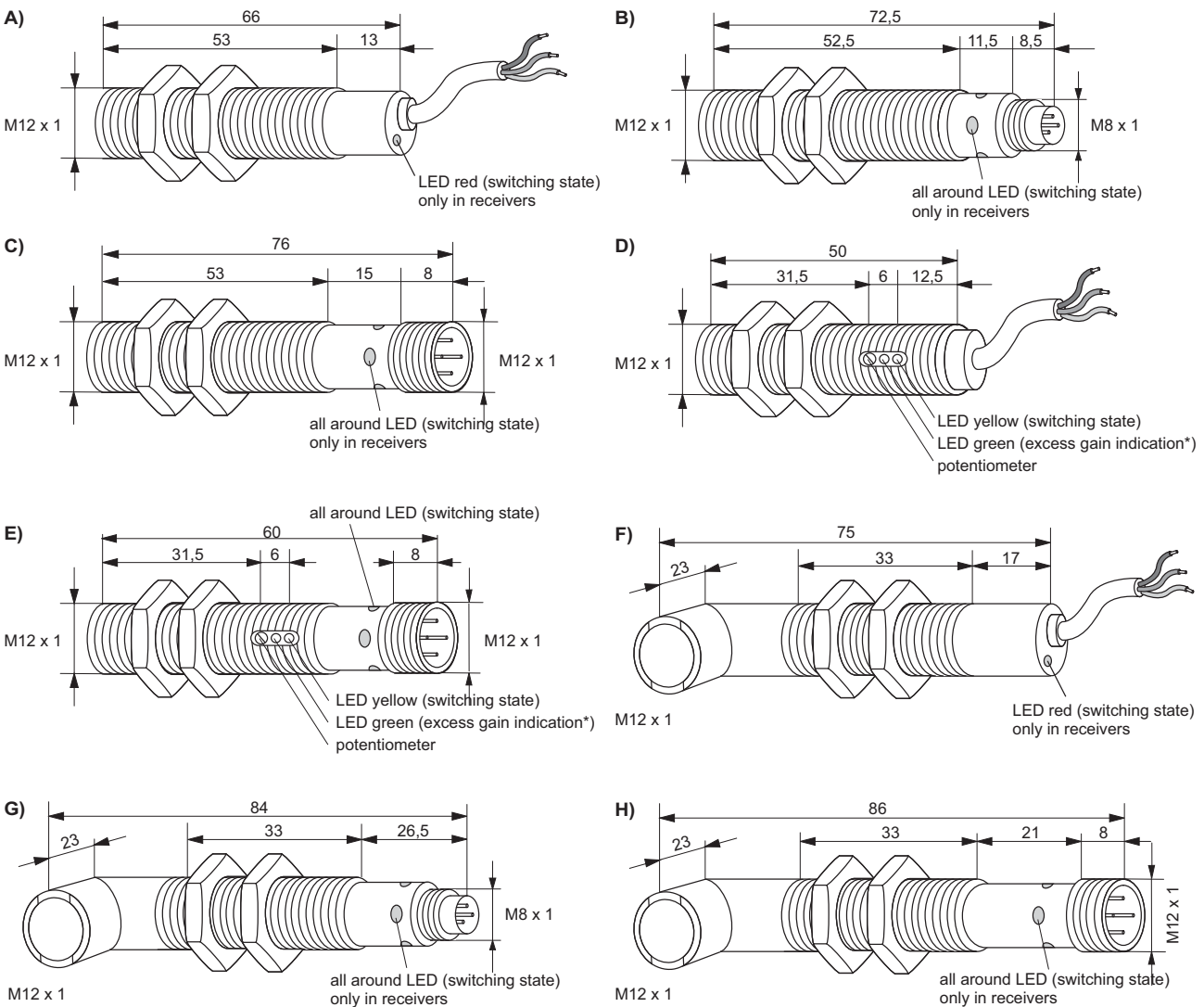
Circuit diagrams



* Excess gain indication: 20% reserve on switching distance
easy arrangement and adjustment
easier detection of pollution

Dimensions

all data in mm



p-u-l-s-o-t-r-o-n-i-c
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Subject to
modifications!



CYLINDER M18

General data

Operating voltage	10 ... 30V DC (* 10 ... 36V DC)
Max. load current	200mA
Off-state current	< 30mA (* < 15mA)
Protection functions	short circuit, overload, reverse voltage
Operating temperature	-25°C ... +55°C
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Housing material	brass, nickel-plated
Connection	2m cable PVC (see selection chart) connector M12 4-pole



* for KORT600..., KORH120... and KORP2000...

Selection chart reflex light probes

Article number	Designation infrared 800nm	Output signal selectable by control input wire	Sensitivity adjustable	Max. switching frequency	Connection	Circuit diagram / Dimensions
08361250254	KORT150-M18MB71-DNU-IR	NPN	150mm	300Hz	2m cable	1 / A
08361250255	KORT150-M18MB71-DPU-IR	PNP	150mm	300Hz	2m cable	2 / A
08361250256	KORT150-M18MB85-DNU-V2-IR	NPN	150mm	300Hz	connector M12	1 / B
08361250257	KORT150-M18MB85-DPU-V2-IR	PNP	150mm	300Hz	connector M12	2 / B
08361250260	KORT150W-M18MB75-DNU-IR	NPN	150mm	300Hz	2m cable	1 / C
08361250261	KORT150W-M18MB75-DPU-IR	PNP	150mm	300Hz	2m cable	2 / C
08361250262	KORT150W-M18MB86-DNU-V2-IR	NPN	150mm	300Hz	connector M12	1 / D
08361250263	KORT150W-M18MB86-DPU-V2-IR	PNP	150mm	300Hz	connector M12	2 / D
08361250218	KORT500-M18MB71-DNU-IR	NPN	500mm	300Hz	2m cable	1 / A
08361250219	KORT500-M18MB71-DPU-IR	PNP	500mm	300Hz	2m cable	2 / A
08361250220	KORT500-M18MB85-DNU-V2-IR	NPN	500mm	300Hz	connector M12	1 / B
08361250221	KORT500-M18MB85-DPU-V2-IR	PNP	500mm	300Hz	connector M12	2 / B
08361250224	KORT500W-M18MB75-DNU-IR	NPN	500mm	300Hz	2m cable	1 / C
08361250225	KORT500W-M18MB75-DPU-IR	PNP	500mm	300Hz	2m cable	2 / C
08361250226	KORT500W-M18MB86-DNU-V2-IR	NPN	500mm	300Hz	connector M12	1 / D
08361250227	KORT500W-M18MB86-DPU-V2-IR	PNP	500mm	300Hz	connector M12	2 / D

2m cable: PVC 4 x 0,5mm²

	Designation red light 660nm	Output signal	Sensitivity adjustable			
08361841500	KORT600-M18MB50-DPA-RT	PNP	600mm	1000Hz	2m cable	5 / E
08361841550	KORT600-M18MB63-DPA-V2-RT	PNP	600mm	1000Hz	connector M12	5 / F

2m cable: PVC 4 x 0,34mm²

	Designation red light 660nm with background suppression	Output signal	Sensitivity adjustable			
08361841100	KORH120-M18MB50-DPS-RT	PNP light-on	10 ... 120mm	500Hz	2m cable	3 / E
08361841150	KORH120-M18MB63-DPS-V2-RT	PNP light-on	10 ... 120mm	500Hz	connector M12	3 / F

2m cable: PVC 3 x 0,34mm²

Continuation on the next page



CYLINDER M18

Selection chart reflex light barriers

Article number	Designation infrared 880nm	Output signal selectable by control input wire	Sensitivity adjustable	Max. switching frequency	Connection	Circuit diag. / Dimensions
08362250218	KORS3000-M18MB71-DNU-IR	NPN	3m	300Hz	2m cable	1 / A
08362250219	KORS3000-M18MB71-DPU-IR	PNP	3m	300Hz	2m cable	2 / A
08362250220	KORS3000-M18MB85-DNU-V2-IR	NPN	3m	300Hz	connector M12	1 / B
08362250221	KORS3000-M18MB85-DPU-V2-IR	PNP	3m	300Hz	connector M12	2 / B
08362250224	KORS3000W-M18MB75-DNU-IR	NPN	3m	300Hz	2m cable	1 / C
08362250225	KORS3000W-M18MB75-DPU-IR	PNP	3m	300Hz	2m cable	2 / C
08362250226	KORS3000W-M18MB86-DNU-V2-IR	NPN	3m	300Hz	connector M12	1 / D
08362250227	KORS3000W-M18MB86-DPU-V2-IR	PNP	3m	300Hz	connector M12	2 / D

	Designation red light 650nm polarized		Sensitivity adjustable			
08362250254	KORP1000-M18MB71-DNU-RT	NPN	1m	300Hz	2m cable	1 / A
08362250255	KORP1000-M18MB71-DPU-RT	PNP	1m	300Hz	2m cable	2 / A
08362250256	KORP1000-M18MB85-DNU-V2-RT	NPN	1m	300Hz	connector M12	1 / B
08362250257	KORP1000-M18MB85-DPU-V2-RT	PNP	1m	300Hz	connector M12	2 / B
08362250260	KORP1000W-M18MB75-DNU-RT	NPN	1m	300Hz	2m cable	1 / C
08362250261	KORP1000W-M18MB75-DPU-RT	PNP	1m	300Hz	2m cable	2 / C
08362250262	KORP1000W-M18MB86-DNU-V2-RT	NPN	1m	300Hz	connector M12	1 / D
08362250263	KORP1000W-M18MB86-DPU-V2-RT	PNP	1m	300Hz	connector M12	2 / D

2m cable: PVC 4 x 0,5mm²

	Designation red light 660nm polarized	Output signal	Sensitivity adjustable			
08362841200	KORP2000-M18MB50-DPS-RT	PNP dark-on	2m	1000Hz	2m cable	3 / E
08362841250	KORP2000-M18MB63-DPS-V2-RT	PNP dark-on	2m	1000Hz	connector M12	3 / F

2m cable: PVC 3 x 0,34mm²

Selection chart one-way light barriers

Article number	Designation infrared 880nm	Output signal * with test input **selectable by control input wire	Sensitivity adjustable	Max. switching frequency	Connection	Circuit diag. / Dimensions
08363250227	KOES15M-M18MB71-D-IR	transmitter*	15m	-	2m cable	4 / A
08363250228	KOES15M-M18MB71-DNU-IR	NPN	15m	300Hz	2m cable	1 / A
08363250229	KOES15M-M18MB71-DPU-IR	PNP	15m	300Hz	2m cable	2 / A
08363250230	KOES15M-M18MB85-D-V2-IR	transmitter*	15m	-	connector M12	4 / B
08363250231	KOES15M-M18MB85-DNU-V2-IR	NPN	15m	300Hz	connector M12	1 / B
08363250232	KOES15M-M18MB85-DPU-V2-IR	PNP	15m	300Hz	connector M12	2 / B
08363250236	KOES15MW-M18MB75-D-IR	transmitter*	15m	-	2m cable	4 / C
08363250237	KOES15MW-M18MB75-DNU-IR	NPN	15m	300Hz	2m cable	1 / C
08363250238	KOES15MW-M18MB75-DPU-IR	PNP	15m	300Hz	2m cable	2 / C
08363250239	KOES15MW-M18MB86-D-V2-IR	transmitter*	15m	-	connector M12	4 / D
08363250240	KOES15MW-M18MB86-DNU-V2-IR	NPN	15m	300Hz	connector M12	1 / D
08363250241	KOES15MW-M18MB86-DPU-V2-IR	PNP	15m	300Hz	connector M12	2 / D

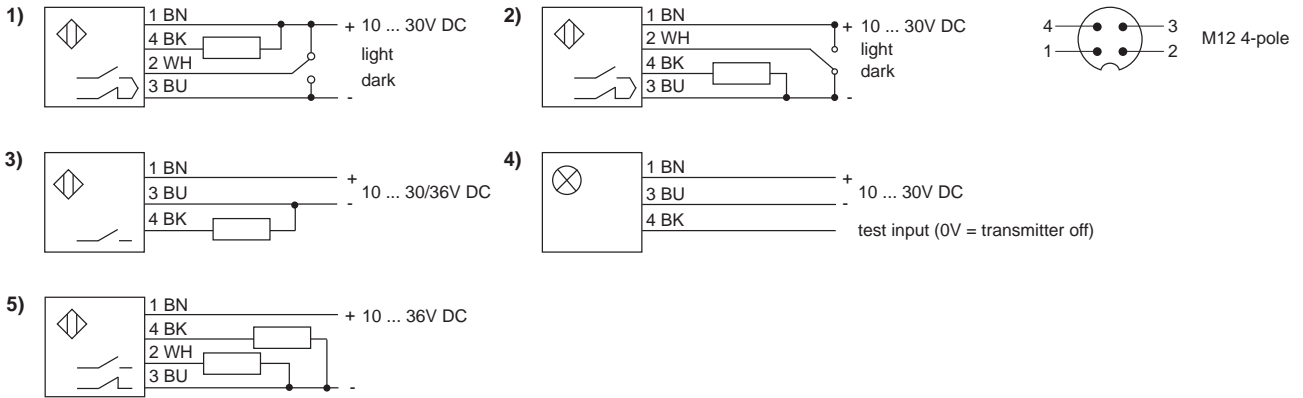
2m cable transmitter: PVC 3 x 0,5mm²

2m cable antivalent: PVC 4 x 0,5mm²

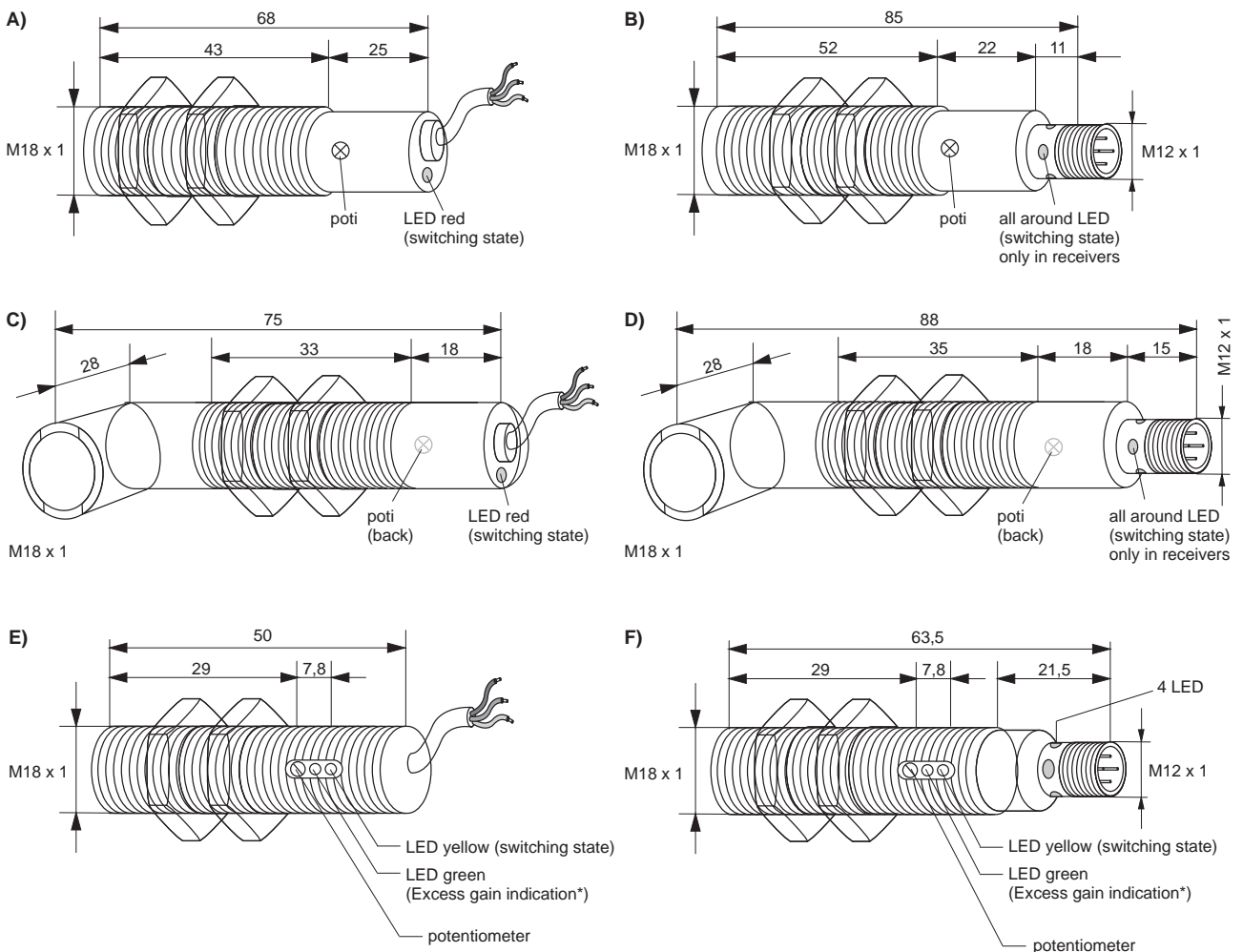


CYLINDER M18

Circuit diagrams



Dimensions



* Excess-gain indication: 20% reserve on switching distance
easy arrangement and adjustment
easier detection of pollution

all data in mm

<p>p-u-l-s-o-t-r-o-n-i-c Pulsotronic GmbH & Co. KG</p>	<p>Neue Schichtstraße 14 b D-09366 Niederdorf</p>	<p>☎ +49 (0) 37 296 / 930 - 200 ☎ +49 (0) 37 296 / 930 - 280</p>	<p>✉ info@pulsotronic.de www.pulsotronic.de</p>	<p>Subject to modifications!</p>
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OPTICAL SENSORS CYLINDER

CYLINDER M30

General data

Operating voltage	10 ... 30V DC
Max. load current	150mA
Off-state current	< 30mA
Protection functions	short circuit, overload, reverse voltage
Operating temperature	-25°C ... +70°C
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Housing material	brass, nickel-plated
Connection	2m cable PVC 4 x 0,5mm ² (KOE560...transmitter: 2m cable PVC 2 x 0,5mm ²) (KOE5200...transmitter: 2m cable PVC 3 x 0,5mm ²) connector M12 4-pole



Selection chart reflex light probes

Article number	Designation infrared 880nm with background suppression	Output signal	Range fixed	Max. switching frequency	Connection	Circuit diagram / Dimensions
08361255016	KORH200-M30MB78-DNA-IR	NPN	200mm	150Hz	2m cable	1 / A
08361255017	KORH200-M30MB78-DPA-IR	PNP	200mm	150Hz	2m cable	2 / A
08361255024	KORH200-M30MB96-DNA-V2-IR	NPN	200mm	150Hz	connector M12	1 / B
08361255025	KORH200-M30MB96-DPA-V2-IR	PNP	200mm	150Hz	connector M12	2 / B
08361255048	KORH400-M30MB78-DNA-IR	NPN	400mm	150Hz	2m cable	1 / A
08361255049	KORH400-M30MB78-DPA-IR	PNP	400mm	150Hz	2m cable	2 / A
08361255056	KORH400-M30MB96-DNA-V2-IR	NPN	400mm	150Hz	connector M12	1 / B
08361255057	KORH400-M30MB96-DPA-V2-IR	PNP	400mm	150Hz	connector M12	2 / B
08361255080	KORH600-M30MB78-DNA-IR	NPN	600mm	150Hz	2m cable	1 / A
08361255081	KORH600-M30MB78-DPA-IR	PNP	600mm	150Hz	2m cable	2 / A
08361255088	KORH600-M30MB96-DNA-V2-IR	NPN	600mm	150Hz	connector M12	1 / B
08361255089	KORH600-M30MB96-DPA-V2-IR	PNP	600mm	150Hz	connector M12	2 / B

Selection chart reflex light barrier

Article number	Designation red light 650nm polarized	Output signal	Sensitivity fixed	Max. switching frequency	Connection	Circuit diagram / Dimensions
08362255016	KORP6000-M30MB78-DNA-RT	NPN	6m	150Hz	2m cable	1 / A
08362255017	KORP6000-M30MB78-DPA-RT	PNP	6m	150Hz	2m cable	2 / A
08362255024	KORP6000-M30MB96-DNA-V2-RT	NPN	6m	150Hz	connector M12	1 / B
08362255025	KORP6000-M30MB96-DPA-V2-RT	PNP	6m	150Hz	connector M12	2 / B

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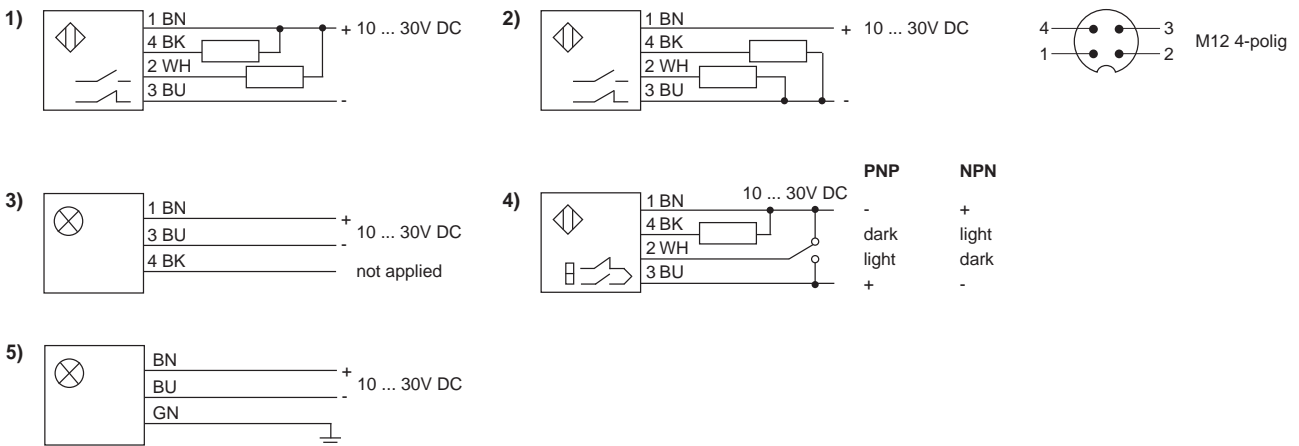


CYLINDER M30

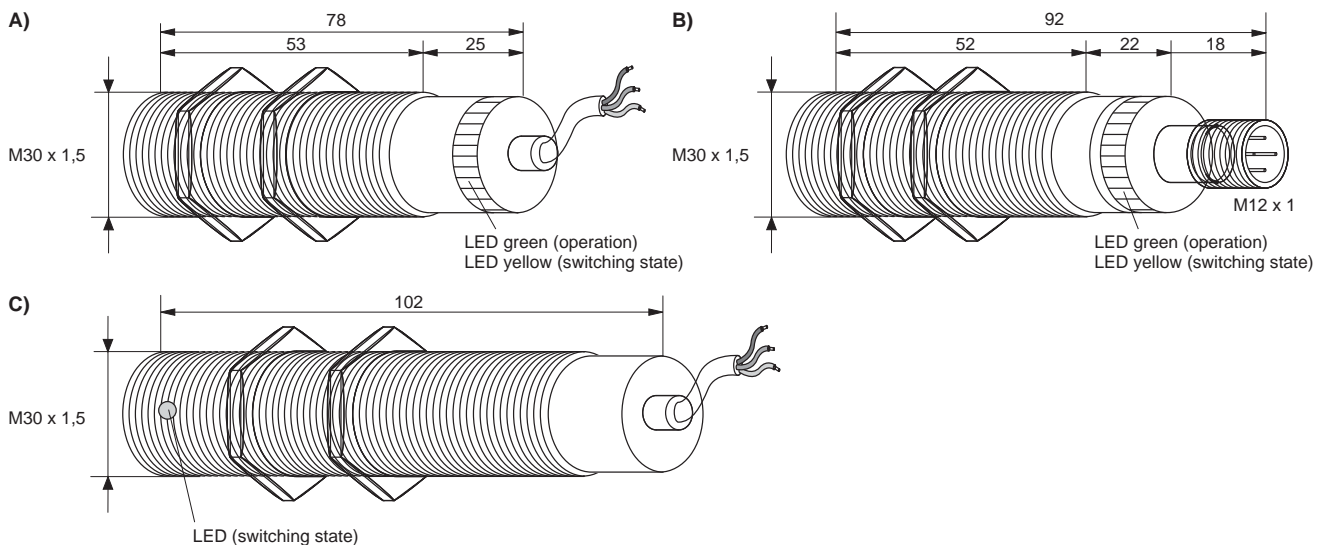
Selection chart one-way light barrier

Article number	Designation infrared 880nm	Output signal	Sensitivity fixed	Max switching frequency	Connection	Schaltbild / Abmessungen
08363255024	KOES60M-M30MB78-D-IR	transmitter	60m	-	2m cable	3 / A
08363255025	KOES60M-M30MB78-DNA-IR	PNP	60m	150Hz	2m cable	1 / A
08363255026	KOES60M-M30MB78-DPA-IR	NPN	60m	150Hz	2m cable	2 / A
08363255036	KOES60M-M30MB96-D-V2-IR	transmitter	60m	-	connector M12	3 / B
08363255037	KOES60M-M30MB96-DNA-V2-IR	NPN	60m	150Hz	connector M12	1 / B
08363255038	KOES60M-M30MB96-DPA-V2-IR	PNP	60m	150Hz	connector M12	2 / B
08363255100	KOES200M-M30MB102-D-IR	transmitter	200m	-	2m cable	5 / C
08363255101	KOES200M-M30MB102-DMU-IR	NPN/PNP	200m	50Hz	2m cable	4 / C

Circuit diagrams



Dimensions



all data in mm



SQUARE Q20

General data

Operating voltage	10 ... 30V DC
Max. load current	150mA
Off-state current	< 25mA
Protection functions	short circuit, overload, reverse voltage
Operating temperature	-20°C ... +55°C
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Housing material	plastic
Connection	2m cable PVC4 x 0,15mm ² (KOE54000... transmitter: 2m cable PUR 3 x 0,15mm ²)



Selection chart reflex light probe

Article number	Designation red light 680nm	Output signal	Sensitivity adjustable	Max. switching frequency	Circuit diagram / Dimensions
08361205001	KORT200-Q20KB-DNA-RT	NPN	200mm	300Hz	1 / A
08361205002	KORT200-Q20KB-DPA-RT	PNP	200mm	300Hz	2 / A
08361205005	KORT200-Q20KB25-DNA-RT	NPN	200mm	300Hz	1 / C
08361205006	KORT200-Q20KB25-DPA-RT	PNP	200mm	300Hz	2 / C

	Designation red light 660nm fixed focus 10mm *		Sensitivity fixed		
08361205013	KORF10-Q20KB-DNA-RT	NPN	10mm	300Hz	1 / B
08361205014	KORF10-Q20KB-DPA-RT	PNP	10mm	300Hz	2 / B

* sensibility adjustable

	Designation red light 680nm fixed focus 20mm *		Sensitivity fixed		
08361205017	KORF20-Q20KB-DNA-RT	NPN	20mm	300Hz	1 / B
08361205018	KORF20-Q20KB-DPA-RT	PNP	20mm	300Hz	2 / B

* sensibility adjustable

	Designation red light 660nm wide angle		Sensitivity adjustable		
08361205009	KORT50-Q20KB25-DNA-RT	NPN	50mm	300Hz	1 / C
08361205010	KORT50-Q20KB25-DPA-RT	PNP	50mm	300Hz	2 / C

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SQUARE Q20

Selection chart reflex light barriers

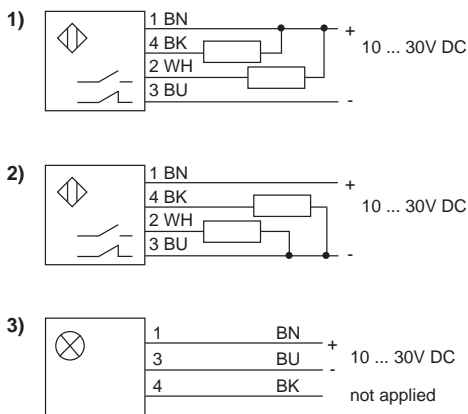
Article number	Designation red light 660nm	Output signal	Sensitivity adjustable	Max. switching frequency	Circuit diagram / Dimensions
08362205001	KORS2000-Q20KB-DNA-RT	NPN	2m	300Hz	1 / A
08362205002	KORS2000-Q20KB-DPA-RT	PNP	2m	300Hz	2 / A

	Designation red light 680nm polarized		Sensitivity adjustable		
08362205005	KORP1000-Q20KB-DNA-RT	NPN	1m	300Hz	1 / A
08362205006	KORP1000-Q20KB-DPA-RT	PNP	1m	300Hz	2 / A

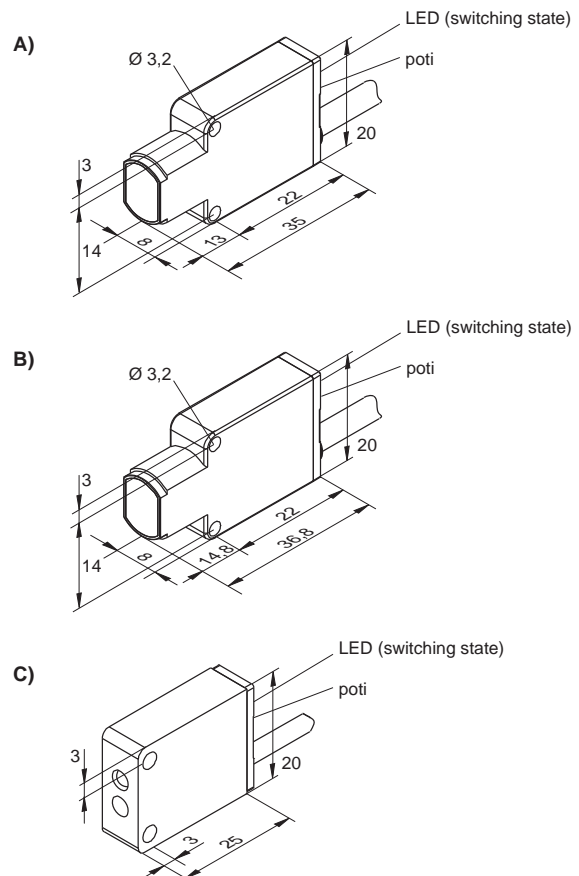
Selection chart one-way light barriers

Article number	Designation red light 660nm	Output signal	Sensitivity adjustable	Max. switching frequency	Circuit diagram / Dimensions
08363205001	KOES4000-Q20KB-D-RT	Sender	4m	-	3 / B
08363205002	KOES4000-Q20KB-DNA-RT	NPN	4m	80Hz	1 / B
08363205003	KOES4000-Q20KB-DPA-RT	PNP	4m	80Hz	2 / B

Circuit diagrams



Dimensions



all data in mm



OPTICAL SENSORS SQUARE

SQUARE Q30

General data

Operating voltage	10 ... 36V DC
Max. load current	200mA (antivalent: sum of both outputs)
Off-state current	< 15mA
Protection functions	short circuit, overload, reverse voltage
Operating temperature	-25°C ... +55°C
Protection class	IP67 (IP65 for Art.Nr. ...2000 up to ...3564)
EMV-standard	according to EN 60947-5-2
Housing material	plastic



Selection chart reflex light probe

Article number	Designation infrared 880nm	Output signal	Sensitivity adjustable	Max. switching frequency	Connection	Circuit diagram / Dimensions
08361822000	KORT600-Q30KB-DPS-IR	PNP light-on	600mm	1000Hz	2m cable	1 / C
08361822064	KORT600-Q30KB-DPS-V1-IR	PNP light-on	600mm	1000Hz	connector M8	1 / D

2m cable: PVC 3 x 0,14mm²
connector M8 3-pole

	Designation infrared 880nm		Sensitivity adjustable			
08361820000	KORT1200-Q30KB-DPA-IR	PNP	1200mm	1000Hz	3m cable	2 / C
08361820064	KORT1200-Q30KB-DPA-V1-IR	PNP	1200mm	1000Hz	connector M8	2 / D
08361820100	KORT1200-Q30KB-DPS-IR	PNP light-on	1200mm	1000Hz	3m cable	6 / C
08361820164	KORT1200-Q30KB-DPS-V1-IR	PNP light-on	1200mm	1000Hz	connector M8	6 / D

3m cable: PVC 4 x 0,14mm²
connector M8 4-pole

	Designation red light 660nm with background suppression		Range adjustable			
08361820200	KORH150-Q30KB-DPA-RT	PNP	15 ... 150mm	500Hz	3m cable	2 / A
08361820264	KORH150-Q30KB-DPA-V1-RT	PNP	15 ... 150mm	500Hz	connector M8	2 / B
08361822100	KORH150-Q30KB-DPS-RT	PNP light-on	15 ... 150mm	500Hz	2m cable	1 / A
08361822164	KORH150-Q30KB-DPS-V1-RT	PNP light-on	15 ... 150mm	500Hz	connector M8	1 / B

3m cable antivalent: PVC 4 x 0,14mm²
connector M8 antivalent: 4-pole

2m cable light-on: PVC 3 x 0,14mm²
connector M8 light-on: 3-pole

Selection chart reflex light barriers

Article number	Designation red light 660nm polarized*	Output signal	Sensitivity adjustable	Max. switching frequency	Connection	Circuit diagram / Dimensions
08361822200	KORP2000-Q30KB-DPS-RT*	PNP dark-on	2m	1000Hz	2m cable	1 / A
08361822264	KORP2000-Q30KB-DPS-V1-RT*	PNP dark-on	2m	1000Hz	connector M8	1 / B
08362820400	KORS4000-Q30KB-DPA-RT	PNP	4m	1000Hz	3m cable	2 / A
08362820464	KORS4000-Q30KB-DPA-V1-RT	PNP	4m	1000Hz	connector M8	2 / B
08362820500	KORS4000-Q30KB-DPÖ-RT	PNP light-on	4m	1000Hz	3m cable	5 / A
08362820564	KORS4000-Q30KB-DPÖ-V1-RT	PNP light-on	4m	1000Hz	connector M8	5 / B

2m cable dark-on: PVC 3 x 0,14mm²
connector M8 dark-on: 3-pole

3m cable antivalent / light-on: PVC 4 x 0,14mm²
connector antivalent / light-on: 4-pole

Continuation on the next page



SQUARE Q30

Selection chart one-way light barriers

Article number	Designation infrared 880nm	Output signal	Sensitivity adjustable	Max. switching frequency	Connection	Circuit diagram / Dimensions
08363822300	KOES6000-Q30KB-DPS-IR	PNP dark-on	6m	1000Hz	2m cable	1 / C
08363822364	KOES6000-Q30KB-DPS-V1-IR	PNP dark-on	6m	1000Hz	connector M8	1 / D
08363822400	KOES6000-Q30KB-D-IR	transmitter	6m	-	2m cable	3 / C
08363822464	KOES6000-Q30KB-D-V1-IR	transmitter	6m	-	connector M8	3 / D
08363820600	KOES12M-Q30KB-DPA-IR	PNP	12m	1000Hz	3m cable	2 / C
08363820664	KOES12M-Q30KB-DPA-V1-IR	PNP	12m	1000Hz	connector M8	2 / D
08363820700	KOES12M-Q30KB-D-IR	transmitter	12m	-	3m cable	3 / C
08363820764	KOES12M-Q30KB-D-V1-IR	transmitter	12m	-	connector M8	3 / D
08362820800	KOES12M-Q30KB-DPÖ-IR	PNP light-on	12m	1000Hz	3m cable	5 / C
08362820864	KOES12M-Q30KB-DPÖ-V1-IR	PNP light-on	12m	1000Hz	connector M8	5 / D

2m cable dark-on / transmitter 6m: 3 x 0,14mm²
connector M8 dark-on / transmitter: 3-pole

3m cable antivalent / light-on / transmitter 12m: 4 x 0,14mm²
connector M8 antivalent / light-on: 4-pole

Selection chart fibre optic devices

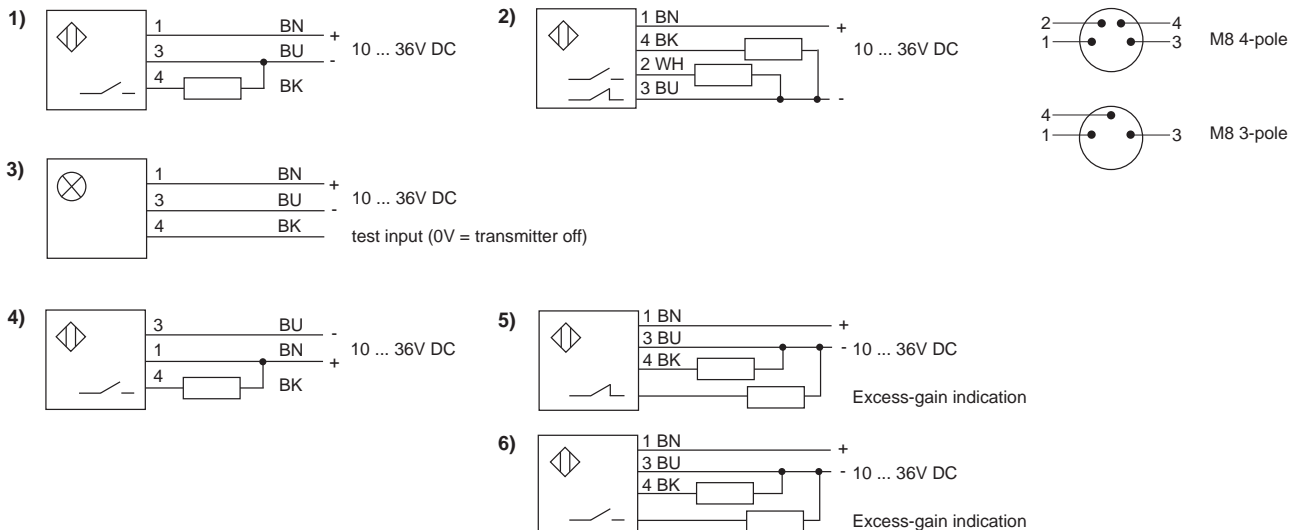
Article number	Designation red light 660nm sensibility adjustable	Output signal	Max. switching frequency	Connection	Circuit diagram / Dimensions
08365821000	KOLL-Q30KB-DPA-RT	PNP	1000Hz	3m cable	2 / E
08365821064	KOLL-Q30KB-DPA-V1-RT	PNP	1000Hz	connector M8	2 / F
08365822500	KOLL-Q30KB-DPSÖ-RT*	PNP light-on	1000Hz	2m cable	1 / E
08365822564	KOLL-Q30KB-DPS/Ö-V1-RT*	PNP light-on	1000Hz	connector M8	1 / F
08365823500	KOLL-Q30KB-DNS/Ö-RT*	NPN light-on	1000Hz	2m cable	4 / E
08365823564	KOLL-Q30KB-DNS/Ö-V1-RT*	NPN light-on	1000Hz	connector M8	4 / F

* Functioning and range depend on the fibre optic device.

3m cable antivalent: 4 x 0,14mm²
connector M8 antivalent: 4-pole

2m cable light-on: 3 x 0,14mm²
connector M8 light-on: 3-pole

Circuit diagrams

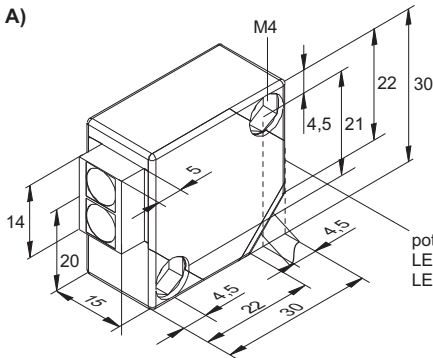




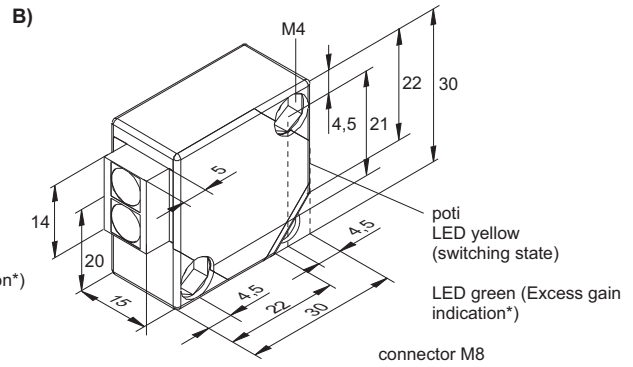
OPTICAL SENSORS SQUARE

SQUARE Q30

Dimensions

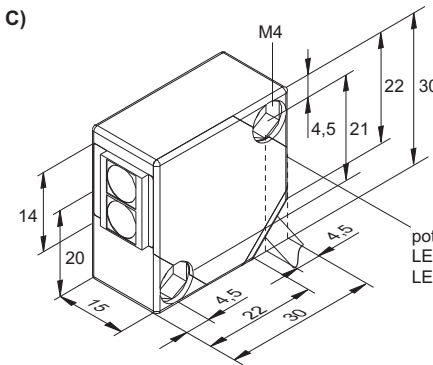


poti
LED yellow (switching state)
LED green (Excess gain indication*)

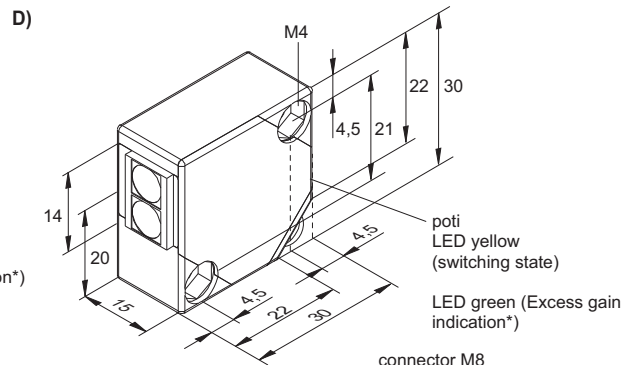


poti
LED yellow (switching state)
LED green (Excess gain indication*)

connector M8

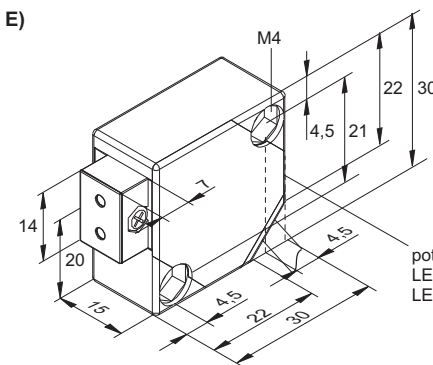


poti
LED yellow (switching state)
LED green (Excess gain indication*)

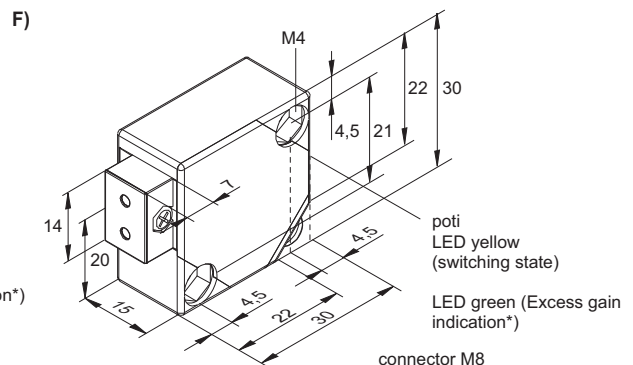


poti
LED yellow (switching state)
LED green (Excess gain indication*)

connector M8



poti
LED yellow (switching state)
LED green (Excess gain indication*)



poti
LED yellow (switching state)
LED green (Excess gain indication*)

connector M8

* Excess-gain indication: 20% reserve on switching distance
easy arrangement and adjustment
easier detection of pollution

all data in mm



OPTICAL SENSORS SQUARE

SQUARE Q31

General data

Operating voltage	10 ... 30V DC
Max. load current	150mA
Off-state current	< 25mA
Max. switching frequency	500Hz
Protection functions	short circuit, overload, reverse voltage
Operating temperature	-25°C ... +70°C
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Housing material	plastic



Selection chart reflex light probe

Article number	Designation infrared 880nm	Output signal	Sensitivity adjustable	Connection	Circuit diag. / Dimensions
08361260017	KORT130-Q31KB-DMU-IR	NPN/PNP	130mm	2m cable PVC 4 x 0,5mm ²	1 / Ad
08361260021	KORT130-Q31KB-DMU-V1-IR	NPN/PNP	130mm	connector M8 4-pole	1 / Bd
08361260022	KORT130-Q31KB-DMU-V2-IR	NPN/PNP	130mm	connector M12 4-pole	1 / Cd
08361260001	KORT300-Q31KB-DMU-IR	NPN/PNP	300mm	2m cable PVC 4 x 0,5mm ²	1 / Ad
08361260005	KORT300-Q31KB-DMU-V1-IR	NPN/PNP	300mm	connector M8 4-pole	1 / Bd
08361260006	KORT300-Q31KB-DMU-V2-IR	NPN/PNP	300mm	connector M12 4-pole	1 / Cd
08361260033	KORT380-Q31KB-DMU-IR	NPN/PNP	380mm	2m cable PVC 4 x 0,5mm ²	1 / Ab
08361260037	KORT380-Q31KB-DMU-V1-IR	NPN/PNP	380mm	connector M8 4-pole	1 / Bb
08361260038	KORT380-Q31KB-DMU-V2-IR	NPN/PNP	380mm	connector M12 4-pole	1 / Cb
	Designation green light 570nm focussed		Sensitivity adjustable		
08361260081	KORF16-Q31KB-DMU-GN	NPN/PNP	16mm	2m cable PVC 4 x 0,5mm ²	1 / Ab
08361260085	KORF16-Q31KB-DMU-V1-GN	NPN/PNP	16mm	connector M8 4-pole	1 / Bb
08361260086	KORF16-Q31KB-DMU-V2-GN	NPN/PNP	16mm	connector M12 4-pole	1 / Cb
	Designation red light 650nm focussed		Sensitivity adjustable		
08361260097	KORF16-Q31KB-DMU-RT	NPN/PNP	16mm	2m cable PVC 4 x 0,5mm ²	1 / Ab
08361260101	KORF16-Q31KB-DMU-V1-RT	NPN/PNP	16mm	connector M8 4-pole	1 / Bb
08361260102	KORF16-Q31KB-DMU-V2-RT	NPN/PNP	16mm	connector M12 4-pole	1 / Cb
08361260113	KORF43-Q31KB-DMU-RT	NPN/PNP	43mm	2m cable PVC 4 x 0,5mm ²	1 / Ab
08361260117	KORF43-Q31KB-DMU-V1-RT	NPN/PNP	43mm	connector M8 4-pole	1 / Bb
08361260118	KORF43-Q31KB-DMU-V2-RT	NPN/PNP	43mm	connector M12 4-pole	1 / Cb
	Designation infrared 880nm focussed		Sensitivity adjustable		
08361260049	KORF16-Q31KB-DMU-IR	NPN/PNP	16mm	2m cable PVC 4 x 0,5mm ²	1 / Ab
08361260053	KORF16-Q31KB-DMU-V1-IR	NPN/PNP	16mm	connector M8 4-pole	1 / Bb
08361260054	KORF16-Q31KB-DMU-V2-IR	NPN/PNP	16mm	connector M12 4-pole	1 / Cb
08361260065	KORF43-Q31KB-DMU-IR	NPN/PNP	43mm	2m cable PVC 4 x 0,5mm ²	1 / Ab
08361260069	KORF43-Q31KB-DMU-V1-IR	NPN/PNP	43mm	connector M8 4-pole	1 / Bb
08361260070	KORF43-Q31KB-DMU-V2-IR	NPN/PNP	43mm	connector M12 4-pole	1 / Cb

Continuation on the next page



SQUARE Q31

Selection chart reflex light barriers

Article number	Designation red light 650nm	Output signal	Sensitivity adjustable	Connection	Circuit diagram / Dimensions
08362260001	KORS5000-Q31KB-DMU-RT	NPN/PNP	5m	2m cable PVC 4 x 0,5mm ²	1 / Ab
08362260005	KORS5000-Q31KB-DMU-V1-RT	NPN/PNP	5m	connector M8 4-pole	1 / Bb
08362260006	KORS5000-Q31KB-DMU-V2-RT	NPN/PNP	5m	connector M12 4-pole	1 / Cb
	Designation red light 650nm polarized		Sensitivity adjustable		
08362260017	KORP2000-Q31KB-DMU-RT	NPN/PNP	2m	2m cable PVC 4 x 0,5mm ²	1 / Ab
08362260021	KORP2000-Q31KB-DMU-V1-RT	NPN/PNP	2m	connector M8 4-pole	1 / Bb
08362260022	KORP2000-Q31KB-DMU-V2-RT	NPN/PNP	2m	connector M12 4-pole	1 / Cb

Selection chart one-way light barriers

Article number	Designation infrared 880nm	Output signal	Sensitivity adjustable	Connection	Circuit diagram / Dimensions
08363260001	KOES3000-Q31KB-D-IR	transmitter	3m	2m cable PVC 4 x 0,5mm ²	2 / Ab
08363260002	KOES3000-Q31KB-DMU-IR	NPN/PNP	3m	2m cable PVC 4 x 0,5mm ²	1 / Ab
08363260005	KOES3000-Q31KB-D-V1-IR	transmitter	3m	connector M8 4-pole	2 / Bb
08363260006	KOES3000-Q31KB-DMU-V1-IR	NPN/PNP	3m	connector M8 4-pole	1 / Bb
08363260007	KOES3000-Q31KB-D-V2-IR	transmitter	3m	connector M12 4-pole	2 / Cb
08363260008	KOES3000-Q31KB-DMU-V2-IR	NPN/PNP	3m	connector M12 4-pole	1 / Cb
08363260033	KOES30M-Q31KB-D-IR	transmitter	30m	2m cable PVC 4 x 0,5mm ²	2 / Ab
08363260034	KOES30M-Q31KB-DMU-IR	NPN/PNP	30m	2m cable PVC 4 x 0,5mm ²	1 / Ab
08363260037	KOES30M-Q31KB-D-V1-IR	transmitter	30m	connector M8 4-pole	2 / Bb
08363260038	KOES30M-Q31KB-DMU-V1-IR	NPN/PNP	30m	connector M8 4-pole	1 / Bb
08363260039	KOES30M-Q31KB-D-V2-IR	transmitter	30m	connector M12 4-pole	2 / Cb
08363260040	KOES30M-Q31KB-DMU-V2-IR	NPN/PNP	30m	connector M12 4-pole	1 / Cb

Selection chart fibre optic devices

Article number	Designation red light 650nm plastic one-way light barrier *	Output signal	Connection	Circuit diagrams / Dimensions
08362260517	KOLLEP-Q31KB-DMU-RT	NPN/PNP	2m cable PVC 4 x 0,5mm ²	1 / Ac
08362260521	KOLLEP-Q31KB-DMU-V1-RT	NPN/PNP	connector M8 4-pole	1 / Bc
08362260522	KOLLEP-Q31KB-DMU-V2-RT	NPN/PNP	connector M12 4-pole	1 / Cc
	Designation infrared 880nm fibre optic reflex light barrier *			
08362260501	KOLLRG-Q31KB-DMU-IR	NPN/PNP	2m cable PVC 4 x 0,5mm ²	1 / Aa
08362260505	KOLLRG-Q31KB-DMU-V1-IR	NPN/PNP	connector M8 4-pole	1 / Ba
08362260506	KOLLRG-Q31KB-DMU-V2-IR	NPN/PNP	connector M12 4-pole	1 / Ca
	Designation red light 650nm fibre optic one-way light barrier *			
08363260517	KOLLEG-Q31KB-DMU-RT	NPN/PNP	2m cable PVC 4 x 0,5mm ²	1 / Aa
08363260521	KOLLEG-Q31KB-DMU-V1-RT	NPN/PNP	connector M8 4-pole	1 / Ba
08363260522	KOLLEG-Q31KB-DMU-V2-RT	NPN/PNP	connector M12 4-pole	1 / Ca

* sensibility adjustable

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SQUARE Q31

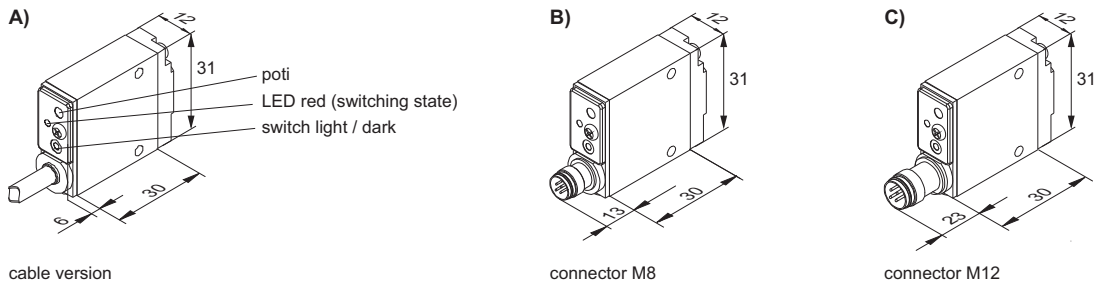
Selection chart fibre optic devices

Article number	Designation infrared 880nm fibre optic one-way light barrier *	Output signal	Connection	Circuit diagram / Dimensions
08363260501	KOLLEG-Q31KB-DMU-IR	NPN/PNP	2m cable PVC 4 x 0,5mm ²	1 / Aa
08363260505	KOLLEG-Q31KB-DMU-V1-IR	NPN/PNP	connector M8 4-pole	1 / Ba
08363260506	KOLLEG-Q31KB-DMU-V2-IR	NPN/PNP	connector M12 4-pole	1 / Ca
	Designation red light 650nm fibre optic light probe*			
08361260517	KOLLTG-Q31KB-DMU-RT	NPN/PNP	2m cable PVC 4 x 0,5mm ²	1 / Aa
08361260521	KOLLTG-Q31KB-DMU-V1-RT	NPN/PNP	connector M8 4-pole	1 / Ba
08361260522	KOLLTG-Q31KB-DMU-V2-RT	NPN/PNP	connector M12 4-pole	1 / Ca
	Designation infrared 880nm fibre optic light probe*			
08361260501	KOLLTG-Q31KB-DMU-IR	NPN/PNP	2m cable PVC 4 x 0,5mm ²	1 / Aa
08361260505	KOLLTG-Q31KB-DMU-V1-IR	NPN/PNP	connector M8 4-pole	1 / Ba
08361260506	KOLLTG-Q31KB-DMU-V2-IR	NPN/PNP	connector M12 4-pole	1 / Ca

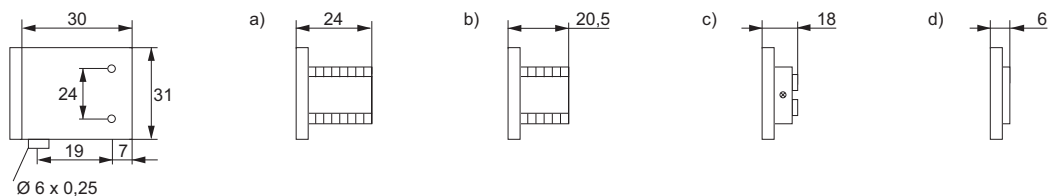
Circuit diagrams



Dimensions



front types



Continuation on the next page



OPTICAL SENSORS SQUARE

SQUARE Q32

General data

Operating voltage	10 ... 30V DC
Max. load current	100mA
Off-state current	< 30mA
Protection functions	short circuit, overload, reverse voltage
Operating temperature	-20°C ... +55°C
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Housing material	plastic / stainless steel
Connection	2m cable PVC 4 x 0,15mm ² (KOE8500... transmitter: 2m cable PVC 3 x 0,15mm ²) connector M8 4-pole



Selection chart reflex light probes

Article number	Designation red light 660nm	Output signal control input wire	Sensitivity adjustable	Max. switching frequency	Connection	Circuit diag. / Dimensions
08361270007	KORT400-Q32KB-DNU-RT	NPN	400mm	700Hz	2m cable	1 / A
08361270008	KORT400-Q32KB-DPU-RT	PNP	400mm	700Hz	2m cable	2 / A
08361270009	KORT400-Q32KB-DNU-V1-RT	NPN	400mm	700Hz	connector M8	1 / B
08361270010	KORT400-Q32KB-DPU-V1-RT	PNP	400mm	700Hz	connector M8	2 / B
	Designation fixed focus 90mm* red light 660nm		Sensitivity fixed			
08361270001	KORF90-Q32KB-DNU-RT	NPN	90mm	700Hz	2m cable	1 / A
08361270002	KORF90-Q32KB-DPU-RT	PNP	90mm	700Hz	2m cable	2 / A
08361270003	KORF90-Q32KB-DNU-V1-RT	NPN	90mm	700Hz	connector M8	1 / B
08361270004	KORF90-Q32KB-DPU-V1-RT	PNP	90mm	700Hz	connector M8	2 / B

* sensibility adjustable

Selection chart reflex light barriers

Article number	Designation red light 660nm polarized	Output signal control input wire	Sensitivity adjustable	Max. switching frequency	Connection	Circuit diag. / Dimensions
08362270001	KORP4000-Q32KB-DNU-RT	NPN	4m	700Hz	2m cable	1 / A
08362270002	KORP4000-Q32KB-DPU-RT	PNP	4m	700Hz	2m cable	2 / A
08362270003	KORP4000-Q32KB-DNU-V1-RT	NPN	4m	700Hz	connector M8	1 / B
08362270004	KORP4000-Q32KB-DPU-V1-RT	PNP	4m	700Hz	connector M8	2 / B
	Designation red light 660nm for transparent objects		Sensitivity adjustable			
08362270007	KORG500-Q32KB-DNU-RT	NPN	500mm	700Hz	2m cable	1 / A
08362270008	KORG500-Q32KB-DPU-RT	PNP	500mm	700Hz	2m cable	2 / A
08362270009	KORG500-Q32KB-DNU-V1-RT	NPN	500mm	700Hz	connector M8	1 / B
08362270010	KORG500-Q32KB-DPU-V1-RT	PNP	500mm	700Hz	connector M8	2 / B

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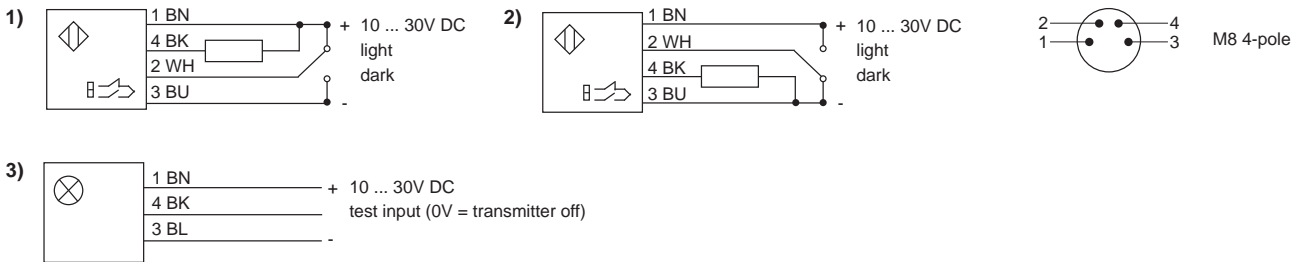


SQUARE Q32

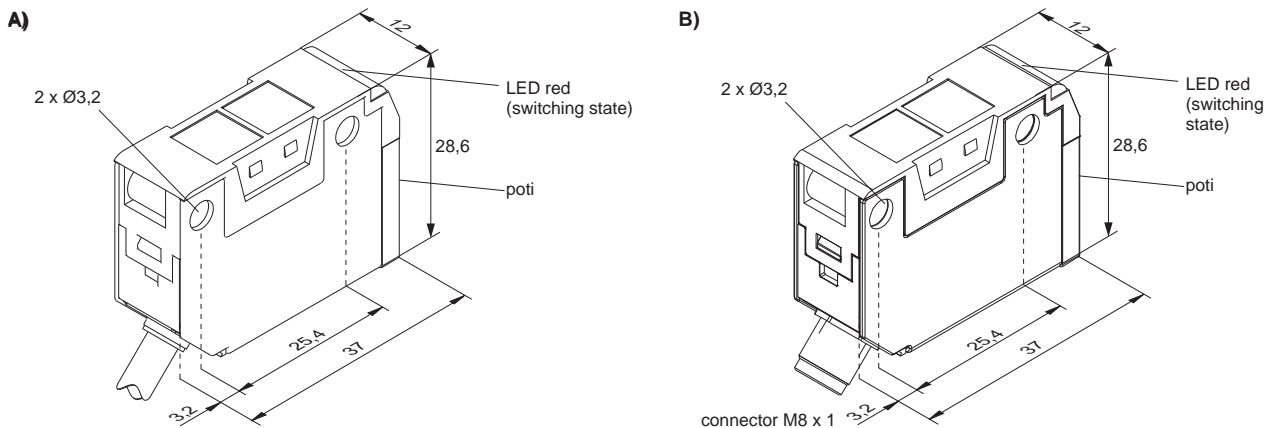
Selection chart one-way light barriers

Article number	Designation red light 660nm polarized	Output signal * with test input ** control input wire	Sensitivity adjustable	Max. switching frequency	Connection	Circuit diagram / Dimensions
08363270001	KOES8500-Q32KB-D-RT	transmitter*	8,5m	-	2m cable	3 / A
08363270002	KOES8500-Q32KB-DNU-RT	NPN **	8,5m	500Hz	2m cable	1 / A
08363270003	KOES8500-Q32KB-DPU-RT	PNP **	8,5m	500Hz	2m cable	2 / A
08363270004	KOES8500-Q32KB-D-V1-RT	transmitter*	8,5m	-	connector M8	3 / B
08363270005	KOES8500-Q32KB-DNU-V1-RT	NPN **	8,5m	500Hz	connector M8	1 / B
08363270006	KOES8500-Q32KB-DPU-V1-RT	PNP **	8,5m	500Hz	connector M8	2 / B

Circuit diagrams



Dimensions



all data in mm



SQUARE Q36

General Data

Operating voltage	10 ... 30V DC
Max. load current	100mA
Off-state current	< 40mA
Switching frequency	max. 500 Hz
Protection functions	Short circuit, polarity
Temperature range	-25°C ... +55°C
Protection class	IP67 (version with Poti IP66)
EMV-standard	according to EN 60947-5-2
Housing material	ABS plastic



Selection chart Reflexbutton

Article-number	Designation Infrared 880nm (KORT350) Red 660nm (KORT110)	Output function	Scan range Adjustable/Poti	Connection	Circuit diagram/ Dimension
08361011160	KORT350-Q36KB-DNA-IR*	NPN antivalent	20 ... 350mm	2m cable	1 / A
08361011010	KORT350-Q36KB-DPA-IR*	PNP antivalent	20 ... 350mm	2m cable	1 / A
08361011170	KORT110-Q36KB-DNA-RT	NPN antivalent	110mm +/- 10%	2m cable	1 / A
08361011020	KORT110-Q36KB-DPA-RT	PNP antivalent	110mm +/- 10%	2m cable	1 / A
08361011120	KORT350-Q36KB-DNA-V1-IR*	NPN antivalent	20 ... 350mm	M8 connector	1 / B
08361011060	KORT350-Q36KB-DPA-V1-IR*	PNP antivalent	20 ... 350mm	M8 connector	1 / B
08361011230	KORT110-Q36KB-DNA-V1-RT	NPN antivalent	110mm +/- 10%	M8 connector	1 / B
08361011070	KORT110-Q36KB-DPA-V1-RT	PNP antivalent	110mm +/- 10%	M8 connector	1 / B

* with Poti

Selection chart Reflexlightbarrier

Article-number	Designation polarized Red light 660nm	Output function	Range Adjustable/Poti	Connection	Circuit diagram/ Dimension
08362011150	KORP2500-Q36KB-DNA-RT*	NPN antivalent	10 ... 2500mm	2m cable	1 / A
08362011000	KORP2500-Q36KB-DPA-RT*	PNP antivalent	10 ... 2500mm	2m cable	1 / A
08362011190	KORP2500-Q36KB-DNA-RT-FIX	NPN antivalent	10 ... 2500mm	2m cable	1 / A
08362011100	KORP2500-Q36KB-DPA-RT-FIX	PNP antivalent	10 ... 2500mm	2m cable	1 / A
08362011200	KORG700-Q36KB-DNA-RT*	NPN antivalent	100 ... 700mm	2m cable	1 / A
08362011130	KORG700-Q36KB-DPA-RT*	PNP antivalent	100 ... 700mm	2m cable	1 / A
08362011210	KORP2500-Q36KB-DNA-V1-RT*	NPN antivalent	10 ... 2500mm	M8 connector	1 / B
08362011050	KORP2500-Q36KB-DPA-V1-RT*	PNP antivalent	10 ... 2500mm	M8 connector	1 / B
08362011250	KORP2500-Q36KB-DNA-V1-RT-FIX	NPN antivalent	10 ... 2500mm	M8 connector	1 / B
08362011110	KORP2500-Q36KB-DPA-V1-RT-FIX	PNP antivalent	10 ... 2500mm	M8 connector	1 / B
08362011260	KORG700-Q36KB-DNA-V1-RT*	NPN antivalent	100 ... 700mm	M8 connector	1 / B
08362011140	KORG700-Q36KB-DPA-V1-RT*	PNP antivalent	100 ... 700mm	M8 connector	1 / B

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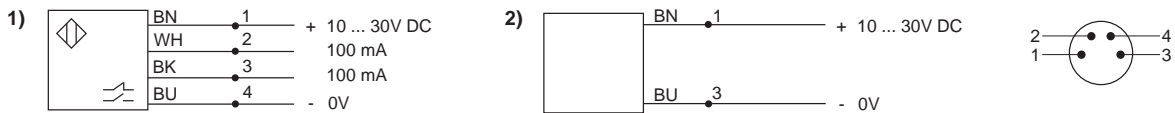


Square Q36

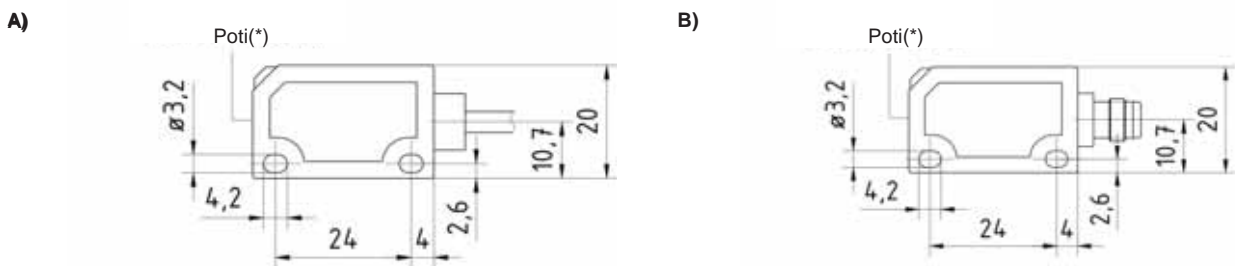
Selection chart one-way light barriers

Article-number	Designation Infrared 880nm (KORT350)	Output signal	Range adjustable	Connection	Circuit diagram/ Dimension
08363011180	KOES6000-Q36KB-DNA-IR	NPN antivalent	100 ... 6000mm	2m cable	1 / A
08363011130	KOES6000-Q36KB-DPA-IR	PNP antivalent	100 ... 6000mm	2m cable	1 / A
08363011040	KOES6000-Q36KB-D-IR	Transmitter	100 ... 6000mm	2m cable	2 / A
08363011045	KOES1500-Q36KB-D-IR	Transmitter	100 ... 1500mm	2m cable	2 / A
08363011240	KOES6000-Q36KB-DNA-V1-IR	NPN antivalent	100 ... 6000mm	M8 connector	1 / B
08363011080	KOES6000-Q36KB-DPA-V1-IR	PNP antivalent	100 ... 6000mm	M8 connector	1 / B
08363011090	KOES6000-Q36KB-D-V1-IR	Transmitter	100 ... 6000mm	M8 connector	2 / B
08363011095	KOES1500-Q36KB-D-V1-IR	Transmitter	100 ... 1500mm	M8 connector	2 / B

Circuit diagram



Dimension



all datas in mm



SQUARE Q43

General data

Operating voltage	10 ... 30V DC
Max. load current	100mA
Off-state current	< 35mA
Protection functions	short circuit, overload, reverse voltage
Operating temperature	-25°C ... +55°C
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Housing material	plastic
Connection	2m cable PVC 4 x 0,5mm ² (KOE22M ... transmitter: 2m cable PVC 3 x 0,5mm ²) connector M8 4-pole



Selection chart reflex light probes

Article number	Designation red light 650nm with background suppression	Output signal selectable by control input wire	Range adjustable	Max. switching frequency	Connection	Circuit diagram / Dimensions
08361275000	KORH100-Q43KB-DNU-RT	NPN	40 ... 100mm	250Hz	2m cable	1 / A
08361275001	KORH100-Q43KB-DPU-RT	PNP	40 ... 100mm	250Hz	2m cable	2 / A
08361275002	KORH100-Q43KB-DNU-V1-RT	NPN	40 ... 100mm	250Hz	connector M8	1 / B
08361275003	KORH100-Q43KB-DPU-V1-RT	PNP	40 ... 100mm	250Hz	connector M8	2 / B
08361275006	KORH300-Q43KB-DNU-RT	NPN	100 ... 300mm	250Hz	2m cable	1 / A
08361275007	KORH300-Q43KB-DPU-RT	PNP	100 ... 300mm	250Hz	2m cable	2 / A
08361275008	KORH300-Q43KB-DNU-V1-RT	NPN	100 ... 300mm	250Hz	connector M8	1 / B
08361275009	KORH300-Q43KB-DPU-V1-RT	PNP	100 ... 300mm	250Hz	connector M8	2 / B

Selection chart reflex light barriers

Article number	Designation red light 650nm polarized	Output signal control input wire	Sensitivity adjustable	Max. switching frequency	Connection	Circuit diag. / Dimensions
08362275007	KORP9000-Q43KB-DNU-RT	NPN	9m	700Hz	2m cable	1 / A
08362275008	KORP9000-Q43KB-DPU-RT	PNP	9m	700Hz	2m cable	2 / A
08362275009	KORP9000-Q43KB-DNU-V1-RT	NPN	9m	700Hz	connector M8	1 / B
08362275010	KORP9000-Q43KB-DPU-V1-RT	PNP	9m	700Hz	connector M8	2 / B

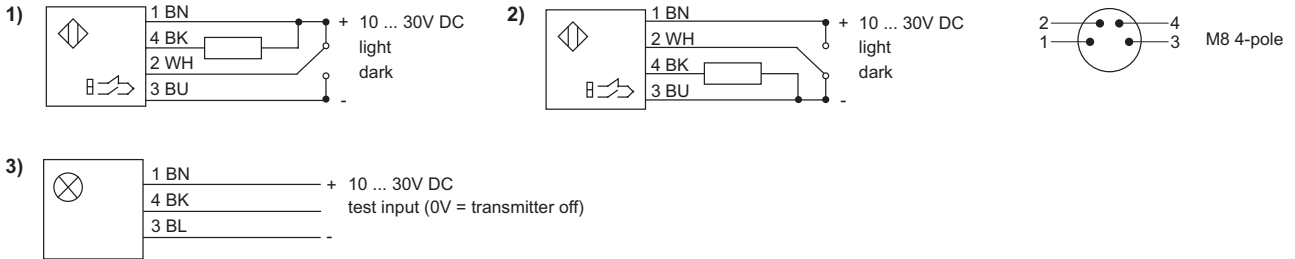
Selection chart one-way light barriers

Article number	Designation infrared 880nm	Output signal *with test input **control input wire	Sensitivity adjustable	Max. switching frequency	Connection	Circuit diag. / Dimensions
08363275000	KOES22M-Q43KB-D-RT	transmitter*	22m	-	2m cable	3 / A
08363275001	KOES22M-Q43KB-DNU-RT	NPN **	22m	33Hz	2m cable	1 / A
08363275002	KOES22M-Q43KB-DPU-RT	PNP **	22m	33Hz	2m cable	2 / A
08363275003	KOES22M-Q43KB-D-V1-RT	transmitter*	22m	-	connector M8	3 / B
08363275004	KOES22M-Q43KB-DNU-V1-RT	NPN **	22m	33Hz	connector M8	1 / B
08363275005	KOES22M-Q43KB-DPU-V1-RT	PNP **	22m	33Hz	connector M8	2 / B

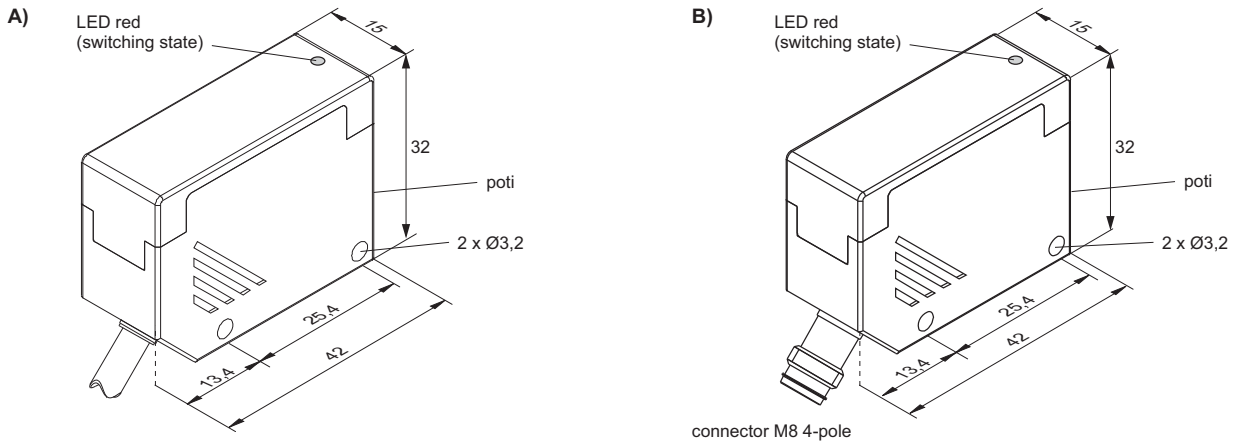


SQUARE Q43

Circuit diagrams



Dimensions



all data in mm



SQUARE Q62

General data

Operating voltage	12 ... 240V DC oder 24 ... 240V AC
Max. load current	2A (30V DC), 1A (250V AC)
Max. switching frequency	50Hz
Power input	<2 VA
Operating temperature	-20°C ... +55°C
Protection class	IP66
EMV-standard	according to EN 60947-5-2
Housing material	plastic



Selection chart reflex light probes

Article number	Designation infrared 880nm	Output signal	Sensitivity adjustable	Connection	Circuit diagram / Dimensions
08361220001	KORT700-Q62KB-VRA-IR	relay	700mm	2m cable PVC 5 x 0,3mm ²	1 / A

Selection chart reflex light barrier

Article number	Designation infrared 880nm	Output signal	Sensitivity adjustable	Connection	Circuit diagram / Dimensions
08362220001	KORS7000-Q62KB-VRA-IR	relay	7m	2m cable PVC 5 x 0,3mm ²	1 / A
	Designation red light 650nm polarized		Sensitivity adjustable		
08362220005	KORP5000-Q62KB-VRA-RT	relay	5m	2m cable PVC 5 x 0,3mm ²	1 / A

Selection chart one-way light barriers

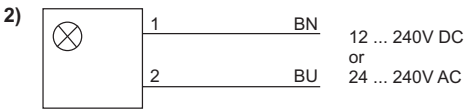
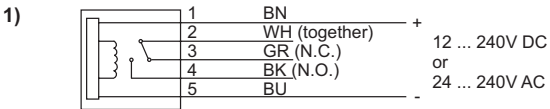
Article number	Designation red light 650nm	Output signal	Sensitivity adjustable	Connection	Circuit diagram / Dimensions
08363220001	KOES10M-Q62KB-V-RT	transmitter	10m	2m cable PVC 2 x 0,3mm ²	2 / A
08363220002	KOES10M-Q62KB-VRA-RT	relay	10m	2m cable PVC 5 x 0,3mm ²	1 / A
	Designation red light 650nm polarized		Sensitivity fixed		
08363220007	KOES30M-Q62KB-V-IR	transmitter	30m	2m cable PVC 2 x 0,3mm ²	2 / A
08363220008	KOES30M-Q62KB-VRA-IR	relay	30m	2m cable PVC 5 x 0,3mm ²	1 / A



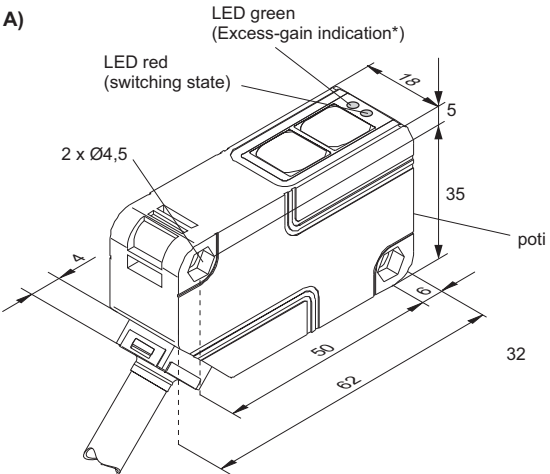
OPTICAL SENSORS SQUARE

SQUARE Q62

Circuit diagrams



Dimensions



* Excess-gain indication: 20% reserve on switching distance
easy arrangement and adjustment
easier detection of pollution

all data in mm



OPTICAL SENSORS SQUARE

SQUARE Q64

General data

Operating voltage	10 ... 30V DC
Max. load current	100mA
Off-state current	< 35mA
Max. Switching frequency	33Hz (reflex light probe, one-way light barrier) 700Hz (reflex light barrier)
Protection functions	short circuit, overload, reverse voltage
Operating temperature	-25°C ... +55°C
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Housing material	plastic



Selection chart reflex light probe

Article number	Designation red light 650nm with background suppression	Output signal selectable by control input wire	Range adjustable	Connection	Circuit diagram / Dimensions
08361215000	KORH300-Q64KB-DNU-RT	NPN	100...300mm	2m cable PVC 4 x 0,5mm ²	1 / A
08361215001	KORH300-Q64KB-DPU-RT	PNP	100...300mm	2m cable PVC 4 x 0,5mm ²	2 / A
08361215002	KORH300-Q64KB-DMU-RT	NPN/PNP	100...300mm	2m cable PVC 5 x 0,5mm ²	3 / A
08361215004	KORH300-Q64KB-DNU-V1-RT	NPN	100...300mm	connector M8 4-pole	1 / B
08361215005	KORH300-Q64KB-DPU-V1-RT	PNP	100...300mm	connector M8 4-pole	2 / B
08361215007	KORH300-Q64KB-DNU-V2-RT	NPN	100...300mm	connector M12 4-pole	1 / C
08361215008	KORH300-Q64KB-DPU-V2-RT	PNP	100...300mm	connector M12 4-pole	2 / C
08361215009	KORH300-Q64KB-DMU-V2-RT	NPN/PNP	100...300mm	connector M12 5-pole	3 / C
08361215015	KORH500-Q64KB-DNU-RT	NPN	150...500mm	2m cable PVC 4 x 0,5mm ²	1 / A
08361215016	KORH500-Q64KB-DPU-RT	PNP	150...500mm	2m cable PVC 4 x 0,5mm ²	2 / A
08361215017	KORH500-Q64KB-DMU-RT	NPN/PNP	150...500mm	2m cable PVC 5 x 0,5mm ²	3 / A
08361215019	KORH500-Q64KB-DNU-V1-RT	NPN	150...500mm	connector M8 4-pole	1 / B
08361215020	KORH500-Q64KB-DPU-V1-RT	PNP	150...500mm	connector M8 4-pole	2 / B
08361215022	KORH500-Q64KB-DNU-V2-RT	NPN	150...500mm	connector M12 4-pole	1 / C
08361215023	KORH500-Q64KB-DPU-V2-RT	PNP	150...500mm	connector M12 4-pole	2 / C
08361215024	KORH500-Q64KB-DMU-V2-RT	NPN/PNP	150...500mm	connector M12 5-pole	3 / C

Selection chart reflex light barriers

Article number	Designation red light 660nm polarized	Output signal control input wire	Sensitivity adjustable	Connection	Circuit diag. / Dimensions
08362215000	KORP13M-Q64KB-DNU-RT	NPN	13m	2m cable PVC 4 x 0,5mm ²	1 / A
08362215001	KORP13M-Q64KB-DPU-RT	PNP	13m	2m cable PVC 4 x 0,5mm ²	1 / A
08362215002	KORP13M-Q64KB-DMU-RT	NPN/PNP	13m	2m cable PVC 5 x 0,5mm ²	2 / A
08362215004	KORP13M-Q64KB-DNU-V1-RT	NPN	13m	connector M8 4-pole	1 / B
08362215005	KORP13M-Q64KB-DPU-V1-RT	PNP	13m	connector M8 4-pole	1 / B
08362215007	KORP13M-Q64KB-DNU-V2-RT	NPN	13m	connector M12 4-pole	1 / C
08362215008	KORP13M-Q64KB-DPU-V2-RT	PNP	13m	connector M12 4-pole	1 / C
08362215009	KORP13M-Q64KB-DMU-V2-RT	NPN/PNP	13m	connector M12 5-pole	2 / C



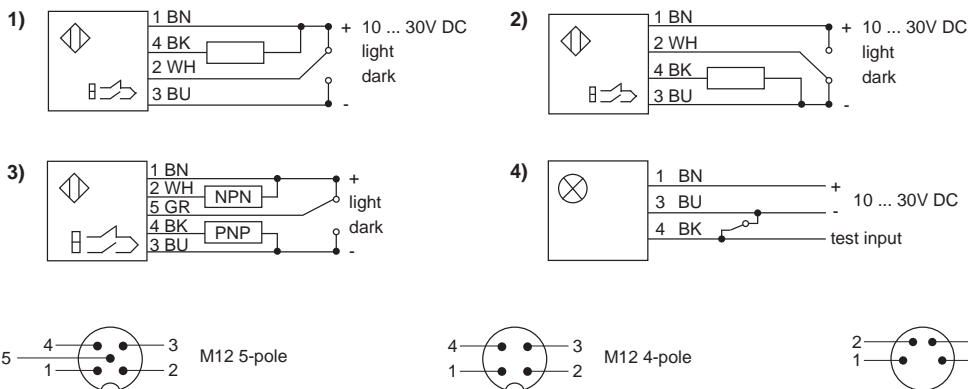
OPTICAL SENSORS SQUARE

SQUARE Q64

Selection chart one-way light barrier

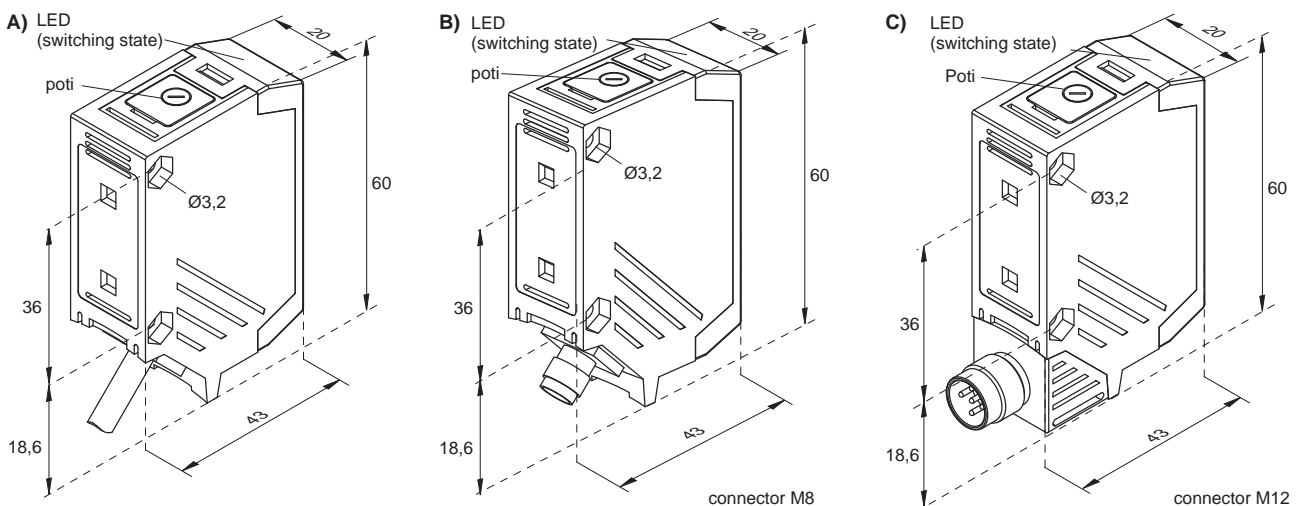
Article number	Designation red light 650nm, polarized	Output signal * with test input ** control input wire	Sensibility adjustable	Connection	Circuit diagr. / Dimensions
08363215000	KOES22M-Q64KB-D-RT	transmitter*	22m	2m cable PVC 3 x 0,5mm ²	4 / A
08363215001	KOES22M-Q64KB-DNU-RT	NPN	22m	2m cable PVC 4 x 0,5mm ²	1 / A
08363215002	KOES22M-Q64KB-DPU-RT	PNP	22m	2m cable PVC 4 x 0,5mm ²	2 / A
08363215003	KOES22M-Q64KB-DMU-RT	NPN/PNP	22m	2m cable PVC 5 x 0,5mm ²	3 / A
08363215006	KOES22M-Q64KB-D-V1-RT	transmitter*	22m	connector M8 4-pole	4 / B
08363215007	KOES22M-Q64KB-DNU-V1-RT	NPN	22m	connector M8 4-pole	1 / B
08363215008	KOES22M-Q64KB-DPU-V1-RT	PNP	22m	connector M8 4-pole	2 / B
08363215009	KOES22M-Q64KB-D-V2-RT	transmitter*	22m	connector M12 4-pole	4 / C
08363215010	KOES22M-Q64KB-DNU-V2-RT	NPN	22m	connector M12 4-pole	1 / C
08363215011	KOES22M-Q64KB-DPU-V2-RT	PNP	22m	connector M12 4-pole	2 / C
08363215012	KOES22M-Q64KB-DMU-V2-RT	NPN/PNP	22m	connector M12 5-pole	3 / C

Circuit diagrams



Dimensions

all data in mm





OPTICAL SENSORS SQUARE

SQUARE Q76

General data

Operating voltage	10 ... 30V DC (* 12 ... 240V DC oder 24 ... 240V AC)
Max. load current	100mA (* 3A)
Off-state current	< 35mA (* <30mA)
Protection functions	short circuit, overload, reverse voltage (* reverse voltage)
Operating temperature	-25°C ... +55°C
Protection class	IP67 (* IP65)
EMV-standard	according to EN 60947-5-2
Housing material	plastic
Connection	clamps connector M12 4-pole (pivotable: 0° or 90°)

* versions with relay output



Selection chart reflex light probe

Article number	Designation infrared 880nm	Output signal	Sensitivity adjustable	Max. switching frequency	Connection	Circuit diagram / Dimensions
08361280001	KORT800-Q76KB-DNU-NPT-IR	NPN	800mm	250Hz	clamps	1 / A
08361280002	KORT800-Q76KB-DPU-NPT-IR	PNP	800mm	250Hz	clamps	2 / A
08361280003	KORT800-Q76KB-DMU-NPT-IR	NPN/PNP	800mm	250Hz	clamps	3 / A
08361280007	KORT800-Q76KB-VRU-NPT-IR	Relais	800mm	25Hz	clamps	4 / A
08361280025	KORT800-Q76KB-DNU-V2-IR	NPN	800mm	250Hz	connector M12	1 / B
08361280026	KORT800-Q76KB-DPU-V2-IR	PNP	800mm	250Hz	connector M12	2 / B
08361280027	KORT800-Q76KB-DMU-V2-IR	NPN/PNP	800mm	250Hz	connector M12	3 / B

	Designation infrared 880nm with background suppression		Range adjustable			
08361280051	KORH300-Q76KB-DNU-NPT-IR	NPN	300mm	250Hz	clamps	1 / A
08361280052	KORH300-Q76KB-DPU-NPT-IR	PNP	300mm	250Hz	clamps	2 / A
08361280053	KORH300-Q76KB-DMU-NPT-IR	NPN/PNP	300mm	250Hz	clamps	3 / A
08361280057	KORH300-Q76KB-VRU-NPT-IR	relay	300mm	25Hz	clamps	4 / A
08361280077	KORH300-Q76KB-DNU-V2-IR	NPN	300mm	250Hz	connector M12	1 / B
08361280078	KORH300-Q76KB-DPU-V2-IR	PNP	300mm	250Hz	connector M12	2 / B
08361280079	KORH300-Q76KB-DMU-V2-IR	NPN/PNP	300mm	250Hz	connector M12	3 / B

Continuation on next page



SQUARE Q76

Selection chart reflex light barriers

Article number	Designation red light 660nm polarized	Output signal	Sensitivity adjustable	Max. switching frequency	Connection	Circuit diag. / Dimensions
08362280001	KORP10M-Q76KB-DNU-NPT-RT	NPN	10m	500Hz	clamps	1 / A
08362280002	KORP10M-Q76KB-DPU-NPT-RT	PNP	10m	500Hz	clamps	2 / A
08362280003	KORP10M-Q76KB-DMU-NPT-RT	NPN/PNP	10m	500Hz	clamps	3 / A
08362280007	KORP10M-Q76KB-VRU-NPT-RT	relay	10m	25Hz	clamps	4 / A
08362280025	KORP10M-Q76KB-DNU-V2-RT	NPN	10m	500Hz	connector M12	1 / B
08362280026	KORP10M-Q76KB-DPU-V2-RT	PNP	10m	500Hz	connector M12	2 / B
08362280027	KORP10M-Q76KB-DMU-V2-RT	NPN/PNP	10m	500Hz	connector M12	3 / B

Selection chart one-way light barriers

Article number	Designation infrared 880nm	Output signal * with test input	Sensitivity adjustable	Max. switching frequency	Connection	Circuit diag. / Dimensions
08363280001	KOES28M-Q76KB-D-NPT-IR	Sender*	28m	-	clamps	5 / A
08363280002	KOES28M-Q76KB-DNU-NPT-IR	NPN	28m	500Hz	clamps	1 / A
08363280003	KOES28M-Q76KB-DPU-NPT-IR	PNP	28m	500Hz	clamps	2 / A
08363280004	KOES28M-Q76KB-DMU-NPT-IR	NPN/PNP	28m	500Hz	clamps	3 / A
08363280008	KOES28M-Q76KB-A-NPT-IR	Sender	28m	-	clamps	6 / A
08363280009	KOES28M-Q76KB-VRU-NPT-IR	Relais	28m	25Hz	clamps	4 / A
08363280034	KOES28M-Q76KB-D-V2-IR	Sender*	28m	-	connector M12	5 / B
08363280035	KOES28M-Q76KB-DNU-V2-IR	NPN	28m	500Hz	connector M12	1 / B
08363280036	KOES28M-Q76KB-DPU-V2-IR	PNP	28m	500Hz	connector M12	2 / B
08363280037	KOES28M-Q76KB-DMU-V2-IR	NPN/PNP	28m	500Hz	connector M12	3 / B

Selection chart fibre optic devices

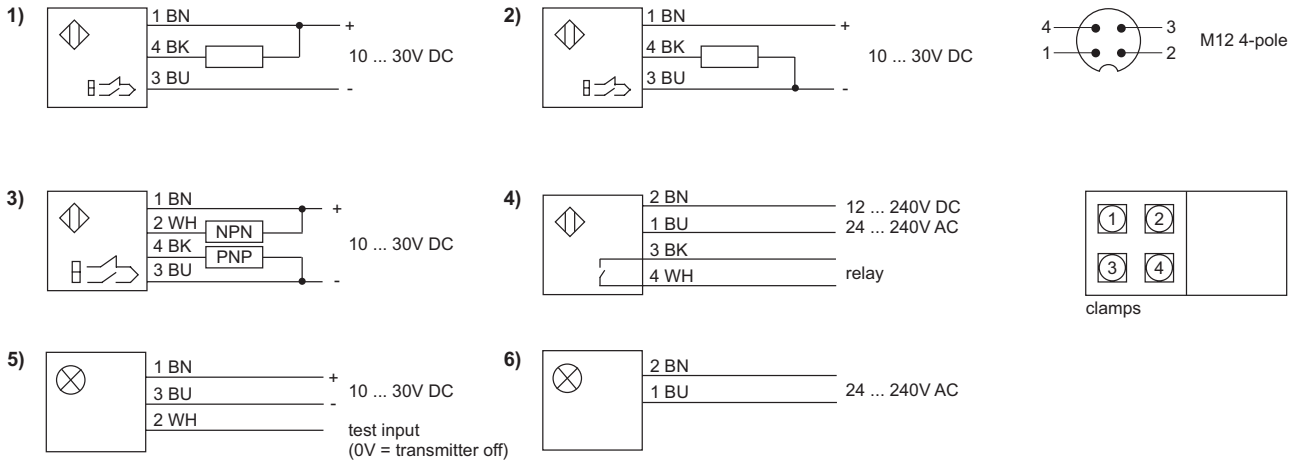
Article number	Designation red light 660nm sensibility adjustable	Output signal	Max. switching frequency	Connection	Circuit diag. / Dimensions
08365280001	KOLL-Q76KB-DNU-NPT-RT	NPN	500Hz	clamps	1 / A
08365280002	KOLL-Q76KB-DPU-NPT-RT	PNP	500Hz	clamps	2 / A
08365280003	KOLL-Q76KB-DMU-NPT-RT	NPN/PNP	500Hz	clamps	3 / A
08365280007	KOLL-Q76KB-VRU-NPT-RT	relay	25Hz	clamps	4 / A
08365280025	KOLL-Q76KB-DNU-V2-RT	NPN	500Hz	connector M12	1 / B
08365280026	KOLL-Q76KB-DPU-V2-RT	PNP	500Hz	connector M12	2 / B
08365280027	KOLL-Q76KB-DMU-V2-RT	NPN/PNP	500Hz	connector M12	3 / B

Functioning and range depend on light conductor.

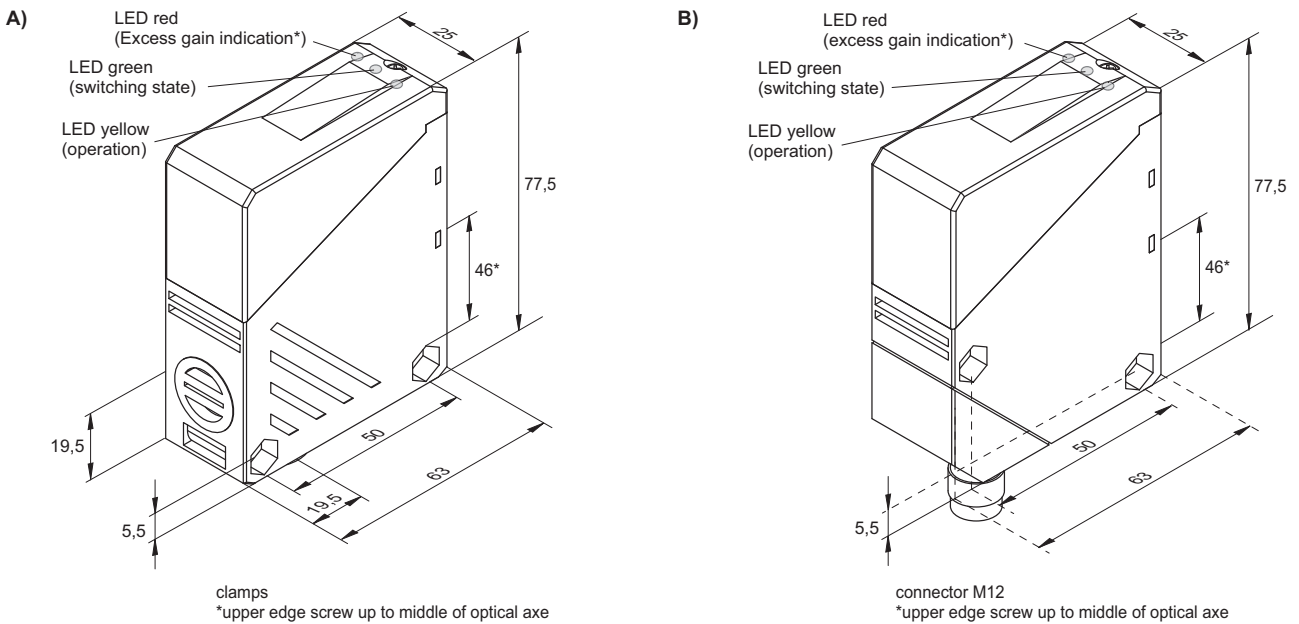


SQUARE Q76

Circuit diagrams



Dimensions



* Excess-gain indication: 20% reserve on switching distance
 easy arrangement and adjustment
 easier detection of pollution

all data in mm



PRODUCT OVERVIEW

Reflex light probes

Product group	Designation	Article number	Matchcode	Page
Opto Cylinder, Square	KORF10-Q20KB-DPA-RT	08361205014	UP-C0010P-CX6C4U2	17
Opto Cylinder, Square	KORF10-Q20KB-DNA-RT	08361205013	UP-C0010N-CX6C4U2	17
Opto Cylinder, Square	KORF16-Q31KB-DMU-GN	08361260081	MP-C0016D-CX5C4U2	22
Opto Cylinder, Square	KORF16-Q31KB-DMU-IR	08361260049	MP-C0016D-CX9C4U2	22
Opto Cylinder, Square	KORF16-Q31KB-DMU-RT	08361260097	MP-C0016D-CX6C4U2	22
Opto Cylinder, Square	KORF16-Q31KB-DMU-V1-GN	08361260085	MP-C0016D-CX5Q4UP	22
Opto Cylinder, Square	KORF16-Q31KB-DMU-V1-IR	08361260053	MP-C0016D-CX9Q4UP	22
Opto Cylinder, Square	KORF16-Q31KB-DMU-V1-RT	08361260101	MP-C0016D-CX6Q4UP	22
Opto Cylinder, Square	KORF16-Q31KB-DMU-V2-GN	08361260086	MP-C0016D-CX5Q4UE	22
Opto Cylinder, Square	KORF16-Q31KB-DMU-V2-IR	08361260054	MP-C0016D-CX9Q4UE	22
Opto Cylinder, Square	KORF16-Q31KB-DMU-V2-RT	08361260102	MP-C0016D-CX6Q4UE	22
Opto Cylinder, Square	KORF20-Q20KB-DPA-RT	08361205018	UP-C0020P-CX6C4U2	17
Opto Cylinder, Square	KORF20-Q20KB-DNA-RT	08361205017	UP-C0020N-CX6C4U2	17
Opto Cylinder, Square	KORF43-Q31KB-DMU-IR	08361260065	MP-C0043D-CX9C4U2	22
Opto Cylinder, Square	KORF43-Q31KB-DMU-RT	08361260113		22
Opto Cylinder, Square	KORF43-Q31KB-DMU-V1-IR	08361260069	MP-C0043D-CX9Q4UP	22
Opto Cylinder, Square	KORF43-Q31KB-DMU-V1-RT	08361260117		22
Opto Cylinder, Square	KORF43-Q31KB-DMU-V2-IR	08361260070	MP-C0043D-CX9Q4UE	22
Opto Cylinder, Square	KORF43-Q31KB-DMU-V2-RT	08361260118		22
Opto Cylinder, Square	KORT50-M5MB35-DPS-IR	08361800100	9980-0100	7
Opto Cylinder, Square	KORT50-M5MB35-DNS-IR	08361800200	9980-0200	7
Opto Cylinder, Square	KORT50-M5MB45-DPS-V1-IR	08361800164	9980-0164	7
Opto Cylinder, Square	KORT50-M5MB45-DNS-V1-IR	08361800264	9980-0264	7
Opto Cylinder, Square	KORT50-Q20KB25-DPA-RT	08361205010	UP-D0050P-CX6C4U2-W	17
Opto Cylinder, Square	KORT50-Q20KB25-DNA-RT	08361205009	UP-D0050N-CX6C4U2-W	17
Opto Cylinder, Square	KORT80-M8MB48-DPS-IR	08361817500	9981-7500	8
Opto Cylinder, Square	KORT80-M8MB57-DPS-V1-IR	08361817564	9981-7564	8
Opto Cylinder, Square	KORF90-Q32KB-DPU-RT	08361270002		25
Opto Cylinder, Square	KORF90-Q32KB-DNU-RT	08361270001		25
Opto Cylinder, Square	KORF90-Q32KB-DPU-V1-RT	08361270004		25
Opto Cylinder, Square	KORF90-Q32KB-DNU-V1-RT	08361270003		25
Opto Cylinder, Square	KORH100-Q43KB-DPU-RT	08361275001		29
Opto Cylinder, Square	KORH100-Q43KB-DNU-RT	08361275000		29
Opto Cylinder, Square	KORH100-Q43KB-DPU-V1-RT	08361275003	RP43-D0100P-CY6Q4UP-BS	29
Opto Cylinder, Square	KORH100-Q43KB-DNU-V1-RT	08361275002		29
Opto Cylinder, Square	KORT110-Q36KB-DNA-RT	08361011170		36
Opto Cylinder, Square	KORT110-Q36KB-DPA-RT	08361011020		36
Opto Cylinder, Square	KORT110-Q36KB-DNA-V1-RT	08361011230		36
Opto Cylinder, Square	KORT110-Q36KB-DPA-V1-RT	08361011070		36
Opto Cylinder, Square	KORH120-M18MB50-DPS-RT	08361841100	9984-1100	12
Opto Cylinder, Square	KORH120-M18MB63-DPS-V2-RT	08361841150	9984-1150	12
Opto Cylinder, Square	KORT130-Q31KB-DMU-IR	08361260017	MP-D0130D-CX9C4U2	22
Opto Cylinder, Square	KORT130-Q31KB-DMU-V1-IR	08361260021	MP-D0130D-CX9Q4UP	22
Opto Cylinder, Square	KORT130-Q31KB-DMU-V2-IR	08361260022	MP-D0130D-CX9Q4UE	22
Opto Cylinder, Square	KORT150-M18MB71-DPU-IR	08361250255	M18B-D0150P-CX9C4U2	12
Opto Cylinder, Square	KORT150W-M18MB75-DPU-IR	08361250261	M18B-D0150P-CZ9C4U2	12
Opto Cylinder, Square	KORT150-M18MB71-DNU-IR	08361250254	M18B-D0150N-CX9C4U2	12
Opto Cylinder, Square	KORT150W-M18MB75-DNU-IR	08361250260	M18B-D0150N-CZ9C4U2	12
Opto Cylinder, Square	KORT150-M18MB85-DPU-V2-IR	08361250257	M18B-D0150P-CX9Q4UE	12
Opto Cylinder, Square	KORT150W-M18MB86-DPU-V2-IR	08361250263	M18B-D0150P-CZ9Q4UE	12
Opto Cylinder, Square	KORT150-M18MB85-DNU-V2-IR	08361250256	M18B-D0150N-CX9Q4UE	12
Opto Cylinder, Square	KORT150W-M18MB86-DNU-V2-IR	08361250262	M18B-D0150N-CZ9Q4UE	12



PRODUCT OVERVIEW

Reflex light probes

Product group	Designation	Article number	Matchcode	Page
Opto Cylinder, Square	KORH150-Q30KB-DPS-RT	08361822100	9882-2100	19
Opto Cylinder, Square	KORH150-Q30KB-DPS-V1-RT	08361822164	9882-2164	19
Opto Cylinder, Square	KORH150-Q30KB-DPA-RT	08361820200	9882-0200	19
Opto Cylinder, Square	KORH150-Q30KB-DPA-V1-RT	08361820264	9882-0264	19
Opto Cylinder, Square	KORT200-M12MB64-DPA-IR	08361245123	M12B-D0200P-CX9C4U2	9
Opto Cylinder, Square	KORT200-M12MB64-DNA-IR	08361245122	M12B-D0200N-CX9C4U2	9
Opto Cylinder, Square	KORT200-M12MB73-DPA-V1-IR	08361245125	M12B-D0200P-CX9Q4UP	9
Opto Cylinder, Square	KORT200-M12MB73-DNA-V1-IR	08361245124	M12B-D0200N-CX9Q4UP	9
Opto Cylinder, Square	KORT200-M12MB75-DPA-V2-IR	08361245127	M12B-D0200P-CX9Q4UE	9
Opto Cylinder, Square	KORT200-M12MB75-DNA-V2-IR	08361245126	M12B-D0200N-CX9Q4UE	9
Opto Cylinder, Square	KORT200-Q20KB25-DPA-RT	08361205006	UP-D0200P-CX6C4U2-F	17
Opto Cylinder, Square	KORT200-Q20KB-DPA-RT	08361205002	UP-D0200P-CX6C4U2	17
Opto Cylinder, Square	KORT200-Q20KB25-DNA-RT	08361205005	UP-D0200N-CX6C4U2-F	17
Opto Cylinder, Square	KORT200-Q20KB-DNA-RT	08361205001	UP-D0200N-CX6C4U2	17
Opto Cylinder, Square	KORH200-M30MB78-DPA-IR	08361255017	M30B-D0200P-CX9C4U2-BS	15
Opto Cylinder, Square	KORH200-M30MB78-DNA-IR	08361255016	M30B-D0200N-CX9C4U2-BS	15
Opto Cylinder, Square	KORH200-M30MB96-DPA-V2-IR	08361255025	M30B-D0200P-CX9Q4UE-BS	15
Opto Cylinder, Square	KORH200-M30MB96-DNA-V2-IR	08361255024	M30B-D0200N-CX9Q4UE-BS	15
Opto Cylinder, Square	KORT300-M12MB50-DPS-RT	08369671100	9982-0000	9
Opto Cylinder, Square	KORT300-M12MB60-DPS-V2-RT	08361820050	9982-0050	9
Opto Cylinder, Square	KORT300-Q31KB-DMU-IR	08361260001	MP-D0300D-CX9C4U2	22
Opto Cylinder, Square	KORT300-Q31KB-DMU-V1-IR	08361260005	MP-D0300D-CX9Q4UP	22
Opto Cylinder, Square	KORT300-Q31KB-DMU-V2-IR	08361260006	MP-D0300D-CX9Q4UE	22
Opto Cylinder, Square	KORH300-Q43KB-DPU-RT	08361275007		29
Opto Cylinder, Square	KORH300-Q43KB-DNU-RT	08361275006		29
Opto Cylinder, Square	KORH300-Q43KB-DPU-V1-RT	08361275009	RP43-D0300P-CY6Q4UP-BS	29
Opto Cylinder, Square	KORH300-Q43KB-DNU-V1-RT	08361275008		29
Opto Cylinder, Square	KORH300-Q64KB-DPU-RT	08361215001	RP64-D0300P-CY6C4U2-BS	33
Opto Cylinder, Square	KORH300-Q64KB-DNU-RT	08361215000	RP64-D0300N-CY6C4U2-BS	33
Opto Cylinder, Square	KORH300-Q64KB-DPU-V1-RT	08361215005	RP64-D0300P-CY6Q4UP-BS	33
Opto Cylinder, Square	KORH300-Q64KB-DNU-V1-RT	08361215004	RP64-D0300N-CY6Q4UP-BS	33
Opto Cylinder, Square	KORH300-Q64KB-DPU-V2-RT	08361215008	RP64-D0300P-CY6Q4UE-SB	33
Opto Cylinder, Square	KORH300-Q64KB-DNU-V2-RT	08361215007	RP64-D0300N-CY6Q4UE-SB	33
Opto Cylinder, Square	KORH300-Q64KB-DMU-RT	08361215002	RP64-D0300D-CY6C5U2-BS	33
Opto Cylinder, Square	KORH300-Q64KB-DMU-V2-RT	08361215009	RP64-D0300D-CY6Q5UE-SB	33
Opto Cylinder, Square	KORH300-Q76KB-DPU-NPT-IR	08361280052		35
Opto Cylinder, Square	KORH300-Q76KB-DNU-NPT-IR	08361280051		35
Opto Cylinder, Square	KORH300-Q76KB-DPU-V2-IR	08361280078		35
Opto Cylinder, Square	KORH300-Q76KB-DNU-V2-IR	08361280077		35
Opto Cylinder, Square	KORH300-Q76KB-DMU-NPT-IR	08361280053		35
Opto Cylinder, Square	KORH300-Q76KB-DMU-V2-IR	08361280079		35
Opto Cylinder, Square	KORH300-Q76KB-VRU-NPT-IRKORT	08361280057		35
Opto Cylinder, Square	KORT350-Q36KB-DNA-IR	08361011160		36
Opto Cylinder, Square	KORT350-Q36KB-DPA-IR	08361011010		36
Opto Cylinder, Square	KORT350-Q36KB-DNA-V1-IR	08361011120		36
Opto Cylinder, Square	KORT350-Q36KB-DPA-V1-IR	08361011060		36
Opto Cylinder, Square	KORT380-Q31KB-DMU-IR	08361260033	MP-D0380D-CX9C4U2	22
Opto Cylinder, Square	KORT380-Q31KB-DMU-V1-IR	08361260037	MP-D0380D-CX9Q4UP	22
Opto Cylinder, Square	KORT380-Q31KB-DMU-V2-IR	08361260038	MP-D0380D-CX9Q4UE	22
Opto Cylinder, Square	KORT400-M12MB64-DPS-IR	08361245323	M12B-D0400P-LX9C3U2/ADJ	9
Opto Cylinder, Square	KORT400-M12MB64-DPÖ-IR	08361245223	M12B-D0400P-DX9C3U2/ADJ	9
Opto Cylinder, Square	KORH400-M30MB78-DPA-IR	08361255049	M30B-D0400P-CX9C4U2-BS	15



PRODUCT OVERVIEW

Reflex light probes

Product group	Designation	Article number	Matchcode	Page
Opto Cylinder, Square	KORH400-M30MB78-DNA-IR	08361255048	M30B-D0400N-CX9C4U2-BS	15
Opto Cylinder, Square	KORH400-M30MB96-DPA-V2-IR	08361255057	M30B-D0400P-CX9Q4UE-BS	15
Opto Cylinder, Square	KORH400-M30MB96-DNA-V2-IR	08361255056	M30B-D0400N-CX9Q4UE-BS	15
Opto Cylinder, Square	KORT400-Q32KB-DPU-RT	08361270008	RP32-D0400P-CY6C4U2	25
Opto Cylinder, Square	KORT400-Q32KB-DNU-RT	08361270007		25
Opto Cylinder, Square	KORT400-Q32KB-DPU-V1-RT	08361270010	RP32-D0400P-CY6Q4UP	25
Opto Cylinder, Square	KORT400-Q32KB-DNU-V1-RT	08361270009		25
Opto Cylinder, Square	KORT500-M18MB71-DPU-IR	08361250219	M18B-D0500P-CX9C4U2	12
Opto Zylinder, Quader	KORT500W-M18MB75-DPU-IR	08361250225	M18B-D0500P-CZ9C4U2	12
Opto Zylinder, Quader	KORT500-M18MB71-DNU-IR	08361250218	M18B-D0500N-CX9C4U2	12
Opto Zylinder, Quader	KORT500W-M18MB75-DNU-IR	08361250224	M18B-D0500N-CZ9C4U2	12
Opto Zylinder, Quader	KORT500-M18MB85-DPU-V2-IR	08361250221	M18B-D0500P-CX9Q4UE	12
Opto Zylinder, Quader	KORT500W-M18MB86-DPU-V2-IR	08361250227	M18B-D0500P-CZ9Q4UE	12
Opto Zylinder, Quader	KORT500-M18MB85-DNU-V2-IR	08361250220	M18B-D0500N-CX9Q4UE	12
Opto Zylinder, Quader	KORT500W-M18MB86-DNU-V2-IR	08361250226	M18B-D0500N-CZ9Q4UE	12
Opto Zylinder, Quader	KORH500-Q64KB-DPU-RT	08361215016	RP64-D0500P-CY6C4U2-BS	33
Opto Zylinder, Quader	KORH500-Q64KB-DNU-RT	08361215015	RP64-D0500N-CY6C4U2-BS	33
Opto Zylinder, Quader	KORH500-Q64KB-DPU-V1-RT	08361215020	RP64-D0500P-CY6Q4UP-BS	33
Opto Zylinder, Quader	KORH500-Q64KB-DNU-V1-RT	08361215019	RP64-D0500N-CY6Q4UP-BS	33
Opto Zylinder, Quader	KORH500-Q64KB-DPU-V2-RT	08361215023	RP64-D0500P-CY6Q4UE-SB	33
Opto Zylinder, Quader	KORH500-Q64KB-DNU-V2-RT	08361215022	RP64-D0500N-CY6Q4UE-SB	33
Opto Zylinder, Quader	KORH500-Q64KB-DMU-RT	08361215017	RP64-D0500D-CY6C5U2-BS	33
Opto Zylinder, Quader	KORH500-Q64KB-DMU-V2-RT	08361215024	RP64-D0500D-CY6Q5UE-SB	33
Opto Zylinder, Quader	KORT600-M18MB50-DPA-RT	08361841500	9984-1500	12
Opto Zylinder, Quader	KORT600-M18MB63-DPA-V2-RT	08361841550	9984-1550	12
Opto Zylinder, Quader	KORT600-Q30KB-DPS-IR	08361822000	9882-2000	19
Opto Zylinder, Quader	KORT600-Q30KB-DPS-V1-IR	08361822064	9882-2064	19
Opto Zylinder, Quader	KORH600-M30MB78-DPA-IR	08361255081	M30B-D0600P-CX9C4U2-BS	15
Opto Zylinder, Quader	KORH600-M30MB78-DNA-IR	08361255080	M30B-D0600N-CX9C4U2-BS	15
Opto Zylinder, Quader	KORH600-M30MB96-DPA-V2-IR	08361255089	M30B-D0600P-CX9Q4UE-BS	15
Opto Zylinder, Quader	KORH600-M30MB96-DNA-V2-IR	08361255088	M30B-D0600N-CX9Q4UE-BS	15
Opto Zylinder, Quader	KORT700-Q62KB-VRA-IR	08361220001	RS62-D0700R-LY9C5L2	31
Opto Zylinder, Quader	KORT800-Q76KB-DPU-NPT-IR	08361280002		35
Opto Zylinder, Quader	KORT800-Q76KB-DNU-NPT-IR	08361280001		35
Opto Zylinder, Quader	KORT800-Q76KB-DPU-V2-IR	08361280026		35
Opto Zylinder, Quader	KORT800-Q76KB-DNU-V2-IR	08361280025		35
Opto Zylinder, Quader	KORT800-Q76KB-DMU-NPT-IR	08361280003		35
Opto Zylinder, Quader	KORT800-Q76KB-DMU-V2-IR	08361280027		35
Opto Zylinder, Quader	KORT800-Q76KB-VRU-NPT-IR	08361280007		35
Opto Zylinder, Quader	KORT1200-Q30KB-DPS-IR	08361820100	9882-0100	19
Opto Zylinder, Quader	KORT1200-Q30KB-DPS-V1-IR	08361820164	9882-0164	19
Opto Zylinder, Quader	KORT1200-Q30KB-DPA-IR	08361820000	9882-0000	19
Opto Zylinder, Quader	KORT1200-Q30KB-DPA-V1-IR	08361820064	9882-0064	19



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Reflex light barriers

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Opto Cylinder, Square	KORP10M-Q76KB-DPU-V2-RT	08362280026		36
Opto Cylinder, Square	KORP10M-Q76KB-DNU-V2-RT	08362280025		36
Opto Cylinder, Square	KORP10M-Q76KB-DMU-NPT-RT	08362280003		36
Opto Cylinder, Square	KORP10M-Q76KB-DMU-V2-RT	08362280027		36
Opto Cylinder, Square	KORP10M-Q76KB-VRU-NPT-RT	08362280007	RP76-L010MR-CY6T4L-PF	36
Opto Cylinder, Square	KORP13M-Q64KB-DPU-RT	08362215001	RP64-L013MP-CY6C4U2-PF	33
Opto Cylinder, Square	KORP13M-Q64KB-DNU-RT	08362215000	RP64-L013MN-CY6C4U2-PF	33
Opto Cylinder, Square	KORP13M-Q64KB-DPU-V1-RT	08362215005	RP64-L013MP-CY6Q4UP-PF	33
Opto Cylinder, Square	KORP13M-Q64KB-DNU-V1-RT	08362215004	RP64-L013MN-CY6Q4UP-PF	33
Opto Cylinder, Square	KORP13M-Q64KB-DPU-V2-RT	08362215008	RP64-L013MP-CY6Q4UE-PS	33
Opto Cylinder, Square	KORP13M-Q64KB-DNU-V2-RT	08362215007	RP64-L013MN-CY6Q4UE-PS	33
Opto Cylinder, Square	KORP13M-Q64KB-DMU-RT	08362215002	RP64-L013MD-CY6C5U2-PF	33
Opto Cylinder, Square	KORP13M-Q64KB-DMU-V2-RT	08362215009	RP64-L013MD-CY6Q5UE-PS	33
Opto Cylinder, Square	KORG500-Q32KB-DPU-RT	08362270008	RP32-L0500P-CY6C4U2-PD	25
Opto Cylinder, Square	KORG500-Q32KB-DNU-RT	08362270007		25
Opto Cylinder, Square	KORG500-Q32KB-DPU-V1-RT	08362270010		25
Opto Cylinder, Square	KORG500-Q32KB-DNU-V1-RT	08362270009		25
Opto Cylinder, Square	KORG700-Q36KB-DNA-RT	08362011200		36
Opto Cylinder, Square	KORG700-Q36KB-DPA-RT	08362011130		36
Opto Cylinder, Square	KORG700-Q36KB-DNA-V1-RT	08362011260		36
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Opto Cylinder, Square	KORP1000-M12MB64-DPA-RT	08362245123	M12B-L1000P-CX6C4U2-PF	10
Opto Cylinder, Square	KORP1000-M12MB64-DNA-RT	08362245122	M12B-L1000N-CX6C4U2-PF	10
Opto Cylinder, Square	KORP1000-M12MB73-DPA-V2-RT	08362245125	M12B-L1000P-CX6Q4UP-PF	10
Opto Cylinder, Square	KORP1000-M12MB75-DPA-V2-RT	08362245127	M12B-L1000P-CX6Q4UE-PF	10
Opto Cylinder, Square	KORP1000-M12MB73-DNA-V2-RT	08362245124	M12B-L1000N-CX6Q4UP-PF	10
Opto Cylinder, Square	KORP1000-M12MB75-DNA-V2-RT	08362245126	M12B-L1000N-CX6Q4UE-PF	10
Opto Cylinder, Square	KORP1000-M18MB71-DPU-RT	08362250255	M18B-L1000P-CX6C4U2-PF	13
Opto Cylinder, Square	KORP1000W-M18MB75-DPU-RT	08362250261	M18B-L1000P-CZ6C4U2-PF	13
Opto Cylinder, Square	KORP1000-M18MB71-DNU-RT	08362250254	M18B-L1000N-CX6C4U2-PF	13
Opto Cylinder, Square	KORP1000W-M18MB75-DNU-RT	08362250260	M18B-L1000N-CZ6C4U2-PF	13
Opto Cylinder, Square	KORP1000-M18MB85-DPU-V2-RT	08362250257	M18B-L1000P-CX6Q4UE-PF	13
Opto Cylinder, Square	KORP1000-M18MB85-DNU-V2-RT	08362250256	M18B-L1000N-CX6Q4UE-PF	13
Opto Cylinder, Square	KORP1000W-M18MB86-DNU-V2-RT	08362250262	M18B-L1000N-CZ6Q4UE-PF	13
Opto Cylinder, Square	KORP1000W-M18MB86-DPU-V2-RT	08362250263	M18B-L1000P-CZ6Q4UE-PF	13
Opto Cylinder, Square	KORP1000-Q20KB-DPA-RT	08362205006	UP-L1000P-CX6C4U2-PF	18
Opto Cylinder, Square	KORP1000-Q20KB-DNA-RT	08362205005	UP-L1000N-CX6C4U2-PF	18
Opto Cylinder, Square	KORP1500-M12MB50-DPS-RT	08362820100	9982-0100	10
Opto Cylinder, Square	KORP1500-M12MB60-DPS-V2-RT	08362820150	9982-0150	10
Opto Cylinder, Square	KORS2000-M12MB64-DPA-IR	08362245159	M12B-L2000P-CX9C4U2	10
Opto Cylinder, Square	KORS2000-M12MB64-DNA-IR	08362245158	M12B-L2000N-CX9C4U2	10
Opto Cylinder, Square	KORS2000-M12MB73-DPA-V1-IR	08362245161	M12B-L2000P-CX9Q4UP	10
Opto Cylinder, Square	KORS2000-M12MB73-DNA-V1-IR	08362245160	M12B-L2000N-CX9Q4UP	10
Opto Cylinder, Square	KORS2000-M12MB75-DPA-V2-IR	08362245163	M12B-L2000P-CX9Q4UE	10
Opto Cylinder, Square	KORS2000-M12MB75-DNA-V2-IR	08362245162	M12B-L2000N-CX9Q4UE	10
Opto Cylinder, Square	KORP2000-M18MB50-DPS-RT	08362841200	9984-1200	13
Opto Cylinder, Square	KORP2000-M18MB63-DPS-V2-RT	08362841250	9984-1250	13
Opto Cylinder, Square	KORS2000-Q20KB-DPA-RT	08362205002	UP-L2000P-CX6C4U2	18
Opto Cylinder, Square	KORS2000-Q20KB-DNA-RT	08362205001	UP-L2000N-CX6C4U2	18
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Opto Cylinder, Square	KORP2000-Q31KB-DMU-RT	08362260017	MP-L2000D-CX6C4U2-PF	13
Opto Cylinder, Square	KORP2000-Q31KB-DMU-V1-RT	08362260021	MP-L2000D-CX6Q4UP-PF	19
Opto Cylinder, Square	KORP2000-Q31KB-DMU-V2-RT	08362260022	MP-L2000D-CX6Q4UE-PF	19
Opto Cylinder, Square	KORP2500-Q36KB-DNA-RT	08362011150		19
Opto Cylinder, Square	KORP2500-Q36KB-DPA-RT	08362011000		19
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Opto Cylinder, Square	KORP2500-Q36KB-DPA-RT-FIX	08362011100		25
Opto Cylinder, Square	KORP2500-Q36KB-DNA-V1-RT	08362011210		25
Opto Cylinder, Square	KORP2500-Q36KB-DPA-V1-RT	08362011050		25
Opto Cylinder, Square	KORP2500-Q36KB-DNA-V1-RT-FIX	08362011250		23
Opto Cylinder, Square	KORP2500-Q36KB-DPA-V1-RT-FIX	08362011110		23
Opto Cylinder, Square	KORS3000-M18MB71-DPU-IR	08362250219	M18B-L3000P-CX9C4U2	23
Opto Cylinder, Square	KORS3000W-M18MB75-DPU-IR	08362250225	M18B-L3000P-CZ9C4U2	31
Opto Cylinder, Square	KORS3000-M18MB71-DNU-IR	08362250218	M18B-L3000N-CX9C4U2	15
Opto Cylinder, Square	KORS3000W-M18MB75-DNU-IR	08362250224	M18B-L3000N-CZ9C4U2	15
Opto Cylinder, Square	KORS3000-M18MB85-DPU-V2-IR	08362250221	M18B-L3000P-CX9Q4UE	15
Opto Cylinder, Square	KORS3000W-M18MB86-DPU-V2-IR	08362250227	M18B-L3000P-CZ9Q4UE	15
Opto Cylinder, Square	KORS3000-M18MB85-DNU-V2-IR	08362250220	M18B-L3000N-CX9Q4UE	31
Opto Cylinder, Square	KORS3000W-M18MB86-DNU-V2-IR	08362250226	M18B-L3000N-CZ9Q4UE	29
Opto Cylinder, Square	KORS4000-Q30KB-DPÖ-RT	08362820500	9882-0500	29
Opto Cylinder, Square	KORS4000-Q30KB-DPÖ-V1-RT	08362820564	9882-0564	29
Opto Cylinder, Square	KORS4000-Q30KB-DPA-RT	08362820400	9882-0400	29
Opto Cylinder, Square	KORS4000-Q30KB-DPA-V1-RT	08362820464	9882-0464	19
Opto Cylinder, Square	KORP4000-Q32KB-DPU-RT	08362270002	RP32-L4000P-CY6C4U2-PF	23
Opto Cylinder, Square	KORP4000-Q32KB-DNU-RT	08362270001		23
Opto Cylinder, Square	KORP4000-Q32KB-DPU-V1-RT	08362270004	RP32-L4000P-CY6Q4UP-PF	23
Opto Cylinder, Square	KORP4000-Q32KB-DNU-V1-RT	08362270003		36
Opto Cylinder, Square	KORS5000-Q31KB-DMU-RT	08362260001	MP-L5000D-CX6C4U2	36
Opto Cylinder, Square	KORS5000-Q31KB-DMU-V1-RT	08362260005	MP-L5000D-CX6Q4UP	36
Opto Cylinder, Square	KORS5000-Q31KB-DMU-V2-RT	08362260006	MP-L5000D-CX6Q4UE	36
Opto Cylinder, Square	KORP5000-Q62KB-VRA-RT	08362220005	RS62-L5000R-LY6C5L2-PF	36
Opto Cylinder, Square	KORP6000-M30MB78-DPA-RT	08362255017	M30B-L6000P-CX6C4U2-PF	36
Opto Cylinder, Square	KORP6000-M30MB78-DNA-RT	08362255016	M30B-L6000N-CX6C4U2-PF	36
Opto Cylinder, Square	KORP6000-M30MB96-DPA-V2-RT	08362255025	M30B-L6000P-CX6Q4UE-PF	36
Opto Cylinder, Square	KORP6000-M30MB96-DNA-V2-RT	08362255024	M30B-L6000N-CX6Q4UE-PF	13
Opto Cylinder, Square	KORS7000-Q62KB-VRA-IR	08362220001	RS62-L7000R-LY9C5L2	13
Opto Cylinder, Square	KORP9000-Q43KB-DPU-RT	08362275008	RP43-L9000P-CY6C4U2-PF (7m)	13
Opto Cylinder, Square	KORP9000-Q43KB-DNU-RT	08362275007		13
Opto Cylinder, Square	KORP9000-Q43KB-DPU-V1-RT	08362275010		13
Opto Cylinder, Square	KORP9000-Q43KB-DNU-V1-RT	08362275009		13



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Opto Cylinder, Square	KOES12M-Q30KB-DPÖ-V1-IR	08362820864	9882-0864	20
Opto Cylinder, Square	KOES12M-Q30KB-DPA-IR	08363820600	9882-0600	20
Opto Cylinder, Square	KOES12M-Q30KB-DPA-V1-IR	08363820664	9882-0664	20
Opto Cylinder, Square	KOES12M-Q30KB-D-IR	08363820700	9882-0700	20
Opto Cylinder, Square	KOES12M-Q30KB-D-V1-IR	08363820764	9882-0764	20
Opto Cylinder, Square	KOES15M-M18MB71-DPU-IR	08363250229	M18B-T015MP-CX9C4U2	13
Opto Cylinder, Square	KOES15MW-M18MB75-DPU-IR	08363250238	M18B-T015MP-CZ9C4U2	13
Opto Cylinder, Square	KOES15M-M18MB71-DNU-IR	08363250228	M18B-T015MN-CX9C4U2	13
Opto Cylinder, Square	KOES15MW-M18MB75-DNU-IR	08363250237	M18B-T015MN-CZ9C4U2	13
Opto Cylinder, Square	KOES15M-M18MB85-DPU-V2-IR	08363250232	M18B-T015MP-CX9Q4UE	13
Opto Cylinder, Square	KOES15MW-M18MB86-DPU-V2-IR	08363250241	M18B-T015MP-CZ9Q4UE	13
Opto Cylinder, Square	KOES15M-M18MB85-DNU-V2-IR	08363250231	M18B-T015MN-CX9Q4UE	13
Opto Cylinder, Square	KOES15MW-M18MB86-DNU-V2-IR	08363250240	M18B-T015MN-CZ9Q4UE	13
Opto Cylinder, Square	KOES15M-M18MB71-D-IR	08363250227	M18B-T015MD-EX9C3L2	13
Opto Cylinder, Square	KOES15MW-M18MB75-D-IR	08363250236	M18B-T015MD-EZ9C3L2	13
Opto Cylinder, Square	KOES15M-M18MB85-D-V2-IR	08363250230	M18B-T015MD-EX9Q4LE	13
Opto Cylinder, Square	KOES15MW-M18MB86-D-V2-IR	08363250239	M18B-T015MD-EZ9Q4LE	13
Opto Cylinder, Square	KOES22M-Q43KB-DPU-RT	08363275002		29
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Opto Cylinder, Square	KOES22M-Q43KB-DPU-V1-RT	08363275005		29
Opto Cylinder, Square	KOES22M-Q43KB-DNU-V1-RT	08363275004		29
Opto Cylinder, Square	KOES22M-Q43KB-D-RT	08363275000		29
Opto Cylinder, Square	KOES22M-Q43KB-D-V1-RT	08363275003		29
Opto Cylinder, Square	KOES22M-Q64KB-DPU-IR	08363215002	RP64-T022MP-CY6C4U2	34
Opto Cylinder, Square	KOES22M-Q64KB-DNU-IR	08363215001	RP64-T022MN-CY6C4U2	34
Opto Cylinder, Square	KOES22M-Q64KB-DPU-V1-RT	08363215008	RP64-T022MP-CY6Q4UP	34
Opto Cylinder, Square	KOES22M-Q64KB-DNU-V1-RT	08363215007	RP64-T022MN-CY6Q4UP	34
Opto Cylinder, Square	KOES22M-Q64KB-DPU-V2-RT	08363215011	RP64-T022MP-CY6Q4UE-S	34
Opto Cylinder, Square	KOES22M-Q64KB-DNU-V2-RT	08363215010	RP64-T022MN-CY6Q4UE-S	34
Opto Cylinder, Square	KOES22M-Q64KB-DMU-RT	08363215003	RP64-T022MD-CY6C5U2	34
Opto Cylinder, Square	KOES22M-Q64KB-DMU-V2-RT	08363215012	RP64-T022MD-CY6Q5UE-S	34
Opto Cylinder, Square	KOES22M-Q64KB-D-RT	08363215000	RP64-T022MD-EY6C3L2	34
Opto Cylinder, Square	KOES22M-Q64KB-D-V1-RT	08363215006	RP64-T022MD-EY6Q4LP	34
Opto Cylinder, Square	KOES22M-Q64KB-D-V2-RT	08363215009	RP64-T022MD-EY6Q4LE-S	34
Opto Cylinder, Square	KOES28M-Q76KB-DPU-NPT-IR	08363280003		36
Opto Cylinder, Square	KOES28M-Q76KB-DNU-NPT-IR	08363280002		36
Opto Cylinder, Square	KOES28M-Q76KB-DPU-V2-IR	08363280036		36
Opto Cylinder, Square	KOES28M-Q76KB-DNU-V2-IR	08363280035		36
Opto Cylinder, Square	KOES28M-Q76KB-DMU-NPT-IR	08363280004		36
Opto Cylinder, Square	KOES28M-Q76KB-DMU-V2-IR	08363280037		36
Opto Cylinder, Square	KOES28M-Q76KB-D-NPT-IR	08363280001		36
Opto Cylinder, Square	KOES28M-Q76KB-D-V2-IR	08363280034		36
Opto Cylinder, Square	KOES28M-Q76KB-VRU-NPT-IR	08363280009		36
Opto Cylinder, Square	KOES28M-Q76KB-A-NPT-IR	08363280008		36
Opto Cylinder, Square	KOES30M-Q31KB-DMU-IR	08363260034	MP-T030MD-CX9C4U2	23
Opto Cylinder, Square	KOES30M-Q31KB-DMU-V1-IR	08363260038	MP-T030MD-CX9Q4UP	23
Opto Cylinder, Square	KOES30M-Q31KB-DMU-V2-IR	08363260040	MP-T030MD-CX9Q4UE	23
Opto Cylinder, Square	KOES30M-Q31KB-D-IR	08363260033	MP-T030MD-EX9C3L2	23
Opto Cylinder, Square	KOES30M-Q31KB-D-V1-IR	08363260037	MP-T030MD-EX9Q4LP	23



PRODUCT OVERVIEW

One-way light barriers

Product group	Designation	Article number	Matchcode	Page
Opto Cylinder, Square	KOES5200-M12MB64-DPA-IR	08363245135	M12B-T5200P-CX9C4U2	10
Opto Cylinder, Square	KOES5200W-M12MB64-DPA-IR	08363245147	M12B-T5200P-CZ9C4U2	10
Opto Cylinder, Square	KOES5200-M12MB64-DNA-IR	08363245134	M12B-T5200N-CX9C4U2	10
Opto Cylinder, Square	KOES5200W-M12MB64-DNA-IR	08363245146	M12B-T5200N-CZ9C4U2	10
Opto Cylinder, Square	KOES5200-M12MB73-DPA-V1-IR	08363245138	M12B-T5200P-CX9Q4UP	10
Opto Cylinder, Square	KOES5200W-M12MB73-DPA-V1-IR	08363245150	M12B-T5200P-CZ9Q4UP	10
Opto Cylinder, Square	KOES5200-M12MB73-DNA-V1-IR	08363245137	M12B-T5200N-CX9Q4UP	10
Opto Cylinder, Square	KOES5200W-M12MB73-DNA-V1-IR	08363245149	M12B-T5200N-CZ9Q4UP	10
Opto Cylinder, Square	KOES5200-M12MB75-DPA-V2-IR	08363245141	M12B-T5200P-CX9Q4UE	10
Opto Cylinder, Square	KOES5200W-M12MB75-DPA-V2-IR	08363245153	M12B-T5200P-CZ9Q4UE	10
Opto Cylinder, Square	KOES5200-M12MB75-DNA-V2-IR	08363245140	M12B-T5200N-CX9Q4UE	10
Opto Cylinder, Square	KOES5200W-M12MB75-DNA-V2-IR	08363245152	M12B-T5200N-CZ9Q4UE	10
Opto Cylinder, Square	KOES5200-M12MB64-D-IR	08363245133	M12B-T5200D-EX9C3L2	10
Opto Cylinder, Square	KOES5200W-M12MB64-D-IR	08363245145	M12B-T5200D-EZ9C3L2	10
Opto Cylinder, Square	KOES5200W-M12MB73-D-V1-IR	08363245148	M12B-T5200D-EZ9Q4LP	10
Opto Cylinder, Square	KOES5200-M12MB73-D-V1-IR	08363245136	M12B-T5200D-EX9Q4LP	10
Opto Cylinder, Square	KOES5200-M12MB75-D-V2-IR	08363245139	M12B-T5200D-EX9Q4LE	10
Opto Cylinder, Square	KOES5200W-M12MB75-D-V2-IR	08363245151	M12B-T5200D-EZ9Q4LE	10
Opto Cylinder, Square	KOES6000-Q30KB-DPS-IR	08363822300	9882-2300	20
Opto Cylinder, Square	KOES6000-Q30KB-DPS-V1-IR	08363822364	9882-2364	20
Opto Cylinder, Square	KOES6000-Q30KB-D-IR	08363822400	9882-2400	20
Opto Cylinder, Square	KOES6000-Q30KB-D-V1-IR	08363822464	9882-2464	20
Opto Cylinder, Square	KOES8500-Q32KB-DPU-RT	08363270003		26
Opto Cylinder, Square	KOES8500-Q32KB-DNU-RT	08363270002		26
Opto Cylinder, Square	KOES8500-Q32KB-DPU-V1-RT	08363270006		26
Opto Cylinder, Square	KOES8500-Q32KB-DNU-V1-RT	08363270005		26
Opto Cylinder, Square	KOES8500-Q32KB-D-RT	08363270001		26
Opto Cylinder, Square	KOES8500-Q32KB-D-V1-RT	08363270004		26

Fibre optic devices

Product group	Designation	Article number	Matchcode	Page
Opto Cylinder, Square	KOLL-Q30KB-DPS/Ö-RT	08365822500	9882-2500	20
Opto Cylinder, Square	KOLL-Q30KB-DNS/Ö-RT	08365823500	9882-3500	20
Opto Cylinder, Square	KOLL-Q30KB-DPS/Ö-V1-RT	08365822564	9882-2564	20
Opto Cylinder, Square	KOLL-Q30KB-DNS/Ö-V1-RT	08365823564	9882-3564	20
Opto Cylinder, Square	KOLL-Q30KB-DPA-RT	08365821000	9882-1000	20
Opto Cylinder, Square	KOLL-Q30KB-DPA-V1-RT	08365821064	9882-1064	20
Opto Cylinder, Square	KOLLEG-Q31KB-DMU-RT	08363260517	MP-TGFD-CX6C4U2	23
Opto Cylinder, Square	KOLLEP-Q31KB-DMU-RT	08362260517	MP-TPFD-CX6C4U2	23
Opto Cylinder, Square	KOLLRG-Q31KB-DMU-IR	08362260501	MP-LGFD-CX9C4U2	23
Opto Cylinder, Square	KOLLEG-Q31KB-DMU-IR	08363260501	MP-TGFD-CX9C4U2	24
Opto Cylinder, Square	KOLLTG-Q31KB-DMU-IR	08361260501	MP-DGFD-CX9C4U2	24
Opto Cylinder, Square	KOLLEG-Q31KB-DMU-RT	08361260517	MP-DGFD-CX6C4U2	24
Opto Cylinder, Square	KOLLEG-Q31KB-DMU-V1-RT	08363260521	MP-TGFD-CX6Q4UP	23
Opto Cylinder, Square	KOLLEP-Q31KB-DMU-V1-RT	08362260521	MP-TPFD-CX6Q4UP	23
Opto Cylinder, Square	KOLLRG-Q31KB-DMU-V1-IR	08362260505	MP-LGFD-CX9Q4UP	23
Opto Cylinder, Square	KOLLEG-Q31KB-DMU-V1-IR	08363260505	MP-TGFD-CX9Q4UP	24
Opto Cylinder, Square	KOLLTG-Q31KB-DMU-V1-IR	08361260505	MP-DGFD-CX9Q4UP	24
Opto Cylinder, Square	KOLLTG-Q31KB-DMU-V1-RT	08361260521	MP-DGFD-CX6Q4UP	24



PRODUCT OVERVIEW

Fibre optic devices

Product group	Designation	Article number	Matchcode	Page
Opto Cylinder, Square	KOLLEG-Q31KB-DMU-V2-RT	08363260522	MP-TGFD-CX6Q4UE	23
Opto Cylinder, Square	KOLLEP-Q31KB-DMU-V2-RT	08362260522	MP-TPFD-CX6Q4UE	23
Opto Cylinder, Square	KOLLRG-Q31KB-DMU-V2-IR	08362260506	MP-LGFD-CX9Q4UE	23
Opto Cylinder, Square	KOLLEG-Q31KB-DMU-V2-IR	08363260506	MP-TGFD-CX9Q4UE	24
Opto Cylinder, Square	KOLLTG-Q31KB-DMU-V2-IR	08361260506	MP-DGFD-CX9Q4UE	24
Opto Cylinder, Square	KOLLTG-Q31KB-DMU-V2-RT	08361260522	MP-DGFD-CX6Q4UE	24
Opto Cylinder, Square	KOLL-Q76KB-DPU-NPT-RT	08365280002		34
Opto Cylinder, Square	KOLL-Q76KB-DNU-NPT-RT	08365280001		34
Opto Cylinder, Square	KOLL-Q76KB-DPU-V2-RT	08365280026		34
Opto Cylinder, Square	KOLL-Q76KB-DNU-V2-RT	08365280025		34
Opto Cylinder, Square	KOLL-Q76KB-DMU-NPT-RT	08365280003		34
Opto Cylinder, Square	KOLL-Q76KB-DMU-V2-RT	08365280027		34
Opto Cylinder, Square	KOLL-Q76KB-VRU-NPT-RT	08365280007		34



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