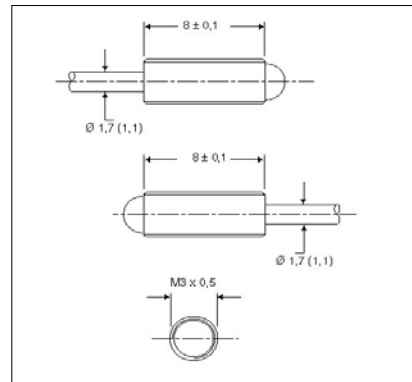
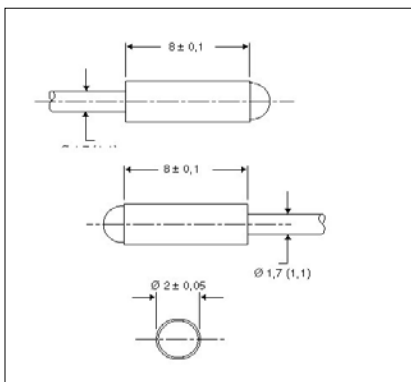




Opposed Mode

Operation only with corresponding amplifier.



Type
Order no. (Match-Code)
Light
Sensing Distance ¹⁾ or ²⁾
Min. Object Size ¹⁾ or ²⁾

KOES300-G2EB8-X0301 IR
08363602000 (9960-2000)
Infrared Light 880 nm
¹⁾ 300 mm / ²⁾ 100 mm
¹⁾ 0,2 mm / ²⁾ 0,1 mm

KOES300-M3MB8-X0301 IR
08363102300 (9960-2300)
Infrared Light 880 nm
¹⁾ 300 mm / ²⁾ 100 mm
¹⁾ 0,2 mm / ²⁾ 0,1 mm

Type
Order no. (Match-Code)
Light
Sensing Distance ¹⁾ or ²⁾
Min. Object Size ¹⁾ or ²⁾

KOES300-G2EB8-X0301 RL
08363602100
Red Light 660 nm
¹⁾ 300 mm / ²⁾ 100 mm
¹⁾ 0,2 mm / ²⁾ 0,1 mm

KOES300-M3MB8-X0301 RL
08363102400
Red Light 660 nm
¹⁾ 300 mm / ²⁾ 100 mm
¹⁾ 0,2 mm / ²⁾ 0,1 mm

Type
Order no. (Match-Code)
Light
Sensing Distance ¹⁾ or ²⁾
Min. Object Size ¹⁾ or ²⁾

KOES800-G2EB8-X0301 IR
08363602200
Infrared Light 880 nm
¹⁾ 800 mm / ²⁾ 300 mm
¹⁾ 0,2 mm / ²⁾ 0,1 mm

KOES800-M3MB8-X IR
08363602500
Infrared Light 880 nm
¹⁾ 800 mm / ²⁾ 300 mm
¹⁾ 0,2 mm / ²⁾ 0,1 mm

Housing Material
Mounting
Connection
Type of Protection
Ambient Temperature

Stainless Steel
for Adhesion or Clamp Mounting
1m PUR-Cable with Connector
IP 65
-10°C bis +55°C

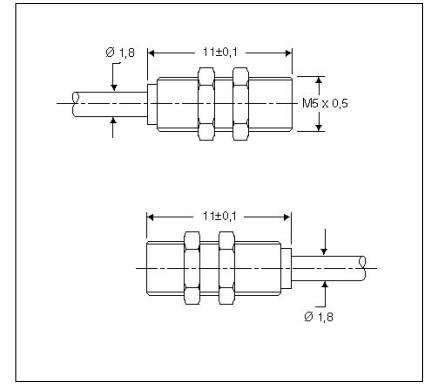
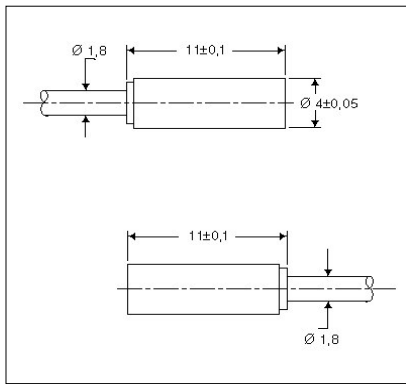
Brass, nickel plated
for Screw Mounting
1m PUR-Cable with Connector
IP 65
-10°C bis +55°C

	Amplifier Switchable ¹⁾ Standard Solution		²⁾ High Solution	
Order no.	08369614100	08369614200	08369614500	08369614600
Output Function	NPN	NPN	PNP	PNP
Connection	Connector M12	Connector M8	Connector M12	Connector M8
Specials	Alarm Output	Alarm Output	AlarmOutput	AlarmOutput
Order no.	08369614000	08369614300	08369614400	08369614700
Output Function	NPN	NPN	PNP	PNP
Connection	2m Cable	Connector M8	2m Cable	Connector M8



Opposed Mode

Operation only with corresponding amplifier.



Type

Order no. (Match-Code)

Light

Sensing Distance ¹⁾ or ²⁾

Min. Object Size ¹⁾ or ²⁾

KOES1000-G4EB11-X0301 IR

08363602600 (9960-2600)

Infrared Light 880 nm

¹⁾ 1000 mm / ²⁾ 350 mm

¹⁾ 0,3 mm / ²⁾ 0,15 mm

KOES1000-M5MB11-X0301 IR

08363602800 (9960-2800)

Infrared Light 880 nm

¹⁾ 1000 mm / ²⁾ 350 mm

¹⁾ 0,3 mm / ²⁾ 0,15 mm

Type

Order no. (Match-Code)

Light

Sensing Distance ¹⁾ or ²⁾

Min. Object Size ¹⁾ or ²⁾

KOES2000-G4EB11-X0301 IR

08363602700

Infrared Light 880 nm

¹⁾ 2000 mm / ²⁾ 700 mm

¹⁾ 0,3 mm / ²⁾ 0,15 mm

KOES2000-M5MB11-X0301 IR

08363602900

Infrared Light 880 nm

¹⁾ 2000 mm / ²⁾ 700 mm

¹⁾ 0,3 mm / ²⁾ 0,15 mm

Type

Order no. (Match-Code)

Housing Material

Mounting

Connection

Type of Protection

Ambient Temperature

Stainless Steel

for Adhesion or Clamp Mounting

1m PUR-Cable with Connector

IP 65

-10°C bis +55°C

Brass, nickel plated

for Screw Mounting

1m PUR-Cable with Connector

IP 65

-10°C bis +55°C

Amplifier Switchable ¹⁾ **Standard Solution** ²⁾ **High Solution**

Order no.

08369614100

08369614200

08369614500

08369614600

Output Function

NPN

NPN

PNP

PNP

Connection

Connector M12

Connector M8

Connector M12

Connector M8

Specials

Alarm Output

Alarm Output

Alarm Output

Alarm Output

Order no.

08369614000

08369614300

08369614400

08369614700

Output Function

NPN

NPN

PNP

PNP

Connection

2m Cable

Connector M8

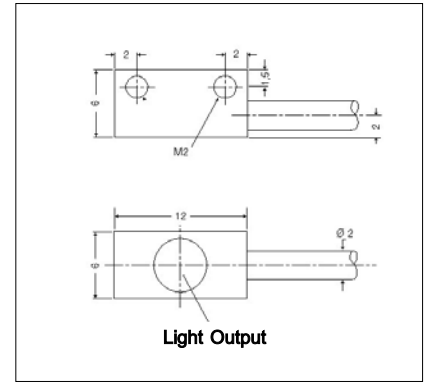
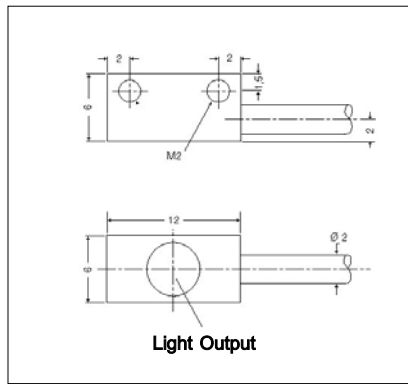
2m Cable

Connector M8



Opposed Mode

Operation only with corresponding amplifier.



Type
Order no. (Match-Code)
Light
Sensing Distance ¹⁾ or ²⁾
Min. Object Size ¹⁾ or ²⁾

KOES1000-Q6MB12-X0301 IR
08363600500 (9960-0500)
Infrared Light 880 nm
¹⁾ 1000 mm / ²⁾ 350 mm
¹⁾ 0,3 mm / ²⁾ 0,15 mm

KOES4000-Q6MB12-X0301 IR
08363600700 (9960-0700)
Infrared Light 880 nm
¹⁾ 4000 mm / ²⁾ 1400 mm
¹⁾ 0,4 mm / ²⁾ 0,2 mm

Type
Order no. (Match-Code)
Light
Sensing Distance ¹⁾ or ²⁾
Min. Object Size ¹⁾ or ²⁾

KOES2000-Q6MB12-X0301 IR
08363602100
Infrared Light 880 nm
¹⁾ 2000 mm / ²⁾ 700 mm
¹⁾ 0,3 mm / ²⁾ 0,15 mm

Type
Order no. (Match-Code)

Housing Material
Mounting
Connection
Type of Protection
Ambient Temperature

Brass, nickel plated
for Screw Mounting
1m PUR-Cable with Connector
IP 65
-10°C bis +55°C

Brass, nickel plated
for Screw Mounting
1m PUR-Cable with Connector
IP 65
-10°C bis +55°C

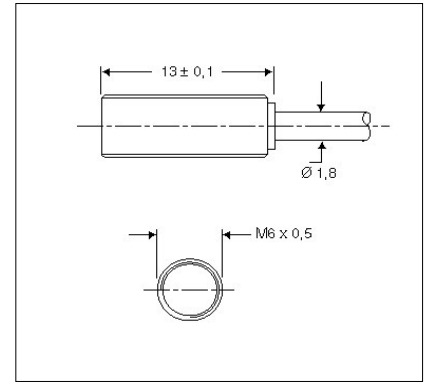
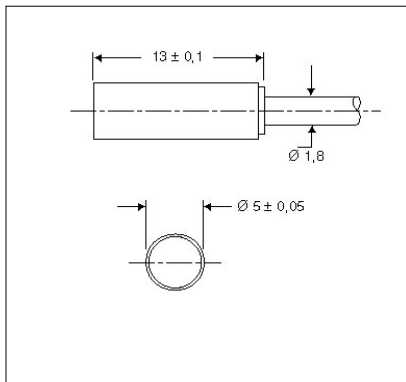
	Amplifier Switchable	¹⁾ Standard Solution	²⁾ High Solution	
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Order no.	08369614100	08369614200	08369614500	08369614600
Output Function	NPN	NPN	PNP	PNP
Connection	Connector M12	Connector M8	Connector M12	Connector M8
Specials	Alarm Output	Alarm Output	Alarm Output	Alarm Output
Order no.	08369614000	08369614300	08369614400	08369614700
Output Function	NPN	NPN	PNP	PNP
Connection	2m Cable	Connector M8	2m Cable	Connector M8



Opposed Mode

Operation only with corresponding amplifier



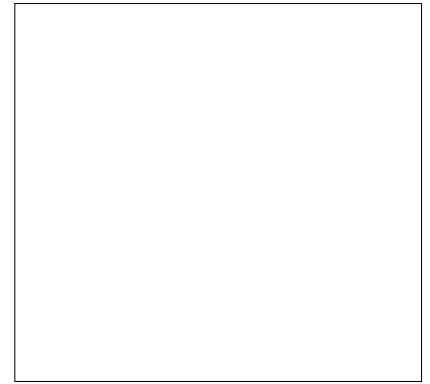
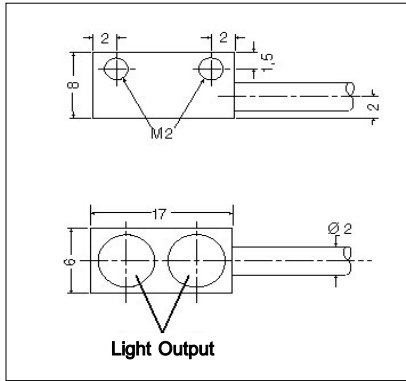
Type	KOES4000-G5EB13-X0301 IR	KOES4000-M6EM13-X0301 IR
Order no. (Match-Code)	08363603000 (9960-3000)	08363603100 (9960-3100)
Light	Infrared Light 880 nm	Infrared Light 880 nm
Sensing Distance ¹⁾ or ²⁾	¹⁾ 4000 mm / ²⁾ 1400 mm	¹⁾ 4000 mm / ²⁾ 1400 mm
Min. Object Size ¹⁾ or ²⁾	¹⁾ 0,4 mm / ²⁾ 0,2 mm	¹⁾ 0,4 mm / ²⁾ 0,2 mm
Type		
Order no. (Match-Code)		
Type		
Order no. (Match-Code)		
Housing Material	Stainless Steel	Brass, nickel plated
Mounting	for Adhesion or Clamp Mounting	for Screw Mounting
Connection	1m PUR-Cable with Connector	1m PUR-Cable with Connector
Type of Protection	IP 65	IP 65
Ambient Temperature	-10°C bis +55°C	-10°C bis +55°C

	Amplifier Switchable ¹⁾ Standard Solution		²⁾ High Solution	
Order no.	08369614100	08369614200	08369614500	08369614600
Output Function	NPN	NPN	PNP	PNP
Connection	Connector M12	Connector M8	Connector M12	Connector M8
Specials	Alarm Output	Alarm Output	Alarm Output	Alarm Output
Order no.	08369614000	08369614300	08369614400	08369614700
Output Function	NPN	NPN	PNP	PNP
Connection	2m Cable	Connector M8	2m Cable	Connector M8



**Retro-Reflectiv Mode
Clear-Glass-Detection**

Operation only with
corresponding amplifier.



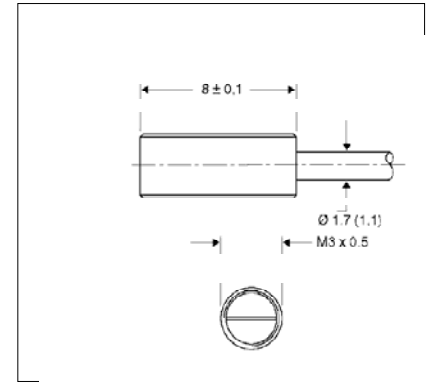
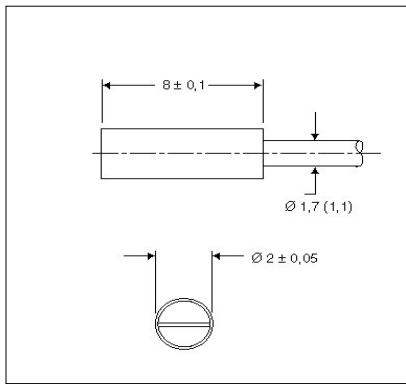
Type	KORS1500-Q6MB17-X0301 RL	
Order no. (Match-Code)	08361600400 (9960-0400)	
Light	Red Light 660 nm	
Sensing Distance to Reflector		
with Polarizing Filter ¹⁾ or ²⁾	¹⁾ 1500 mm / ²⁾ 500 mm	
Type		
Order no. (Match-Code)		
Type		
Order no. (Match-Code)		
Housing Material	Brass, nickel plated	
Mounting	for Screw Mounting	
Connection	1m PUR-Cable with Connector	
Type of Protection	IP 65	
Ambient Temperature	-10°C bis +55°C	

	Amplifier Switchable	¹⁾ Standard Solution	²⁾ High Solution	
Order no.	08369614100	08369614200	08369614500	08369614600
Output Function	NPN	NPN	PNP	PNP
Connection	Connector M12	Connector M8	Connector M12	Connector M8
Specials	Alarm Output	Alarm Output	Alarm Output	Alarm Output
Order no.	08369614000	08369614300	08369614400	08369614700
Output Function	NPN	NPN	PNP	PNP
Connection	2m Cable	Connector M8	2m Cable	Connector M8



Convergent Mode

Operation only with corresponding amplifier.



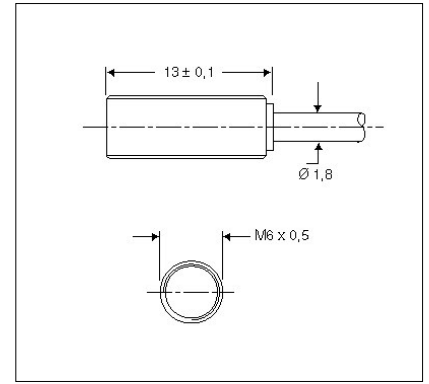
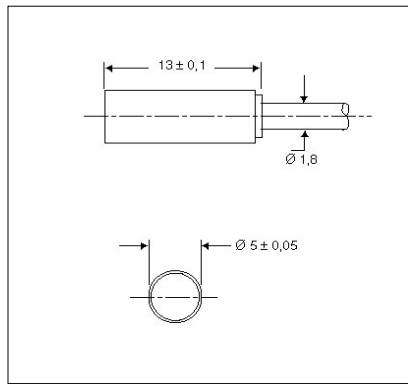
Type	KORT12-G2EB8-X0301 IR	KORT12-M3MB8-X0301 IR
Order no. (Match-Code)	08361601100 (9960-1100)	08361601200 (9960-1200)
Light	Infrared Light 880 nm	Infrared Light 880 nm
Sensing Distance ¹⁾ or ²⁾	¹⁾ 12 mm / ²⁾ 3 mm	¹⁾ 12 mm / ²⁾ 3 mm
Sensing Distance to Reflector ¹⁾ or ²⁾	¹⁾ 250 mm / ²⁾ 80 mm	¹⁾ 250 mm / ²⁾ 80 mm
Type		
Order no. (Match-Code)		
Type		
Order no. (Match-Code)		
Housing Material	Stainless Steel	Brass, nickel plated
Mounting	for Adhesion or Clamp Mounting	for Screw Mounting
Connection	1m PUR-Cable with Connector	1m PUR-Cable with Connector
Type of Protection	IP 65	IP 65
Ambient Temperature	-10°C bis +55°C	-10°C bis +55°C

	Amplifier Switchable ¹⁾ Standard Solution		²⁾ High Solution	
Order no.	08369614100	08369614200	08369614500	08369614600
Output Function	NPN	NPN	PNP	PNP
Connection	Connector M12	Connector M8	Connector M12	Connector M8
Specials	Alarm Output	Alarm Output	Alarm Output	Alarm Output
Order no.	08369614000	08369614300	08369614400	08369614700
Output Function	NPN	NPN	PNP	PNP
Connection	2m Cable	Connector M8	2m Cable	Connector M8



Convergent Mode

Operation only with corresponding amplifier.



Type
Order no. (Match-Code)
Light
Sensing Distance ¹⁾ or ²⁾
Sensing Distance to Reflector ¹⁾ or ²⁾

KORT60-G5EB13-X0301 IR
08361601300 (9960-1300)
Infrared Light 880 nm
¹⁾ 60 mm / ²⁾ 15 mm
¹⁾ 800 mm / ²⁾ 200 mm

KORT60-M6MB13-X0301 IR
08361601600 (9960-1600)
Infrared Light 880 nm
¹⁾ 60 mm / ²⁾ 15 mm
¹⁾ 800 mm / ²⁾ 200 mm

Type
Order no. (Match-Code)
Light
Sensing Distance ¹⁾ or ²⁾
Sensing Distance to Reflector ¹⁾ or ²⁾

KORT60-M5EB13-X0301 RL
08361601400 (9960-1400)
Red Light 660 nm
¹⁾ 60 mm / ²⁾ 15 mm
¹⁾ 800 mm / ²⁾ 200 mm

KORT60-M6MB13-X0301 RL
08361601700 (9960-1700)
Red Light 660 nm
¹⁾ 60 mm / ²⁾ 15 mm
¹⁾ 800 mm / ²⁾ 200 mm

Type
Order no. (Match-Code)
Light
Sensing Distance ¹⁾ or ²⁾
Sensing Distance to Reflector ¹⁾ or ²⁾

KORT100-G5EB13-X0301 IR
08361601500 (9960-1500)
Infrared Light 880 nm
¹⁾ 100 mm / ²⁾ 25 mm
¹⁾ 1200 mm / ²⁾ 300 mm

KORT100-M6MB13-X0301 IR
08361601800 (9960-1800)
Infrared Light 880 nm
¹⁾ 100 mm / ²⁾ 25 mm
¹⁾ 1200 mm / ²⁾ 300 mm

Housing Material
Mounting
Connection
Type of Protection
Ambient Temperature

Stainless Steel
for Adhesion or Clamp Mounting
1m PUR-Cable with Connector
IP 65
-10°C bis +55°C

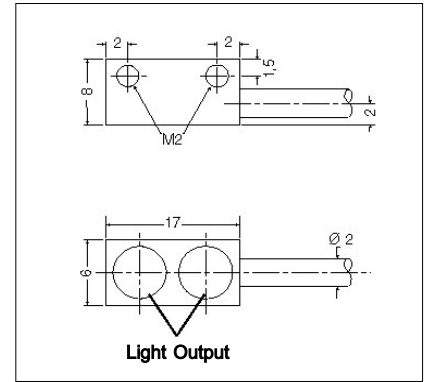
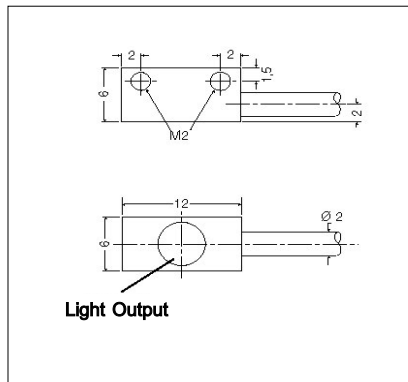
Brass, nickel plated
for Screw Mounting
1m PUR-Cable with Connector
IP 65
-10°C bis +55°C

	Amplifier Switchable		¹⁾ Standard Solution	²⁾ High Solution
Order no.	08369614100	08369614200	08369614500	08369614600
Output Function	NPN	NPN	PNP	PNP
Connection	Connector M12	Connector M8	Connector M12	Connector M8
Specials	Alarm Output	Alarm Output	Alarm Output	Alarm Output
Order no.	08369614000	08369614300	08369614400	08369614700
Output Function	NPN	NPN	PNP	PNP
Connection	2m Cable	Connector M8	2m Cable	Connector M8



Convergent Mode

Operation only with corresponding amplifier.



Type
Order no. (Match-Code)
Light
Sensing Distance ¹⁾ or ²⁾
Sensing Distance to Reflector ¹⁾ or ²⁾

KORT60-Q6MB12-X0301 IR
08361600000 (9860-0000)
Infrared 880 nm
¹⁾ 60 mm / ²⁾ 15 mm
¹⁾ 800 mm / ²⁾ 200 mm

KORT200-Q6MB17-X0301 IR
08361600300 (9860-0300)
Infrared 880 nm
¹⁾ 60 mm / ²⁾ 15 mm
¹⁾ 3000 mm / ²⁾ 700 mm

Type
Order no. (Match-Code)
Light
Sensing Distance ¹⁾ or ²⁾
Sensing Distance to Reflector ¹⁾ or ²⁾

KORT60-Q6MB12-X0301 RL
08361600100 (9860-0100)
Red Light 660 nm
¹⁾ 60 mm / ²⁾ 15 mm
¹⁾ 800 mm / ²⁾ 200 mm

Type
Order no. (Match-Code)
Light
Sensing Distance ¹⁾ or ²⁾
Sensing Distance to Reflector ¹⁾ or ²⁾

KORT100-Q6MB12-X0301 IR
08361600200 (9860-0200)
Infrared Light 880 nm
¹⁾ 100 mm / ²⁾ 25 mm
¹⁾ 1200 mm / ²⁾ 300 mm

Housing Material
Mounting
Connection
Type of Protection
Ambient Temperature

Brass, nickel plated
for Screw Mounting
1m PUR-Cable with Connector
IP 65
-10°C bis +55°C

	Amplifier Switchable	¹⁾ Standard Solution	²⁾ High Solution	
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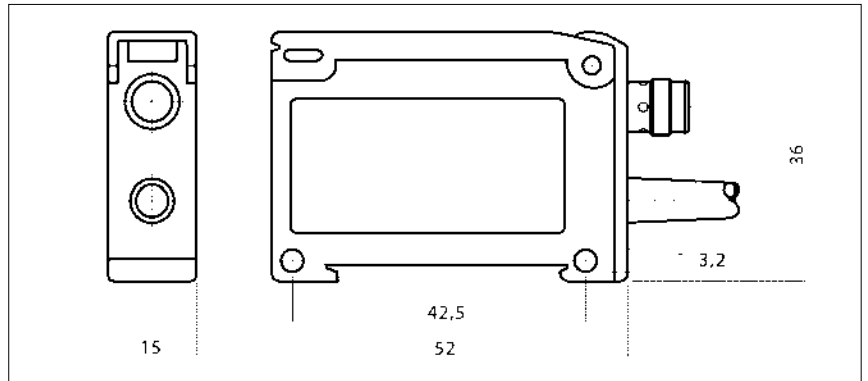
Order no.	08369614100	08369614200	08369614500	08369614600
Output Function	NPN	NPN	PNP	PNP
Connection	Connector M12	Connector M8	Connector M12	Connector M8
Specials	Alarm Output	Alarm Output	Alarm Output	Alarm Output
Order no.	08369614000	08369614300	08369614400	08369614700
Output Function	NPN	NPN	PNP	PNP
Connection	2m Cable	Connector M8	2m Cable	Connector M8

Amplifier for optical Mini-Sensors



Operation with corresponding sensors.

Operating Voltage	U_b
Output Current	I_b
Limiting Frequency	
Principle of Operation	
Pulse Extentsion	
Adjustment	
Function / Operating Indicator	
Operating Status	
Housing Material / Weight	
Ambient Temperature	
Type of Protection	
Current Consumption (no load)	
Mounting	
Order no.	
Output Function	
Connection	
Specials	
Order no.	
Output Function	
Connection	



General Specification of the Following Amplifier

Operating Voltage	10 ... +30 VDC
Output Current	100 mA, Short Circuit Protection
Limiting Frequency	500 Hz
Principle of Operation	Switched
Pulse Extentsion	0 ms, 10 ms, 20 ms, 50 ms, 100 ms oder 200 ms Selectable
Adjustment	Teach-Input
Function / Operating Indicator	yellow and red LED's
Operating Status	LED green
Housing Material / Weight	Plastic ABS, 55g
Ambient Temperature	-10 ... +55 °C
Type of Protection	IP 65
Current Consumption (no load)	max. 50 mA
Mounting	DIN - Rail

Order no.	08369614100	08369614200	08369614500	08369614600
Output Function	NPN	NPN	PNP	PNP
Connection	Connector M12	Connector M8	Connector M12	Connector M8
Specials	Alarm Output	Alarm Output	Alarm Output	Alarm Output
Order no.	08369614000	08369614300	08369614400	08369614700
Output Function	NPN	NPN	PNP	PNP
Connection	2m Cable	Connector M8	2m Cable	Connector M8

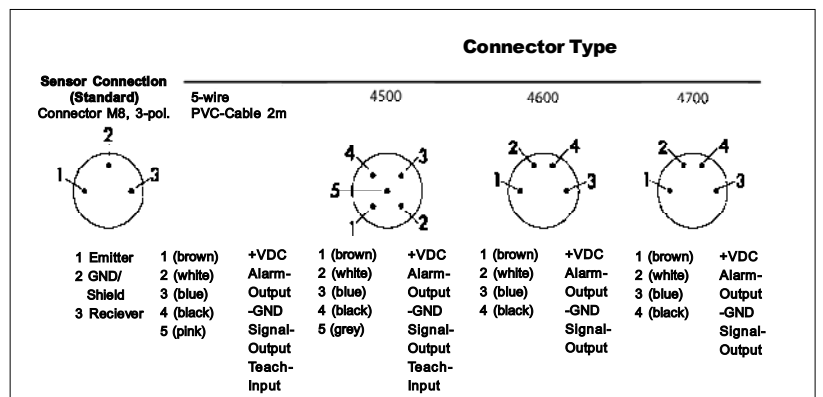
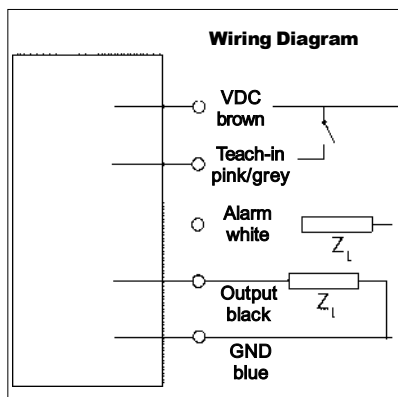


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KOES300-M3MB8-X0301 RL	08363102400	3
KOES800-M3MB8-X0301 IR	08363102500	3
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KOES2000-M5MB11-X0301 IR	08363602900	4
KOES1000-Q6MB12-X0301 IR	08363600500	5
KOES2000-Q6MB12-X0301 IR	08363600600	5
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KORT60-M6MB13-X0301 IR	08361601600	9
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