

design M8x0.75
M12x1
M18x1
M30x1.5

through-beam sensor retro-reflective sensor dif. reflection sensor operating distance operating distance sensing range

up to 10.0m up to 4.0m up to 1.5m

- √ robust metal housing
- √ integrated amplifier, adjustable diffuse reflection sensors
- √ high sampling frequency and sensing ranges
- √ connection with cable, M8- or M12-connector



up to 10m operating distance stainless steel or brass housing









description

These days, optoelectronic sensors are indispensable components in many automated manufacturing processes. They are used everywhere where parts have to be more reliably detected in a way which is fast and without contact, or have to be counted, measured or positioned.

The devices feature a brass housing and are often used in connection with a PLC for automatic production processes and machines.

Through-beam sensors detect objects of any shape, regardless of their color.

Among other things, diffuse reflection sensors with intensity differentiation are suited to differentiate white / black objects. If, in the case of the receivers of through-beam sensors or diffuse reflection sensors, the corresponding LED flashes when the output is switched, the respective device is working without sufficient functional reserve, e.g. due to soiling

or maladjustment. The LED display lights up if the output is securely switched.

The design M18 devices have a programmable output circuit (light-on or dark-on mode).

The transmitting power of the M12 design transmitters can be adjusted using an external potentiometer. Through this the operating distance in connection with the corresponding receiver can be reduced. Furthermore these devices have a test input that makes a selective cut off possible.

application examples

- presence check of various objects
- avoiding collision, in the case of feeding movements
- monitoring of object heights and pile heights
- limit switches, position switches and pulse generators



article-no.	OE080100	OE080170
version	through-beam receiver	through-beam receiver
operating range	2.5m	2.5m
connection	cable	connector
article-no.	OS080000	OS080070
version	through-beam transmitter	through-beam transmitter
operating range	2.5m	2.5m
connection	cable	connector
	M8x0.75 W 11 SW 11 Ø 6.8 LED Ø 2.8	M8x0.75 SW 11 Ø6.5 M8x1
TECHNICAL DATA operating distance	2.5m	2.5m
output signal	pnp dark-on mode *	pnp dark-on mode *
operating voltage	10 30V DC	10 30V DC
current consumption (w/o load)	≤ 24mA (receiver) / ≤ 17mA (transmitter)	≤ 24mA (receiver) / ≤ 17mA (transmitter)
	100mA *	100mA *
output current (max. load)		
	2.0V DC *	
voltage drop (max. load)	2.0V DC * LED, infrared light, 880nm	2.0V DC * LED, Infrarotlicht ,880nm
voltage drop (max. load) transmitting element (pulsed)		2.0V DC *
output current (max. load) voltage drop (max. load) transmitting element (pulsed) response/decay time	LED, infrared light, 880nm < 2.5msec *	2.0V DC * LED, Infrarotlicht ,880nm < 2.5msec *
voltage drop (max. load) transmitting element (pulsed) response/decay time display (signal)	LED, infrared light, 880nm < 2.5msec * red LED *	2.0V DC * LED, Infrarotlicht ,880nm < 2.5msec * red LED *
voltage drop (max. load) transmitting element (pulsed) response/decay time display (signal) display (stand-by)	LED, infrared light, 880nm < 2.5msec *	2.0V DC * LED, Infrarotlicht ,880nm < 2.5msec *
voltage drop (max. load) transmitting element (pulsed) response/decay time display (signal) display (stand-by) sensitivity adjustment	LED, infrared light, 880nm < 2.5msec * red LED * red LED, flashing * -	2.0V DC * LED, Infrarotlicht ,880nm < 2.5msec * red LED * red LED, flashing *
voltage drop (max. load) cransmitting element (pulsed) response/decay time display (signal) display (stand-by) sensitivity adjustment short-circuit protection	LED, infrared light, 880nm < 2.5msec * red LED *	2.0V DC * LED, Infrarotlicht ,880nm < 2.5msec * red LED *
voltage drop (max. load) transmitting element (pulsed) response/decay time display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection	LED, infrared light, 880nm < 2.5msec * red LED * red LED, flashing * - + +	2.0V DC * LED, Infrarotlicht ,880nm < 2.5msec * red LED * red LED, flashing * - + +
voltage drop (max. load) transmitting element (pulsed) response/decay time display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection design	LED, infrared light, 880nm < 2.5msec * red LED * red LED, flashing * - + + M8x0.75	2.0V DC * LED, Infrarotlicht ,880nm < 2.5msec * red LED * red LED, flashing * - + + M8x0.75
voltage drop (max. load) transmitting element (pulsed) response/decay time display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection design ength (thread/complete)	LED, infrared light, 880nm < 2.5msec * red LED * red LED, flashing * - + + M8x0.75 48mm/59mm	2.0V DC * LED, Infrarotlicht ,880nm < 2.5msec * red LED * red LED, flashing * - + + M8x0.75 55mm/75mm
voltage drop (max. load) transmitting element (pulsed) response/decay time display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection design length (thread/complete) housing material	LED, infrared light, 880nm < 2.5msec * red LED * red LED, flashing * - + + + M8x0.75 48mm/59mm nickel-plated brass	2.0V DC * LED, Infrarotlicht ,880nm < 2.5msec * red LED * red LED, flashing * - + + M8x0.75 55mm/75mm nickel-plated brass
voltage drop (max. load) transmitting element (pulsed) response/decay time display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection design ength (thread/complete) nousing material front screen material	LED, infrared light, 880nm < 2.5msec * red LED * red LED, flashing * - + + + M8x0.75 48mm/59mm nickel-plated brass plastic	2.0V DC * LED, Infrarotlicht ,880nm < 2.5msec * red LED * red LED, flashing * - + + M8x0.75 55mm/75mm nickel-plated brass plastic
voltage drop (max. load) transmitting element (pulsed) response/decay time display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection design ength (thread/complete) nousing material front screen material operating temperature	LED, infrared light, 880nm < 2.5msec * red LED * red LED, flashing * - + + + M8x0.75 48mm/59mm nickel-plated brass plastic -25 +65°C	2.0V DC * LED, Infrarotlicht ,880nm < 2.5msec * red LED * red LED, flashing * - + + M8x0.75 55mm/75mm nickel-plated brass plastic -25 +65°C
voltage drop (max. load) transmitting element (pulsed) response/decay time display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection design length (thread/complete) housing material front screen material operating temperature system of protection (EN 60529)	LED, infrared light, 880nm < 2.5msec * red LED * red LED, flashing * - + + M8x0.75 48mm/59mm nickel-plated brass plastic -25 +65°C IP65	2.0V DC * LED, Infrarotlicht ,880nm < 2.5msec * red LED * red LED, flashing * - + + M8x0.75 55mm/75mm nickel-plated brass plastic -25 +65°C IP65
voltage drop (max. load) transmitting element (pulsed) response/decay time display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection design length (thread/complete) housing material front screen material operating temperature system of protection (EN 60529) connection	LED, infrared light, 880nm < 2.5msec * red LED * red LED, flashing * - + + M8x0.75 48mm/59mm nickel-plated brass plastic -25 +65°C IP65 cable, PVC, 3-wire	2.0V DC * LED, Infrarotlicht ,880nm < 2.5msec * red LED * red LED, flashing * - + + M8x0.75 55mm/75mm nickel-plated brass plastic -25 +65°C IP65 M8-connector, 3-pin
voltage drop (max. load) transmitting element (pulsed) response/decay time display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection design length (thread/complete) housing material front screen material operating temperature system of protection (EN 60529)	LED, infrared light, 880nm < 2.5msec * red LED * red LED, flashing * - + + M8x0.75 48mm/59mm nickel-plated brass plastic -25 +65°C IP65	2.0V DC * LED, Infrarotlicht ,880nm < 2.5msec * red LED * red LED, flashing * - + + M8x0.75 55mm/75mm nickel-plated brass plastic -25 +65°C IP65



version	OT080100 dif. reflection sensor with	OT080105	OT080170 dif. reflection sensor with	OT080175 dif. reflection sensor with
	intensity differentiation	intensity differentiation	intensity differentiation	intensity differentiation
operating range	40mm	80mm	40mm	80mm
connection	cable	cable	connector	connector
	M8.0x0.75 W8.0x0.75 SW 11 Ø 6.8 LED Ø 2.8	M8.0x0.75 W8.0x0.75 SW 11 Ø 6.8 LED Ø 2.8	M8x0.75 SW 11 Ø6.5	M8x0.75 SW 11 Ø6.5 M8x1
TECHNICAL DATA	40mm	80mm	40mm	80mm
sensing range output signal	pnp	pnp	pnp	pnp
output signal	light-on mode	light-on mode	light-on mode	light-on mode
operating voltage	10 30V DC	10 30V DC	10 30V DC	10 30V DC
current consumption (w/o load)	≤ 20mA	≤ 20mA	≤ 20mA	≤ 20mA
output current (max. load)	100mA	100mA	100mA	100mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC	2.0V DC
transmitting element (pulsed)	LED, infrared light, 880nm	LED, infrared light, 880nm	LED, infrared light, 880nm	LED, infrared light, 880n
	< 1msec	< 1msec	< 1msec	< 1msec
response/decay time	red LED	red LED	red LED	
	Ted LED		red LED	red LED
display (signal)	red LED, flashing	red LED, flashing	red LED, flashing	red LED red LED, flashing
display (signal) display (stand-by) sensitivity adjustment				
display (signal) display (stand-by) sensitivity adjustment				
display (signal) display (stand-by) sensitivity adjustment short-circuit protection	red LED, flashing -	red LED, flashing -	red LED, flashing -	red LED, flashing
display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection	red LED, flashing - +	red LED, flashing - +	red LED, flashing - +	red LED, flashing - +
display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection design	red LED, flashing - + + M8x0.75 48mm/56mm	red LED, flashing - + + M8x0.75 48mm/56mm	red LED, flashing - + +	red LED, flashing - + +
response/decay time display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection design length (thread/complete) housing material	red LED, flashing - + + M8x0.75	red LED, flashing - + + M8x0.75	red LED, flashing - + + M8x0.75	red LED, flashing - + + M8x0.75
display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection design length (thread/complete) housing material lens material	red LED, flashing - + + M8x0.75 48mm/56mm nickel-plated brass plastic	red LED, flashing - + + M8x0.75 48mm/56mm nickel-plated brass plastic	red LED, flashing - + + M8x0.75 55mm/72mm nickel-plated brass plastic	red LED, flashing - + + M8x0.75 55mm/72mm nickel-plated brass plastic
display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection design length (thread/complete) housing material lens material operating temperature	red LED, flashing - + + M8x0.75 48mm/56mm nickel-plated brass plastic -25 +65°C	red LED, flashing - + + M8x0.75 48mm/56mm nickel-plated brass plastic -25 +65°C	red LED, flashing - + + M8x0.75 55mm/72mm nickel-plated brass plastic -25 +65°C	red LED, flashing - + + M8x0.75 55mm/72mm nickel-plated brass plastic -25 +65°C
display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection design length (thread/complete) housing material lens material	red LED, flashing - + + M8x0.75 48mm/56mm nickel-plated brass plastic	red LED, flashing - + + M8x0.75 48mm/56mm nickel-plated brass plastic	red LED, flashing - + + M8x0.75 55mm/72mm nickel-plated brass plastic	red LED, flashing - + + M8x0.75 55mm/72mm nickel-plated brass plastic
display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection design length (thread/complete) housing material lens material operating temperature	red LED, flashing - + + M8x0.75 48mm/56mm nickel-plated brass plastic -25 +65°C	red LED, flashing - + + M8x0.75 48mm/56mm nickel-plated brass plastic -25 +65°C	red LED, flashing - + + M8x0.75 55mm/72mm nickel-plated brass plastic -25 +65°C	red LED, flashing - + + M8x0.75 55mm/72mm nickel-plated brass plastic -25 +65°C



article-no.	OE120125	OS120020	OT120100	OT120120
version	through-beam	through-beam	dif. reflection sensor with	dif. reflection sensor witl
	receiver	transmitter	intensity differentiation	intensity differentiation
operating range	6m		30 200mm	30 200mm
connection	connector	connector	cable	connector
	M12x1 9; SW17 LED 0: Ø 10.5	M12x1 SW17 LED O Ø 10.5	M12x1 SW17 Poti LED Ø 10.5	M12x1 SW17 SW17 Poti O LED Ø 10.5 M12x1
TECHNICAL DATA operating distance/sensing range output signal	6m pnp	(external adjustable) -	30 200mm pnp	30 200mm pnp
	light-on mode		light-on mode	light-on mode
operating voltage	10 30V DC	10 30V DC	10 30V DC	10 30V DC
current consumption (w/o load)	≤ 20mA	≤ 28mA	≤ 24mA	≤ 24mA
output current (max. load)	100mA		200mA	200mA
voltage drop (max. load)	2.1V DC	-	1.8V DC	1.8V DC
transmitting element (pulsed)		LED, infrared light, 880nm	LED, infrared light, 880nm	LED, infrared light, 880nn
response/decay time	< 6msec		< 1msec	< 1msec
display (signal)	red LED		yellow LED	yellow LED
display (operation)		green LED		
display (stand-by)	-	-	yellow LED, flashing	yellow LED, flashing
sensitivity adjustment	potentiometer	-	potentiometer	potentiometer
short-circuit protection	+	+	+	+
reverse polarity protection	+	+	+	+
design	M12x1	M12x1	M12x1	M12x1
length (thread/complete)	52.5mm/70mm	52.5mm/70mm	42mm/70.5mm	42mm/81mm
housing material	stainless steel	stainless steel	nickel-plated brass	nickel-plated brass
lens material	plastic	plastic	plastic	plastic
operating temperature	-25 +55°C	-25 +55°C	-25 +65°C	-25 +65°C
system of protection (EN 60529)	-23 +33 C	-25 +35 C	-25 +65 C	-23 +63 C
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connection connection accessories	M12-connector, 3-pin e.g. VK200025 , 2m straight, PUR	M12-connector, 3-pin e.g. VK200025, 2m straight, PUR	cable, 2m, PVC, 3-wire -	M12-connector, 3-pin e.g. VK200025 , 2m straight, PUR



article-no. version operating range connection	OE180303 through-beam receiver 10m cable	OE180323 through-beam receiver 10m connector	
article-no. version	OS180003	OS180023 through-beam transmitter	
operating range	through-beam transmitter 10m	10m	
connection	cable	connector	
	M18x1 SW 24 Poti Ø 16.5 potentiometer only receiver	M18x1 SW 24 Poti LED Ø 16.5 M12x1 potentiometer only receiver	
TECHNICAL DATA			
operating distance	10m	10m	
output signal	pnp light-on / dark-on mode *	pnp light-on / dark-on mode *	
operating voltage	10 30V DC	10 30V DC	
current consumption (w/o load)	≤ 25mA (receiver) / ≤ 25mA (transmitter)	≤ 25mA (receiver) / ≤ 25mA (transmitter)	
output current (max. load)	100mA *	100mA *	
voltage drop (max. load)	2.0V DC *	2.0V DC *	
ransmitting element (pulsed)	LED, infrared light, 880nm	LED, infrared light, 880nm < 1.0msec *	
esponse/decay time	< 1.0msec*		
lisplay (signal)	yellow LED *	yellow LED *	
lisplay (operation)	green LED	green LED	
lisplay (stand-by) ensitivity adjustment	green LED, flashing * potentiometer *	green LED, flashing * potentiometer *	
hort-circuit protection	+	+	
everse polarity protection	+	+	
esign	M18x1	M18x1	
ength (thread/complete)	35mm/60mm	35mm/71mm	
ousing material	nickel-plated brass	nickel-plated brass	
ront screen material	plastic	plastic	
perating temperature	-25 +55°C	-25 +55°C	
ystem of protection (EN 60529)	IP67	IP67	
connection	cable, PVC, 4-wire	M12-connector, 4-pin	
connection accessories	-	e.g. VK200325 , 2m	
* only receiver		straight, PUR	



article-no.	OR180303	OR180323	OT180303	OT180323
version	retro-refl. sensor	retro-refl. sensor	dif. reflection sensor	dif. reflection sensor
operating range	4m	4m	200mm	200mm
connection	cable	connector	cable	connector
	M18x1 SW 24 8 Poti Ø 16.5 LED	M18x1 SW 24 SW 24 SW 24 M12x1	M18x1 SW 24 88 Ø 16.5	M18x1 SW 24 Poti LED Ø 16.5 PM12x1
TECHNICAL DATA				
operating distance/sensing range	4m	4m	0 200mm	0 200mm
output signal	pnp light-on / dark-on mode	pnp light-on / dark-on mode	pnp light-on / dark-on mode	pnp light-on / dark-on mode
operating voltage	10 30V DC	10 30V DC	10 30V DC	10 30V DC
current consumption (w/o load)	≤ 15mA	≤ 15mA	≤ 25mA	≤ 25mA
output current (max. load)	200mA	200mA	100mA	100mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.5V DC	2.5V DC
transmitting element (pulsed)	LED, infrared light, 880nm	LED, infrared light, 880nm	LED, infrared light, 880nm	LED, infrared light, 880nn
response/decay time	< 1msec	< 1msec	< 1msec	< 1msec
display (signal)	yellow LED	yellow LED	yellow LED	yellow LED
display (operation)	green LED	green LED	green LED	green LED
display (stand-by)	green LED, flashing	green LED, flashing	green LED, flashing	green LED, flashing
sensitivity adjustment	potentiometer	potentiometer	potentiometer	potentiometer
short-circuit protection	+	+	+	+
reverse polarity protection	+	+	+	+
design	M18x1	M18x1	M18x1	M18x1
length (thread/complete)	35mm/60mm	35mm/71mm	35mm/60mm	35mm/71mm
housing material	nickel-plated brass	nickel-plated brass	nickel-plated brass	nickel-plated brass
front screen material	plastic	plastic	plastic	plastic
operating temperature	-25 +55°C	-25 +55°C	-25 +55°C	-25 +55°C
system of protection (EN 60529)	IP67	IP67	IP67	IP67
connection	cable, PVC, 4-wire	M12-connector, 4-pin	cable, PVC, 4-wire	M12-connector, 4-pin
connection accessories		e.g. VK200325 straight, PUR, 2m		e.g. VK200325 straight, PUR, 2m



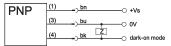
article-no. version operating range	OT300400	OT300420
operating range	dif. reflection sensor	dif. reflection sensor
-	1.5m	1.5m
connection	cable	M12-cable-connector
	M30x1.5 W 36 W 36 W 4.5 Poti LED	M30x1.5 W 27.8 Poti LED
TECHNICAL DATA sensing range output signal	1.5m pnp	1.5m pnp
sensing range output signal	pnp light-on / dark-on mode	pnp light-on / dark-on mode
sensing range output signal operating voltage	pnp light-on / dark-on mode 10 30V DC	pnp light-on / dark-on mode 10 30V DC
sensing range putput signal operating voltage current consumption (w/o load)	pnp light-on / dark-on mode 10 30V DC ≤ 50mA	pnp light-on / dark-on mode 10 30V DC ≤ 50mA
poperating voltage current consumption (w/o load) population (with a consumption (with	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA
pensing range putput signal perating voltage current consumption (w/o load) putput current (max. load) voltage drop (max. load)	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC
pensing range putput signal personal pe	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm
output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed) response/decay time	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec
output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed) response/decay time display (signal)	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED
poensing range poutput signal poperating voltage current consumption (w/o load) poutput current (max. load) voltage drop (max. load) transmitting element (pulsed) response/decay time display (signal) display (stand-by)	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED yellow LED, flashing	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED yellow LED, flashing
poutput signal poperating voltage current consumption (w/o load) putput current (max. load) voltage drop (max. load) cransmitting element (pulsed) response/decay time display (signal) display (stand-by) sensitivity adjustment	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED yellow LED, flashing potentiometer	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED yellow LED, flashing potentiometer
pensing range putput signal perating voltage current consumption (w/o load) putput current (max. load) voltage drop (max. load) cransmitting element (pulsed) response/decay time display (signal) display (stand-by) sensitivity adjustment short-circuit protection	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED yellow LED yellow LED, flashing potentiometer +	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED yellow LED, flashing potentiometer +
persing range putput signal persing voltage current consumption (w/o load) putput current (max. load) politage drop (max. load) cransmitting element (pulsed) response/decay time display (signal) display (stand-by) pensitivity adjustment short-circuit protection reverse polarity protection	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED yellow LED yellow LED, flashing potentiometer + +	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED yellow LED yellow LED, flashing potentiometer + +
perating voltage current consumption (w/o load) cutput current (max. load) cutput current (max. load) cutput current (max. load) transmitting element (pulsed) cresponse/decay time display (signal) display (stand-by) censitivity adjustment chort-circuit protection creverse polarity protection design	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED yellow LED, flashing potentiometer + + H M30x1.5	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED yellow LED, flashing potentiometer + + H M30x1.5
pensing range putput signal perating voltage current consumption (w/o load) putput current (max. load) voltage drop (max. load) transmitting element (pulsed) response/decay time display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection design length (thread/complete)	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED yellow LED, flashing potentiometer + + M30x1.5 52mm/66mm	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED yellow LED, flashing potentiometer + + + M30x1.5 52mm/66mm
pensing range putput signal personal pe	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED yellow LED yellow LED, flashing potentiometer + + + M30x1.5 52mm/66mm nickel-plated brass	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED yellow LED, flashing potentiometer + + + M30x1.5 52mm/66mm nickel-plated brass
pensing range putput signal perating voltage current consumption (w/o load) putput current (max. load) voltage drop (max. load) transmitting element (pulsed) response/decay time display (signal) display (stand-by) sensitivity adjustment short-circuit protection reverse polarity protection design length (thread/complete) housing material	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED yellow LED yellow LED, flashing potentiometer + + + M30x1.5 52mm/66mm nickel-plated brass plastic	pnp light-on / dark-on mode 10 30V DC ≤ 50mA 100mA 2.5V DC LED, infrared light, 880nm < 2.5msec yellow LED yellow LED, flashing potentiometer + + + M30x1.5 52mm/66mm nickel-plated brass plastic
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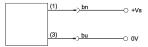
1200 THROUGH-BEAM, RETRO-REFLECTIVE, DIF. REFLECTION SENSORS

connection

through-beam receiver, dif. reflection sensor



through-beam transmitter



through-beam transmitter OS12

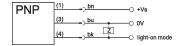


system test OS12: Disabling the transmitter via closing a switch between blue (3) and black (4).

power adjustment OS12: Controlling of the transmitting power via connection of a potentiometer between blue (3) and black (4).

wire colors: bn = brown (1), wh = white (2), bu =blue (3), bk = black (4)

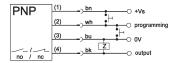
retro-reflective sensor



dif. reflection sensor OT30



through-beam reciever OE18, retro-reflective senseor OR18, dif. reflection sensor OT18



light-on mode: connection between white (2) and brown (1)

dark-on mode: connection between white (2) and blue (3)

ARTICLE-NO.	DESCRIPTION	MATERIAL
AY000088	base module *	flanges: stainless steel, ball pin: steel zinced
AY000089	fixture kit for M8x1 sensors	stainless steel
AY000090	fixture kit for M12x1 sensors	stainless steel
AY000091	fixture kit for M18x1 sensors	stainless steel

^{*} The base module **AY000088** is included in every fixture kit. Material of the screws and nuts: galvanized steel

ARTICLE-NO.	DESCRIPTION	FOR SENSOR DIAMETER	MATERIAL CLIP/SCREW
AY000047	quick clip	8mm	PA6 / galvanized steel
AY000048	quick clip with positive stop	8mm	PA6 / galvanized steel
AY000049	quick clip	12mm	PA6 / galvanized steel
AY000050	quick clip with positive stop	12mm	PA6 / galvanized steel
AY000051	quick clip	18mm	PA6 / galvanized steel
AY000052	quick clip with positive stop	18mm	PA6 / galvanized steel
AY000061	quick clip	30mm	PA6 / galvanized steel
AY000062	quick clip with positive stop	30mm	PA6 / galvanized steel
AY000053	straight base for quick clip	12mm, 18mm	PA6 / galvanized steel
AY000054	angular base for quick clip	12mm, 18mm	PA6 / galvanized steel
AY000055	quick clip identification labels	12 30mm	plastic / -
AY000057	box set with selection of quick clips	4 18mm	plastic / -

This data sheet contains the standard versions only. Kindly request the availability of other output- and connection functions.

We will be pleased to supply the matching cable socket for your devices with connector. Please refer to the list in catalog chapter "accessories" under "cable sockets **ipf-SENSORFLEX**®" or search our website for "VK".

Warning: Never use these devices in applications where the safety of a person depends on their functionality.