IPF ELECTRONIC **OPTICAL SENSORS** THROUGH-BEAM, RETRO-REFLECTIVE, DIF. REFLECTION SENSORS 1800

dimensions

12 x 27 x 14mm 12 x 27 x 16.3mm

through-beam sensors	range
retro-reflective sensors	operating range
dif. reflection sensors	sensing range

5m 3.5m 5 to 200mm

- ✓ special versions for glass detection or with linear red light beam
- diffuse reflection sensor with either intensity differentiation or background suppression
- range or sensing range adjustable with through-beam sensors and diffuse reflection sensors
- ✓ retro-reflective sensors with polarizing filter
- ✓ plastic housing, subminiature design
- ✓ LED switching state display with alignment-aid
- ✓ integrated amplifier
- ✓ high switching frequency and switching distances
- connection via cable, M8-connector, 4-pin or M8 cable connector, 3-pin

performance giant in spite of tiny size optimal – with visible red light!



description

ipf sensors of this series are optoelectronic proximity switches with a very high accuracy in an extremely small and compact design.

The through-beam sensors operate over a range of up to 5000mm. The retro-reflective sensors (with built-in polarizing filter) up to 3500m.

Diffuse reflection sensors are available with both intensity differentiation as well as with background suppression through triangulation.

For the version with background suppression, objects are reliably detected independent of their color, since their position is calculated from the angle of the reflected light.

These sensors allow very accurate detection of the smallest objects, even in rapid production sequences.

The sensors operate with visible red light, which allows for an easy alignment with the object to be detected and a comfortable adjustment.

Possible misalignment or soiled optics are signalled by the flashing of the switching state display.

Functional monitoring of the devices is possible via a test input

in the transmitter of the through-beam sensor. For this, the operating voltage potential is applied to the corresponding contact. The transmitter is switched off. Through this, the basic alignment of the transmitter to the receiver can be checked. The retro-reflective sensors are equipped with a polarizing filter. The reliable detection of reflective objects and mutual interference suppression by further through-beam sensors is thereby ensured. The interference suppression function is also available for diffuse reflection sensors.

Optical sensors are frequently used in combination with a programmable logic controller (PLC).

Matching standard mounting brackets are included in the scope of delivery.

application examples

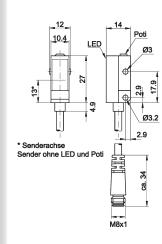
- limit switches, position switches and pulse generators in automatic machinery and production processes
- precise detection of minute objects made from metal, glass, plastic (films), wood, paper, etc.

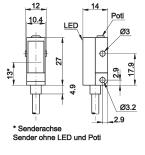
OPTICAL SENSORS

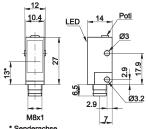


1800 THROUGH-BEAM, RETRO-REFLECTIVE, DIF. REFLECTION SENSORS

article-no.	OE140170	OE140406	OE140476
version	through-beam sensor receiver	through-beam sensor receiver	through-beam sensor receiver
connection	M8 cable connector, PVC	cable, PUR	M8-connector
output	pnp, dark-on mode	pnp, light-on/dark-on mode	pnp, light-on/dark-on mode
article-no.	OS140070	OS140006	OS140076
version	through-beam sensor transmitter	through-beam sensor transmitter	through-beam sensor transmitter
connection	M8 cable connector, PVC	cable, PUR	M8-connector
operating range	5m	5m	5m







* Senderachse Sender ohne LED und Poti

TECHNICAL DATA

range	5m	5m	5m
output signal**	pnp, 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
current consumption (w/o load)	≤ 23mA* / ≤ 16mA**	≤ 23mA* / ≤ 16mA**	≤ 23mA* / ≤ 16mA**
output current (max. load)**	100mA	100mA	100mA
voltage drop (max. load)**	1.8V DC	1.8V DC	1.8V DC
transmitting element (pulsed)*	LED, red light	LED, red light	LED, red light
wavelength*	660nm	660nm	660nm
response/decay time**	< 1.4ms	< 1.4ms	< 1.4ms
switching frequency	350Hz	350Hz	350Hz
display (signal)**	yellow LED, continuous light	yellow LED, continuous light	yellow LED, continuous light
display (functional reserve)**	yellow LED, flashing	yellow LED, flashing	yellow LED, flashing
sensitivity adjustment**	potentiometer 270°	potentiometer 270°	potentiometer 270°
interference suppression	-	-	-
test input*	+	+	+
short-circuit protection**	+	+	+
reverse polarity protection	+	+	+
dimensions	12x27x14mm	12x27x14mm	12x27x14mm
housing material	plastic (ASA)	plastic (ASA)	plastic (ASA)
front screen material	PMMA	PMMA	PMMA
operating temperature	-25 +65°C	-25 +65°C	-25 +65°C
degree of protection (EN 60529)	IP65	IP65	IP67
connection	M8 cable connector, 200mm, 3-pin	2m cable, 4-wire	M8-connector, 4-pin
connection accessories	e.g. VK200075	-	e.g. VK200375
mounting accessories	e.g. AU000073	e.g. AO000073	e.g. AO000073
mounting accessories (universal ho	lder) AY000116	AY000116	AY000116

** only receiver

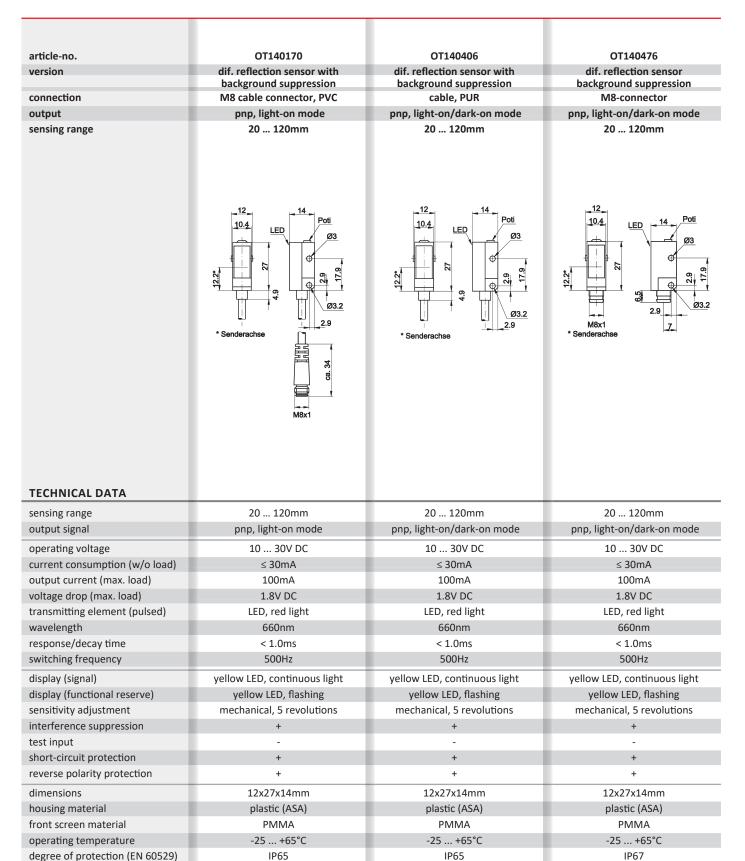
IPF ELECTRONIC **OPTICAL SENSORS** THROUGH-BEAM, RETRO-REFLECTIVE, DIF. REFLECTION SENSORS 1800

article-no. version	OR140404 retro-reflective sensor	OR140474 retro-reflective sensor
	with polarizing filter	with polarizing filter M8-connector
connection output	cable, PUR pnp, light-on/dark-on mode	
range	3.5m	pnp, light-on/dark-on mode 3.5m
Tange	5.511	3.311
	* Senderachse	HBX1 * Senderachse
TECHNICAL DATA range output signal	3.5m pnp, light-on/dark-on mode	3.5m pnp, light-on/dark-on mode
operating voltage	10 30V DC	10 30V DC
current consumption (w/o load)	≤ 25mA	≤ 25mA
output current (max. load)	100mA	100mA
voltage drop (max. load)	1.8V DC	1.8V DC
transmitting element (pulsed)	LED, red light	LED, red light
wavelength	660nm	660nm
response/decay time	< 0.5ms	< 0.5ms
switching frequency	1kHz	1kHz
display (signal)	yellow LED, continuous light	yellow LED, continuous light
		yenen izz, continuous igne
display (functional reserve)	yellow LED, flashing	yellow LED, flashing
	yellow LED, flashing -	
display (functional reserve)		yellow LED, flashing
display (functional reserve) sensitivity adjustment	-	yellow LED, flashing -
display (functional reserve) sensitivity adjustment interference suppression	+	yellow LED, flashing - +
display (functional reserve) sensitivity adjustment interference suppression test input	+	yellow LED, flashing - + -
display (functional reserve) sensitivity adjustment interference suppression test input short-circuit protection	- + - +	yellow LED, flashing - + - +
display (functional reserve) sensitivity adjustment interference suppression test input short-circuit protection reverse polarity protection	- + - + + +	yellow LED, flashing - + - + + + +
display (functional reserve)sensitivity adjustmentinterference suppressiontest inputshort-circuit protectionreverse polarity protectiondimensions	- + - + + + 12x27x16.3mm	yellow LED, flashing - + - + + + 12x27x16.3mm
display (functional reserve)sensitivity adjustmentinterference suppressiontest inputshort-circuit protectionreverse polarity protectiondimensionshousing material	- + - + + 12x27x16.3mm plastic (ASA)	yellow LED, flashing - + - + + 12x27x16.3mm plastic (ASA)
display (functional reserve)sensitivity adjustmentinterference suppressiontest inputshort-circuit protectionreverse polarity protectiondimensionshousing materialfront screen material	- + - + + 12x27x16.3mm plastic (ASA) PMMA	yellow LED, flashing - + - + 12x27x16.3mm plastic (ASA) PMMA
display (functional reserve)sensitivity adjustmentinterference suppressiontest inputshort-circuit protectionreverse polarity protectiondimensionshousing materialfront screen materialoperating temperature	- + - + 12x27x16.3mm plastic (ASA) PMMA -25 +65°C IP65	yellow LED, flashing - + - + 12x27x16.3mm plastic (ASA) PMMA -25 +65°C
display (functional reserve)Image: Sensitivity adjustmentsensitivity adjustmentImage: Sensitivity adjustmentinterference suppressionImage: Sensitivity adjustmenttest inputImage: Sensitivity adjustmentshort-circuit protectionImage: Sensitivity adjustmentreverse polarity protectionImage: Sensitivity adjustmentdimensionsImage: Sensitivity adjustmenthousing materialImage: Sensitivity adjustmentoperating temperatureImage: Sensitivity adjustmentdegree of protection (EN 60529)Image: Sensitivity adjustment	- + - + + 12x27x16.3mm plastic (ASA) PMMA -25 +65°C	yellow LED, flashing - + - + + 12x27x16.3mm plastic (ASA) PMMA -25 +65°C IP67
display (functional reserve)Image: Sensitivity adjustmentImage: Sensitivity adjustmentsensitivity adjustmentImage: Sensitivity adjustmentImage: Sensitivity adjustmentinterference suppressionImage: Sensitivity adjustmentImage: Sensitivity adjustmenttest inputImage: Sensitivity adjustmentImage: Sensitivity adjustmentshort-circuit protectionImage: Sensitivity adjustmentImage: Sensitivity adjustmentshort-circuit protectionImage: Sensitivity adjustmentImage: Sensitivity adjustmentdimensionsImage: Sensitivity adjustmentImage: Sensitivity adjustmenthousing materialImage: Sensitivity adjustmentImage: Sensitivity adjustmentoperating temperatureImage: Sensitivity adjustmentImage: Sensitivity adjustmentdegree of protection (EN 60529)Image: Sensitivity adjustmentImage: Sensitivity adjustmentconnectionImage: Sensitivity adjustmentImage: Sensitivity adjustmentImage: Sensitivity adjustment	- + - + + 12x27x16.3mm plastic (ASA) PMMA -25 +65°C IP65 2m cable, 4-wire	yellow LED, flashing + + +

OPTICAL SENSORS



1800 THROUGH-BEAM, RETRO-REFLECTIVE, DIF. REFLECTION SENSORS



connection

connection accessories

mounting accessories

mounting accessories (universal holder)

2m cable, 4-wire

e.g. AO000073

AY000116

M8-connector, 4-pin

e.g. VK200375

e.g. AO000073

AY000116

M8 cable connector, 200mm, 3-pin

e.g. VK200075

e.g. AO000073

AY000116

IPF ELECTRONIC **OPTICAL SENSORS** THROUGH-BEAM, RETRO-REFLECTIVE, DIF. REFLECTION SENSORS 1800

article-no.	OT140405	OT140475
version	dif. reflection sensor with	dif. reflection sensor with
	intensity differentiation	intensity differentiation
connection	cable, PUR	M8-connector
output	pnp, light-on/dark-on mode	pnp, light-on/dark-on mode
sensing range	5 200mm	5 200mm
	* Senderachse	M8x1 * Senderachse
TECHNICAL DATA		
sensing range	5 200mm	5 200mm
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 output signal operating voltage current consumption (w/o load)	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA
sensing range output signal operating voltage current consumption (w/o load) output current (max. load)	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA
sensing range output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load)	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC
sensing range output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed)	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light
sensing range output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm
sensing range output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength response/decay time	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms
sensing range output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength response/decay time switching frequency	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms 500Hz	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms 500Hz
sensing range output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength response/decay time switching frequency display (signal)	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms 500Hz yellow LED, continuous light	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms 500Hz yellow LED, continuous light
sensing range output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength response/decay time switching frequency display (signal) display (functional reserve)	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms 500Hz yellow LED, continuous light yellow LED, flashing	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms 500Hz yellow LED, continuous light yellow LED, flashing
sensing range output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength response/decay time switching frequency display (signal) display (functional reserve) sensitivity adjustment	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms 500Hz yellow LED, continuous light yellow LED, flashing potentiometer 270°
sensing range output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength response/decay time switching frequency display (signal) display (functional reserve) sensitivity adjustment interference suppression	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms 500Hz yellow LED, continuous light yellow LED, flashing	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms 500Hz yellow LED, continuous light yellow LED, flashing
sensing range output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength response/decay time switching frequency display (signal) display (functional reserve) sensitivity adjustment interference suppression test input	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms 500Hz yellow LED, continuous light yellow LED, flashing potentiometer 270° + -	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms 500Hz yellow LED, continuous light yellow LED, flashing potentiometer 270° + -
sensing range output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength response/decay time switching frequency display (signal) display (signal) display (functional reserve) sensitivity adjustment interference suppression test input short-circuit protection	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms 500Hz yellow LED, continuous light yellow LED, flashing potentiometer 270° + - +	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms 500Hz yellow LED, continuous light yellow LED, flashing potentiometer 270° + - +
sensing range output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength response/decay time switching frequency display (signal) display (functional reserve) sensitivity adjustment interference suppression test input	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms 500Hz yellow LED, continuous light yellow LED, flashing potentiometer 270° + -	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms 500Hz yellow LED, continuous light yellow LED, flashing potentiometer 270° + -
sensing range output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength response/decay time switching frequency display (signal) display (signal) display (functional reserve) sensitivity adjustment interference suppression test input short-circuit protection reverse polarity protection dimensions	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms
sensing range output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength response/decay time switching frequency display (signal) display (signal) display (functional reserve) sensitivity adjustment interference suppression test input short-circuit protection reverse polarity protection dimensions housing material	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 100mA 1.8V DC LED, red light 660nm < 1.0ms	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms
sensing rangeoutput signaloperating voltagecurrent consumption (w/o load)output current (max. load)voltage drop (max. load)voltage drop (max. load)transmitting element (pulsed)wavelengthresponse/decay timeswitching frequencydisplay (signal)display (functional reserve)sensitivity adjustmentinterference suppressiontest inputshort-circuit protectionreverse polarity protectiondimensionshousing materialfront screen material	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 100mA 1.8V DC LED, red light 660nm < 1.0ms	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms
sensing rangeoutput signaloperating voltagecurrent consumption (w/o load)output current (max. load)voltage drop (max. load)voltage drop (max. load)transmitting element (pulsed)wavelengthresponse/decay timeswitching frequencydisplay (signal)display (functional reserve)sensitivity adjustmentinterference suppressiontest inputshort-circuit protectionreverse polarity protectiondimensionshousing materialfront screen materialoperating temperature	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 100mA 1.8V DC LED, red light 660nm < 1.0ms	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms
sensing rangeoutput signaloperating voltagecurrent consumption (w/o load)output current (max. load)voltage drop (max. load)voltage drop (max. load)transmitting element (pulsed)wavelengthresponse/decay timeswitching frequencydisplay (signal)display (functional reserve)sensitivity adjustmentinterference suppressiontest inputshort-circuit protectionreverse polarity protectiondimensionshousing materialfront screen material	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 100mA 1.8V DC LED, red light 660nm < 1.0ms	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms
sensing rangeoutput signaloperating voltagecurrent consumption (w/o load)output current (max. load)voltage drop (max. load)voltage drop (max. load)transmitting element (pulsed)wavelengthresponse/decay timeswitching frequencydisplay (signal)display (functional reserve)sensitivity adjustmentinterference suppressiontest inputshort-circuit protectionreverse polarity protectiondimensionshousing materialfront screen materialoperating temperature	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 100mA 1.8V DC LED, red light 660nm < 1.0ms	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms
sensing rangesensing rangeoutput signalioperating voltageicurrent consumption (w/o load)ioutput current (max. load)ivoltage drop (max. load)itransmitting element (pulsed)iwavelengthiresponse/decay timeiswitching frequencyidisplay (signal)idisplay (functional reserve)isensitivity adjustmentiinterference suppressionitest inputishort-circuit protectionidimensionsihousing materialioperating temperatureidegree of protection (EN 60529)i	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms
sensing range output signal output signal output signal output signal output signal output current (max. load) output current (pulsed)	pnp, light-on/dark-on mode 10 30V DC ≤ 30mA 100mA 1.8V DC LED, red light 660nm < 1.0ms	pnp, light-on/dark-on mode10 30V DC≤ 30mA100mA1.8V DCLED, red light660nm< 1.0ms

OPTICAL SENSORS



e.g. AO000073

AY000116

1800 THROUGH-BEAM, RETRO-REFLECTIVE, DIF. REFLECTION SENSORS

article-no.	OT140477	OT140478	OT140479
version	dif. reflection sensor with	dif. reflection sensor with	dif. reflection sensor with
	background suppression	background suppression	background suppression
	linear beam	glass detection	small beam diameter
connection	M8-connector	M8-connector	M8-connector
output	pnp, light-on/dark-on mode	pnp, light-on/dark-on mode	pnp, light-on/dark-on mode
sensing range	20 80mm	10 30mm	25 120mm
TECHNICAL DATA sensing range output signal	20 80mm pnp, light-on/dark-on mode	10 30mm pnp, light-on/dark-on mode	25 120mm pnp, light-on/dark-on mode
operating voltage	10 30V DC	10 30V DC	10 30V DC
current consumption (w/o load)	≤ 30mA	≤ 30mA	≤ 30mA
output current (max. load)	100mA	100mA	100mA
voltage drop (max. load)	1.8V DC	1.8V DC	1.8V DC
transmitting element (pulsed)	LED, red light	LED, red light	LED, red light
wavelength	660nm	660nm	660nm
beam diameter	•		2mm at distance focus 35 45mm
response/decay time	< 1.0ms	< 1.0ms	< 1.0ms
switching frequency	< 500Hz	< 500Hz	< 500Hz
display (signal)	yellow LED, continuous light	yellow LED, continuous light	yellow LED, continuous light
display (functional reserve)	yellow LED, flashing	yellow LED, flashing	yellow LED, flashing
sensitivity adjustment	mechanical, 5 revolutions	mechanical, 5 revolutions	mechanical, 5 revolutions
interference suppression	+	+	+
test input	-	-	-
short-circuit protection	+	+	+
reverse polarity protection	+	+	+
dimensions	12x27x14mm	12x27x14mm	12x27x14mm
housing material	plastic (ASA)	plastic (ASA)	plastic (ASA)
front screen material	PMMA	PMMA	PMMA
operating temperature	-25 +65°C	-25 +65°C	-25 +65°C
degree of protection (EN 60529)	-25 +65 C IP67	-25 +65 C IP67	IP67
connection	M8-connector, 4-pin	M8-connector, 4-pin	M8-connector, 4-pin
connection accessories	e.g. VK200375	e.g. VK200375	e.g. VK200375

mounting accessories

mounting accessories (universal holder)

e.g. AO000073

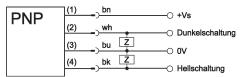
AY000116

e.g. AO000073

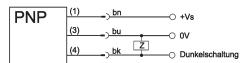
AY000116

connection

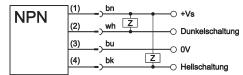
light-on and dark-on mode



M8 cable connector devices, dark-on mode



light-on and dark-on mode



M8 cable connector devices, light-on mode

PNP	(1) <u>bn</u>	+Vs
	(3) bu	
	(4) <u>bk</u> Z	Hellschaltung

M8 cable connector devices, transmitter through-beam sensor

(1)	-) bn	-	-0 +Vs
(3)	-) bu		-0 0V
(4)	-) bk	 -	-O Test

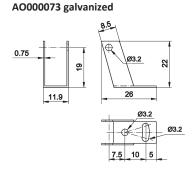
transmitter through-beam sensor

(1)	bn ,	
(2)	wh	n. c.
(3)	bu	
(4)	bk	H
	, ,	⊖ n. c. ⊖ 0V ⊢ ⊖ Test

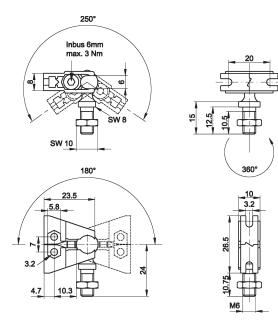
wire colors: bn = brown (1), wh = white (2), bu = blue (3), bk = black (4)

OPTICAL SENSORS IPF ELECTRONIC 1800 THROUGH-BEAM, RETRO-REFLECTIVE, DIF. REFLECTION SENSORS

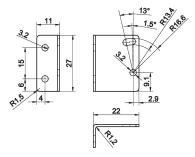
mounting bracket



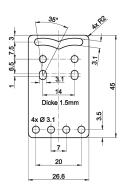
mounting accessories (universal holder) AY000116 consisting of base module



AO000073 galvanized



... and fitting panel



ACCESSORIES

article-no.	description	note
AY000088	base module *	jaw: stainless steel, ball pin: galvanized steel
AY000116	mounting kit for sensors Ox14	stainless steel

* The AY000088 base module is contained in every mounting kit. Material of bolts and nuts: galvanized steel

This data sheet contains only the available standard versions. Please contact us for other output and connection versions.

We will be pleased to supply the matching cable socket for your connector devices. 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.

This data sheet as well as your personal contact can be found at www.ipf-electronic.com

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