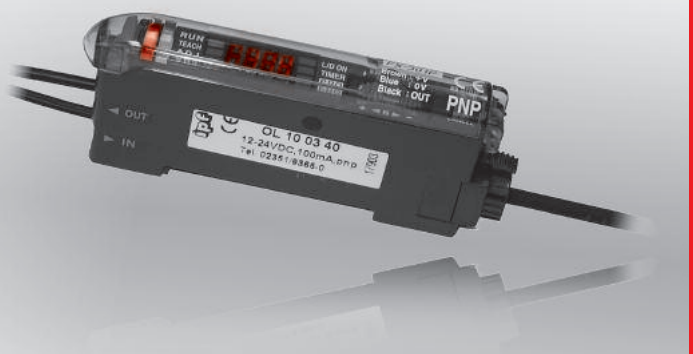
fiber optic amplifiers 1400

design		**10 x 30.5 x 70.5mm**
plastic optic fiber	through-beam sensors	**up to 14m**
	dif. reflection sensors	**up to 230mm**



- ✓ **increased operating distance and sensing range**
- ✓ **multi-timer function**
- ✓ **optic data transmission function for up to 16 amplifiers**
- ✓ **operating mode selection switch for easy programming of all functions**
- ✓ **4-digit 7-segment LED-display**
- ✓ **crosstalk suppression for up to 4 amplifiers**
- ✓ **high external light shielding**
- ✓ **LED-displays for status, stand-by function and programming**
- ✓ **short-circuit and reverse polarity protection**
- ✓ **robust plastic housing**
- ✓ **socket connection, matching 2m or 5m connection cables**

intuitive teach-in control
red, blue, green, or IR LED

description

The **OL10** series sets a new standard for optical sensors with fiber optics. The extended operating distance and sensing range resulting from the use of a new optical lens, the optical data transmission function and the external sensitivity setting (optional) represent just the most important features of this multi-intelligent fiber optic sensor amplifier.
A new 4 element LED has been provided as the light source, making it unnecessary to install a voltage adjuster to stabilize the transmitting power. The **OL10** range is specifically suited for frequently changing production sequences, when several sensors are used as well as when a very accurate sensitivity setting is required.
Typical applications are the detection of contrast marks and metal pins, film width recognition, object recognition, recognition of very small objects on robot arms and conveyor belts. The setting of the installed function is adapted to the application with the assistance of the operating mode selection switch. The installed IR-port enables the synchronization of up to 4 amplifiers and the passing-on of the settings to up to 15 further fiber optic amplifiers.
An integrated function allows for a reduction of the transmitting power via a push on the button. This way strongly reflecting and highly transparent materials can be measured without any problems and without saturated operation.
The **OL100346** offers further functions: window comparator, difference and alarm output function.

application examples

- detection of marks
- qualitative check of imprints
- presence check of metal pins
- film width recognition

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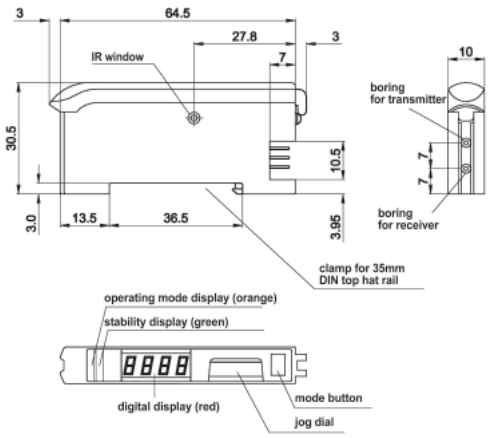
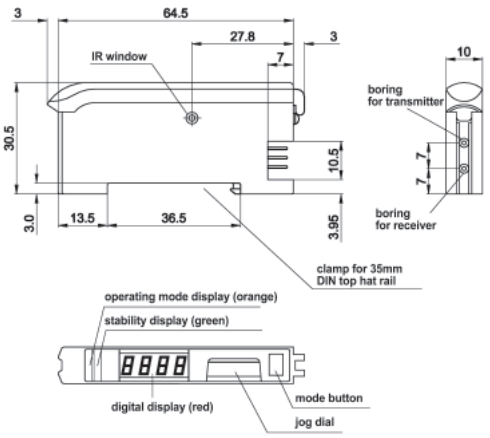
Subject to alteration! Version: May 2011

fiber optic sensors

1400 fiber optic amplifiers

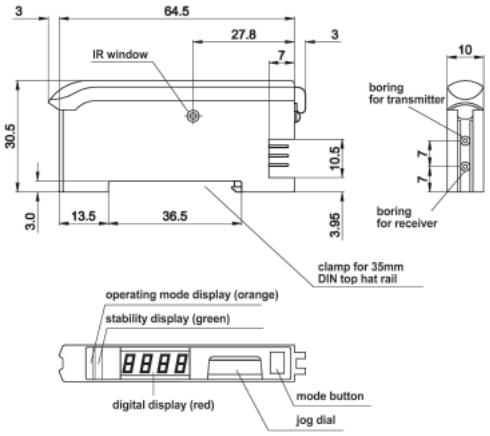
article-no.	OL100340	OL100341
version	red light	red light

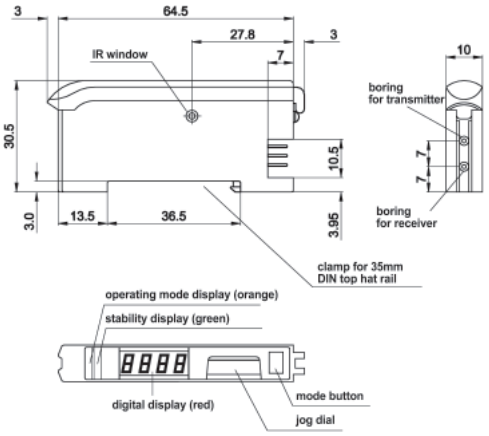




TECHNICAL DATA		
operating distance	through-beam sensor: depending on used fiber optics up to 14m	through-beam sensor: depending on used fiber optics up to 14m
sensing range	dif. reflection sensor: depending on used fiber optics up to 230mm	dif. reflection sensor: depending on used fiber optics up to 230mm
output signal	pnp, no / nc, programmable	pnp, no / nc, programmable
operating voltage	12 ... 24V DC ±10%	12 ... 24V DC ±10%
current consumption (w/o load)	≤ 40mA	≤ 40mA
output current (max. load)	100mA	100mA
voltage drop (max. load)	1.5V DC	1.5V DC
transmitting element (pulsed)	LED, red light	LED, blue light
wave length	660nm	470nm
hysteresis	3-way programmable	3-way programmable
response / decay time	0.065 / 0.15 / 0.25 / 2msec programmable	0.15 / 0.25 / 2msec programmable
display (signal/reserve)	orange LED / green LED, flashing	orange LED / green LED, flashing
sensitivity adjustment	teach-in	teach-in
time adjustment	on- / off-delayed, one-shot	on- / off-delayed, one-shot
short-circuit protection	+	+
reverse polarity protection	+	+
design	10x30.5x70.5mm	10x30.5x70.5mm
housing material	ABS	ABS
front cap material	polycarbonate	polycarbonate
operating temperature	-10 ... +55°C	-10 ... +55°C
system of protection (EN 60529)	IP40	IP40
connection	connector	connector
connection accessories	e.g. master-cable **AL000013**, 2m, PUR, 3-wire e.g. slave-cable **AL000017**, 2m, PUR, 1-wire	e.g. master-cable **AL000013**, 2m, PUR, 3-wire e.g. slave-cable **AL000017**, 2m, PUR, 1-wire
mounting accessories	DIN-rail: **AL000015**	DIN-rail: **AL000015**
accessories	reduction sleeve: **AL000016, AL000027**	reduction sleeve: **AL000016, AL000027**

article-no.	OL100342	OL100343
version	green light	infrared light



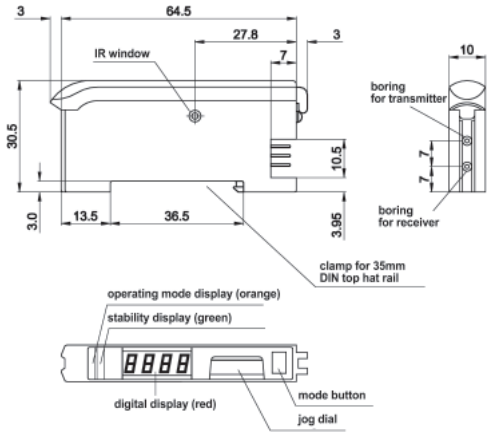


TECHNICAL DATA

operating distance	through-beam sensor: depending on used fiber optics up to 14m	through-beam sensor: depending on used fiber optics up to 14m
sensing range	dif. reflection sensor: depending on used fiber optics up to 230mm	dif. reflection sensor: depending on used fiber optics up to 230mm
output signal	pnp, no / nc, programmable	pnp, no / nc, programmable
operating voltage	12 ... 24V DC ±10%	12 ... 24V DC ±10%
current consumption (w/o load)	≤ 40mA	≤ 40mA
output current (max. load)	100mA	100mA
voltage drop (max. load)	1.5V DC	1.5V DC
transmitting element (pulsed)	LED, green light	LED, infrared light
wave length	525nm	880nm
hysteresis	3-way programmable	3-way programmable
response / decay time	0.15 / 0.25 / 2msec programmable	0.15 / 0.25 / 2msec programmable
display (signal/reserve)	orange LED / green LED, flashing	orange LED / green LED, flashing
sensitivity adjustment	teach-in	teach-in
time adjustment	on- / off-delayed, one-shot	on- / off-delayed, one-shot
short-circuit protection	+	+
reverse polarity protection	+	+
design	10x30.5x70,5mm	10x30.5x70.5mm
housing material	ABS	ABS
front cap material	polycarbonate	polycarbonate
operating temperature	-10 ... +55°C	-10 ... +55°C
system of protection (EN 60529)	IP40	IP40
connection	connector	connector
connection accessories	e.g. master-cable **AL000013**, 2m, PUR, 3-wire e.g. slave-cable **AL000017**, 2m, PUR, 1-wire	e.g. master-cable **AL000013**, 2m, PUR, 3-wire e.g. slave-cable **AL000017**, 2m, PUR, 1-wire
mounting accessories	DIN-rail: **AL000015**	DIN-rail: **AL000015**
accessories	reduction sleeve: **AL000016, AL000027**	reduction sleeve: **AL000016, AL000027**

1400 fiber optic amplifiers

article-no.	**OL100346**
version	**red light** **window comparator, difference function, alarm output function**

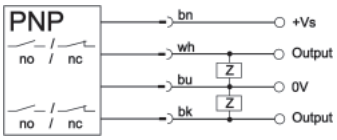


TECHNICAL DATA

operating distance	through-beam sensor: depending on used fiber optics up to 14m
sensing range	dif. reflection sensor: depending on used fiber optics up to 230mm
output signal	2 x pnp, no / nc, programmable
operating voltage	12 ... 24V DC
current consumption (w/o load)	≤ 40mA
output current (max. load)	50mA
voltage drop (max. load)	1.5V DC
transmitting element (pulsed)	LED, red light
wave length	660nm
hysteresis	3-way programmable
response / decay time	0.065 / 0.15 / 0.25 / 2.5 / 4.5msec programmable
display (signal/reserve)	orange LED / green LED, flashing
sensitivity adjustment	teach-in
time adjustment	on- / off-delayed, one-shot
short-circuit protection	+
reverse polarity protection	+
design	10x30.5x70.5mm
housing material	ABS
front cap material	polycarbonate
operating temperature	-10 ... +55°C
system of protection (EN 60529)	IP40
connection	connector
connection accessories	e.g. master-cable **AL000030**, 2m, PUR, 4-wire e.g. slave-cable **AL000032**, 2m, PUR, 2-wire
mounting accessories	DIN-rail: **AL000015**
accessories	reduction sleeve: **AL000016, AL000027**

connection

connector devices, light-on and dark-on mode, 4-pin



connector devices, light-on and dark-on mode, 3-pin

wire colors: bn = brown, wh = white, bu = blue, bk = black

Various cables are available for supplying fiber optic amplifiers with operating voltage and for reading out the outputs. The master cable sockets contain voltage supply and an output, the slave cable socket only contains an output. For these, the voltage supply is looped through via the connector. All design variants are available in lengths of 2m and 5m.

fig. 1

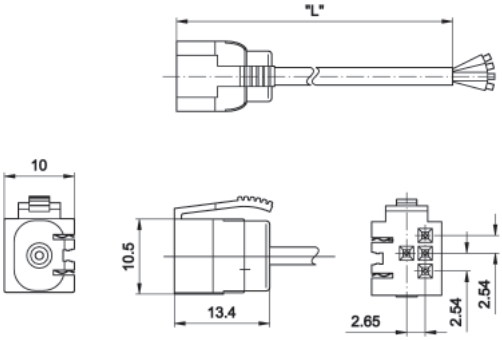
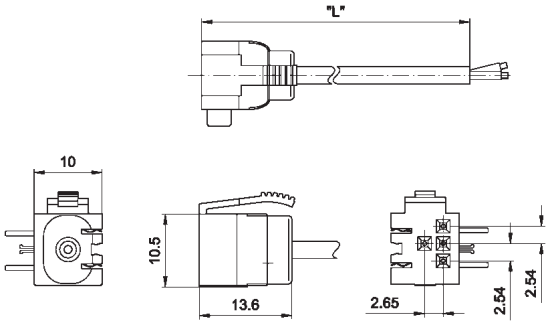


fig. 2



ACCESSORIES

article-no.	description	material	fig.
AL000013	master-cable socket, 2m, 3-wire	PUR	1
AL000014	master-cable socket, 5m, 3-wire	PUR	1
AL000017	slave-cable socket, 2m, 1-wire	PUR	2
AL000018	slave-cable socket, 5m, 1-wire	PUR	2
AL000030	master-cable socket, 2m, 4-wire for **OL100346**	PUR	1
AL000031	master-cable socket, 5m, 4-wire for **OL100346**	PUR	1
AL000032	slave-cable socket, 2m, 2-wire for **OL100346**	PUR	2
AL000033	slave-cable socket, 5m, 2-wire for **OL100346**	PUR	2

fig. 3

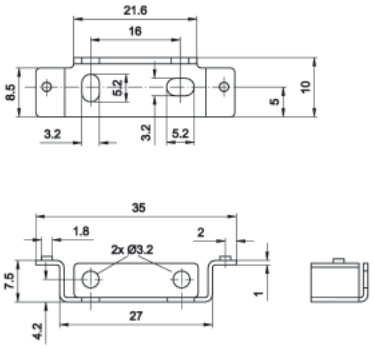


fig. 4

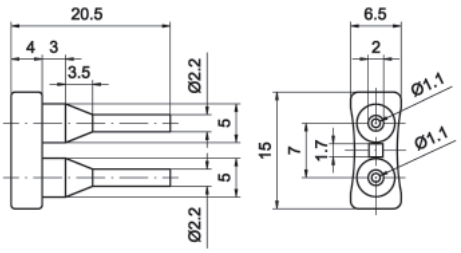
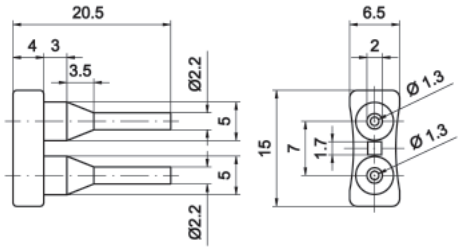


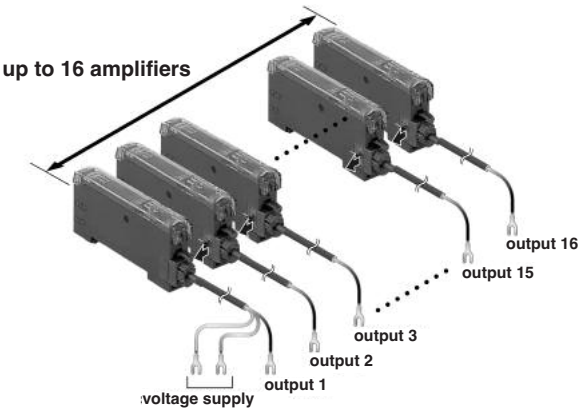
fig. 5



ACCESSORIES

article-no.	description	material	fig.
AL000015	DIN-rail DIN EN 60715 TH35	steel chrome-plated	3
AL000016	reduction sleeve 2.2/1.1	plastic	4
AL000027	reduction sleeve 2.2/1.3	plastic	5

If several sensors are needed in a production line, a networking of the single sensors is recommended. With one single command, settings can be copied (copy) or accessed from the respective memory.
When a batch change takes place in the production process, the sensors are adapted by activating only one single function (remote data load). On account of the structure, it is equally possible to dismantle individual amplifiers without having to move or dismantle amplifiers standing on the left or right. This is achieved through the special design of the electric connection cable. 4 versions are available: A master cable and a slave cable, each in lengths of 2m or 5m.



The list of articles contains the standard versions only. Kindly request the availability of other output- and connection functions.

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