Optical data coupler

OD600-F4-8BPV

Detection range up to 3000 mm

- 8-channel data transfer in both directions
- Control output for correct data transfer
- Stop input
- Large sensing range
- Large offset angle

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General specifications	
Effective detection range	0 ... 600 mm
Approvals	CE
Alignment aid	1 LED
Transmission mode	FSK
Transfer time	≤ 40 ms
Diameter of the light spot	300 mm at a distance of 600 mm
Angle of divergence	± 15 °
Ambient light limit	40000 Lux
Indicators/operating means	
Data flow display	16 LEDs for signaling the switch states of the in and outputs
Function display	1 LED for operating voltage 1 LED for correct data transfer
Electrical specifications	
Operating voltage	10 ... 30 V DC
Ripple	5 %
No-load supply current I_0	≤ 80
Output	
Voltage drop U_d	≤ 2.5 V
Switching frequency f	12 Hz
Standard conformity	
Standards	EN 60947-5-2
Ambient conditions	
Ambient temperature	-10 ... 50 °C (263 ... 323 K)
Storage temperature	-20 ... 70 °C (253 ... 343 K)
Mechanical specifications	
Protection degree	IP66
Connection	2000 mm PVC cable
Material	
Mass	80 g (240 g with 2000 mm cable)

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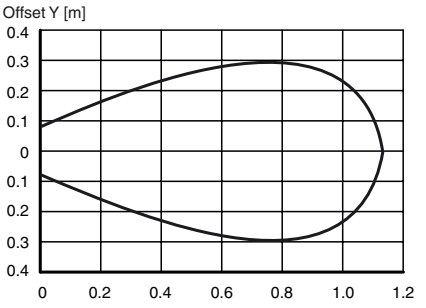
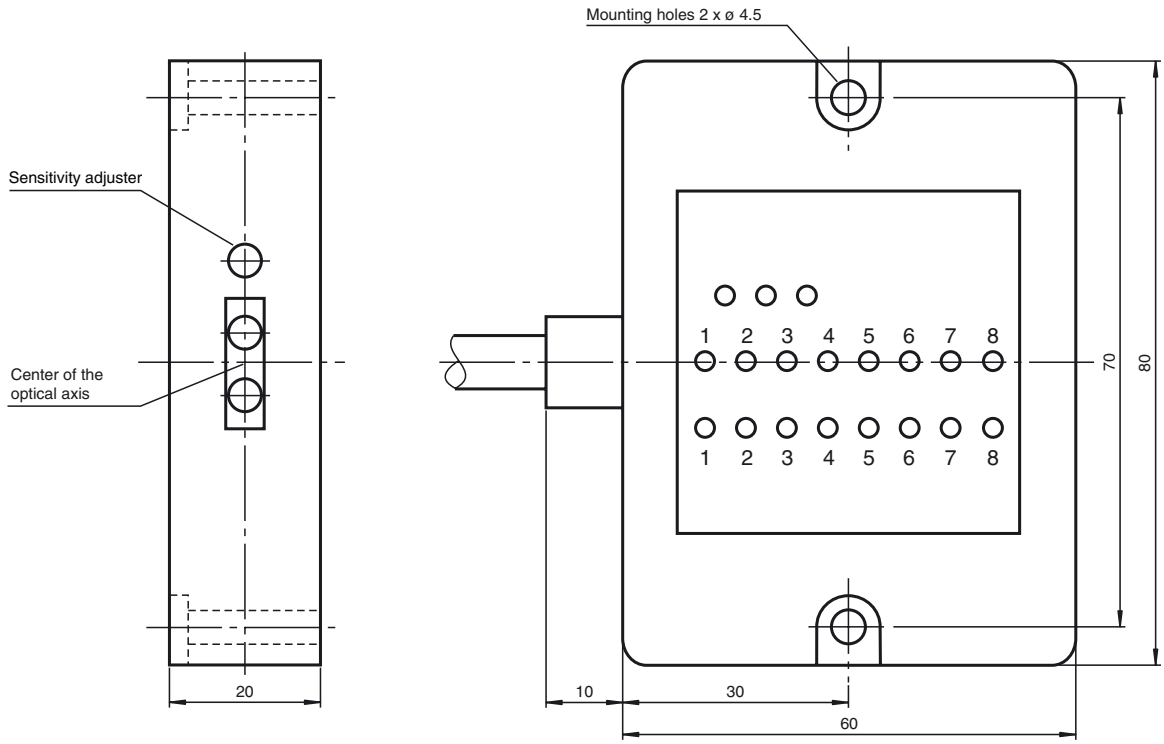
Curves/Diagrams

Characteristic response curve



Dimensions



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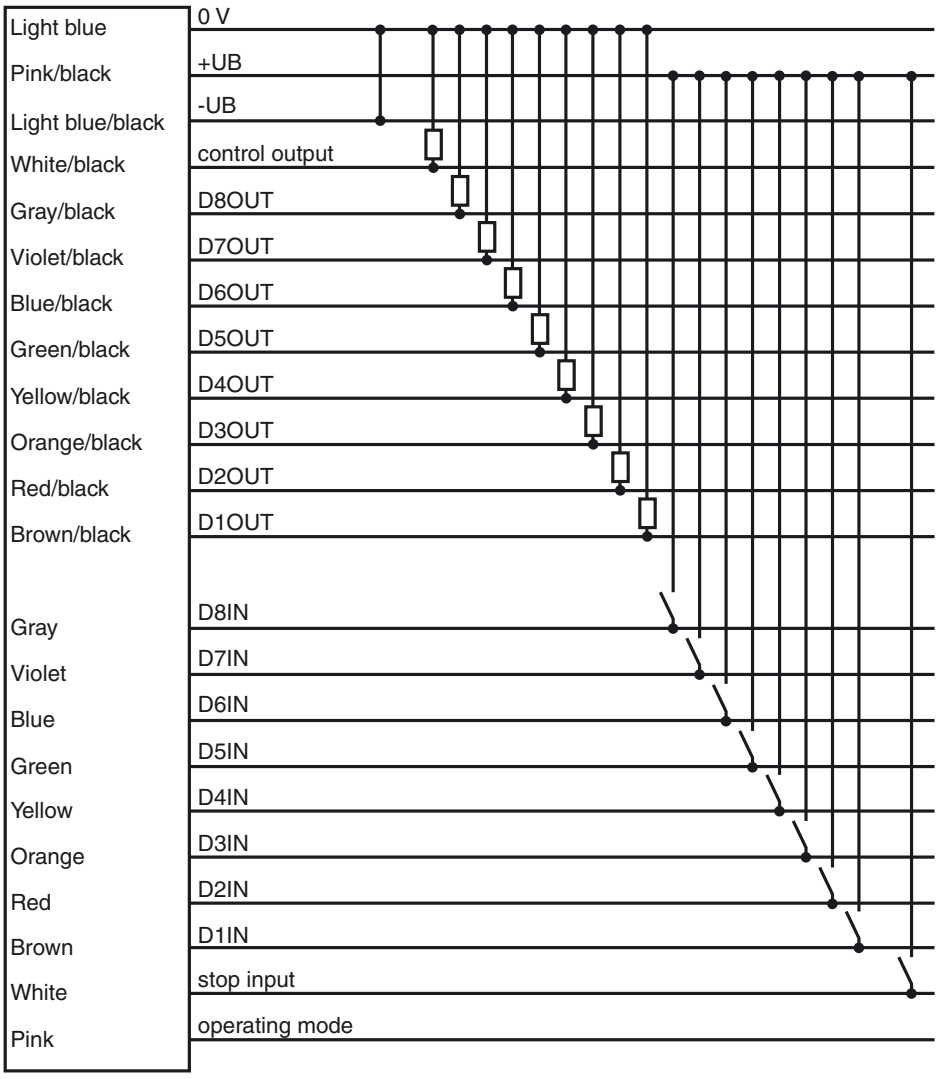
Electrical connection



o = light ON, • = dark ON

Function

Assignment of the connections

Supply voltage +	Pink/Black
Supply voltage -	Light blue/Black
Ground connection	Light blue

For inputs and outputs:

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Input	Conductor color	Output	Conductor color
1	Brown	1	Brown/Black
2	Red	2	Red/Black
3	Orange	3	Orange/Black
4	Yellow	4	Yellow/Black
5	Green	5	Green/Black
6	Blue	6	Blue/Black
7	Violet	7	Violet/Black
8	Gray	8	Gray/Black
		Stop input	White

Stop input

If this input is switched to +UB, the data transfer (transmitting and receiving) is disabled.

Switch of operating mode (Pink)

This input is used to switch to ready for reception or transmission in idle mode. Jumpering this input with +UB causes the data transmission light beam switch to be ready for transmission, without the jumper it is ready for reception
Ready for transmission means that as soon as it makes contact with another data transmission light beam switch, this data transmission light beam switch will first start to transmit its data and will then switch to reception. Ready for reception means that the data transmission light beam switch will wait in idle mode for transmitted data from another data transmission light beam switch, that it will immediately switch the data to the outputs when it is received, and that it will then switch to transmission.

Conntrol output (White/Black)

This output is switched to +UB if the data transmission route works free of errors. The respective switching state is then indicated by the "GO" LED.

Input switching

Input voltage $U_{I\,max}$ = 35 V
Input current $I_{I\,max}$ = 8 mA

In accordance with DIN 19234 (NAMUR) a proximity switch can be connected at UB > 20.4 V.

Output switching

Output voltage U_A= UB-2.5 V
Operating current I_{Lmax} = 30 mA, short circuit-proof

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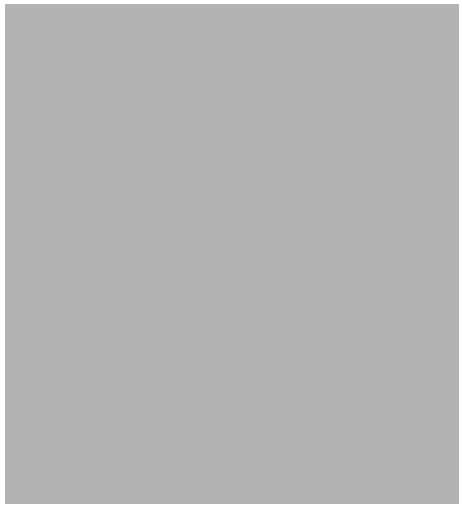
Indicators

„Power“ - LED	operating voltage turned on.
„RCV“ - LED	lights up if the optical radiation axes of the transmitter and receiver are within the permitted tolerance range (max. offset angle).
„GO“ - LED	indicates the switching status of the control output.



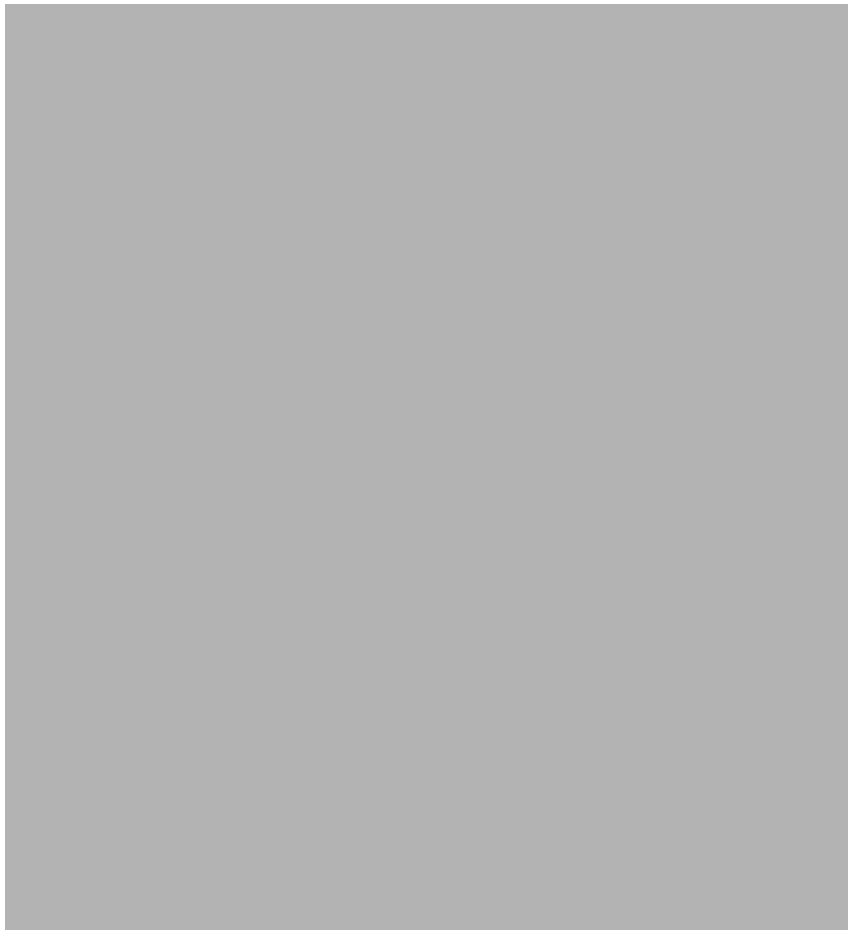
Time response

t1 = min. 30 ms
The time for which data must be active at the INPUT

t2 = max. 40 ms
transfer time

t3 = 90 ms
The time between the interruption of the IR beam and the reset of the "GO" output and DATA-OUTPUT

t4 = 110 ms
The time between the establishment of the IR beam and the setting of the "GO" output and DATA-OUTPUT



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