

Optical Data Transmission OD-2M



- **Optical Data Transmission**
- **Range of 200 m**
- **Interbus-S (RS422)**
- **Profibus / RS485**
- **Transmission Rate 2 Mbit/s**

Electrical Data

Transmission medium	Infrared light, wavelength 880 nm
Daylight filter	Makrolon
Opening angle	approx. $\pm 1,5^\circ$ to optical axis ($\pm 0,75^\circ$ and $\pm 0,4^\circ$ on request)
Range	0,5 ... 200 m
Operating voltage without optics heating.....	10 - 30 V DC
Current consumption without optics heating.....	approx. 300 mA at 24 V DC
Operating voltage with optics heating	20 - 30 V DC
Current consumption with optics heating.....	approx. 1,3 A at 24 V DC
Interfaces	
Interbus-S	for Interbus (bus operation) and RS 422 (point-to-point connection)
Profibus.....	for Profibus MPI, FMS, DP, FMS/DP and RS 485
Outputs	
Warning signal	Data transmission without performance reserve, voltage: active; 0 V: inactive
Error	no data transmission possible, operating voltage: active; 0 V: inactive
Inputs	
Transmitter deactivation TXD	Operating voltage: transmitter inactive; 0 V: transmitter active
Receiver deactivation RXD	operating voltage: receiver inactive; 0 V: receiver active
Duplex operation	Interbus-S, Profibus full duplex operation
Pin assignment.....	on request
Housing	Diecast aluminium
Weight	approx. 3kg

Environmental Data

Operating temperature range without optics heating	-10°C ... + 50°C
Operating temperature range with optics heating	-35°C ... +50°C
Storage temperature range.....	-30°C .. +50°C
Humidity	max. 90 % rel. humidity, no condensation
* Protection class	IP 65 (DIN 40 050)
* The type of protection is valid for mounting according assembly instruction	

Purchase Order Information

Note: Each transmission line consists of 2 devices with various frequencies

Interbus-S RS 422

Order designation without optics heating..... OD-2M 40801-12121 & 40801-22121
 Order designation with optics heating..... OD-2M 40801-12122 & 40801-22122
 Transmission rate..... continuous up to 1,5 Mbit/s

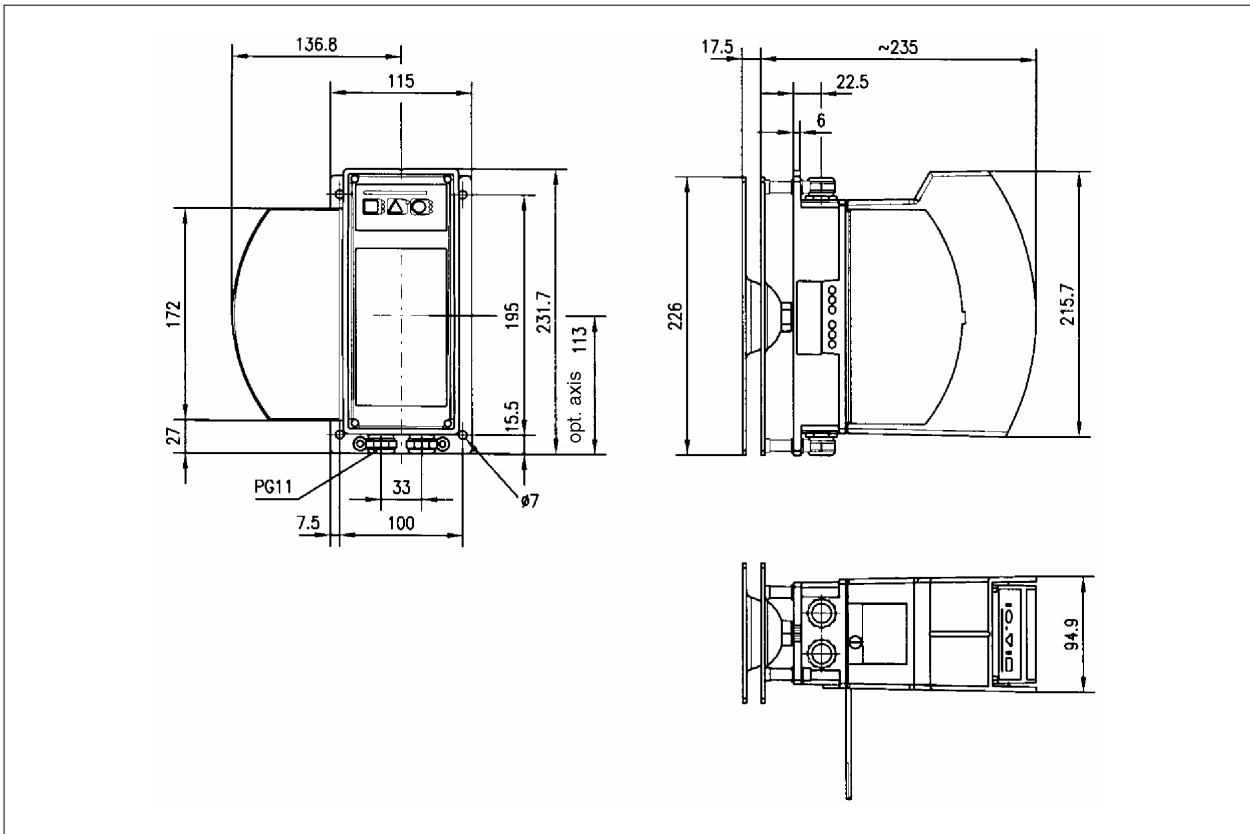
Interbus bus terminal

Order designation without optics heating..... OD-2M 40801-13131 & 40801-23131
 Order designation with optics heating..... OD-2M 40801-13132 & 40801-23132
 Transmission rate..... continuous up to 500 kbit/s, no setting required

Profibus, MPI, FMS, DP, mixed mode, RS 485

Order designation without optics heating..... OD-2M 40801-11111 & 40801-21111
 Order designation with optics heating..... OD-2M 40801-11112 & 40801-21112
 Transmission rate..... 9,6kbit/s, 19,2 kbit/s, 38,4 kbit/s, 57,6 kbit/s, 93,75 kbit/s,
 137,5 kbit/s, 375 kbit/s, 500 kbit/s, 1,5 Mbit/s (adjustable)

Dimensional Drawing



Optical Data Transmission OD-500



- **Optical Data Transmission**
- **Range 120 m**
- **Interbus-S (RS422)**
- **Profibus / Suconet K1 (RS485)**
- **Transmission Rate 500 Kbit/s**

Electrical Data

Transmission medium	Infrared alternating light
Optical system	Glass
Opening angle	approx. $\pm 0,5^\circ$ to optical axis
Range	up to 120 m
Operating voltage.....	12-30 V DC filtered
Residual ripple.....	max. 15 %
Current consumption (no load)	< 420 mA
Interfaces	
Interbus-S	for Interbus (bus operation) and RS 422 (point-to-point connection)
Profibus	for Profibus MPI, FMS, DP, FMS/DP and RS 485
Suconet	Suconet K, K1 and K2
Outputs	
Receiving without functional reserve	PNP, plus switching, operating voltage – 2V
Receiving with functional reserve	PNP, plus switching, operating voltage – 2V
Inputs	
Transmitter deactivation	Operating voltage: transmitter inactive, < 0,7 V transmitter active
Receiver deactivation.....	Operating voltage: receiver inactive, < 0,7 V receiver active
Duplex operation	Interbus-S, Profibus full duplex operation, Suconet half duplex operation.
Pin assignment.....	on request
Housing	Aluminium
Weight	1525 g

Environmental Data

Operating temperature range	-10°C ... + 45°C (-30°C as option)
Storage temperature range.....	-35°C .. +70°C
* Protection class	IP 65 (DIN 40 050)
* The type of protection is valid for mounting according assembly instruction	

Purchase Order Information

Note: Each transmission line consists of 2 devices with various frequencies

Interbus-S

Order designation OD-500 40800-12110 & 40800-22110

Transmission rate..... 500 kbit/s

RS422 (point-to-point connection)

Order designation OD-500 40800-12110 & 40800-22110

Transmission rate..... continuous up to 500 kbit/s, no setting required

Profibus, MPI, FMS, DP, mixed mode

Order designation OD-500 40800-11110 & 40800-21110

Transmission rate..... 9,6kbit/s, 19,2 kbit/s, 38,4 kbit/s, 57,6 kbit/s, 93,75 kbit/s,
 137,5 kbit/s, 375 kbit/s, 500 kbit/s (adjustable)

Suconet K

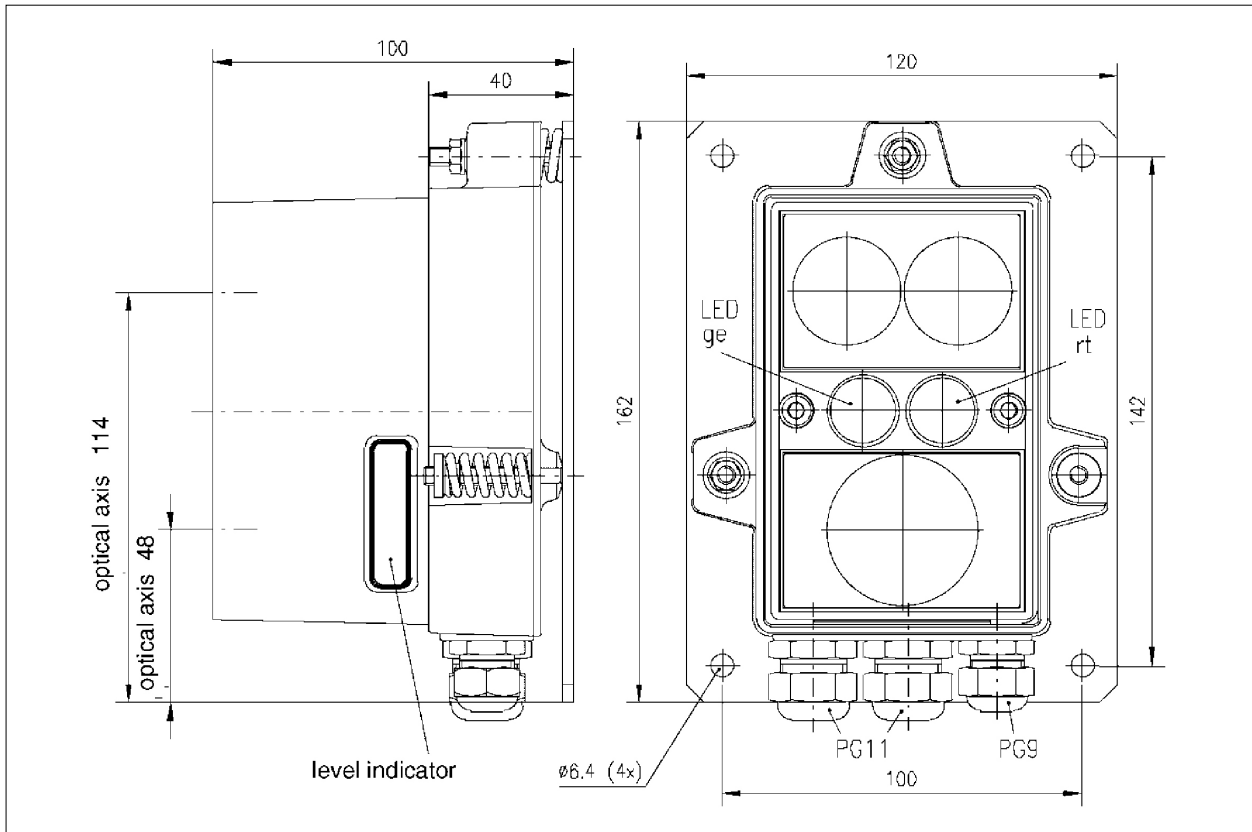
Order designation OD-500 40800-11110 & 40800-21110

Transmission rate..... Suconet K, K1, K2 with 187,5 kbit/s

Suconet K with 375 kbit/s

Suconet possible only with half-duplex operation

Dimensional Drawing



Optical Data Transmission ID-200



- **Optical Data Transmission**
- **Range 120 m, 200 m**
- **PROFIBUS / RS 485**
- **Interbus-S 500kbit/s / RS 422**
- **Interbus-S 2Mbit/s / Fibre Optic**
- **Data Highway + (DH+) / Remote I/O**

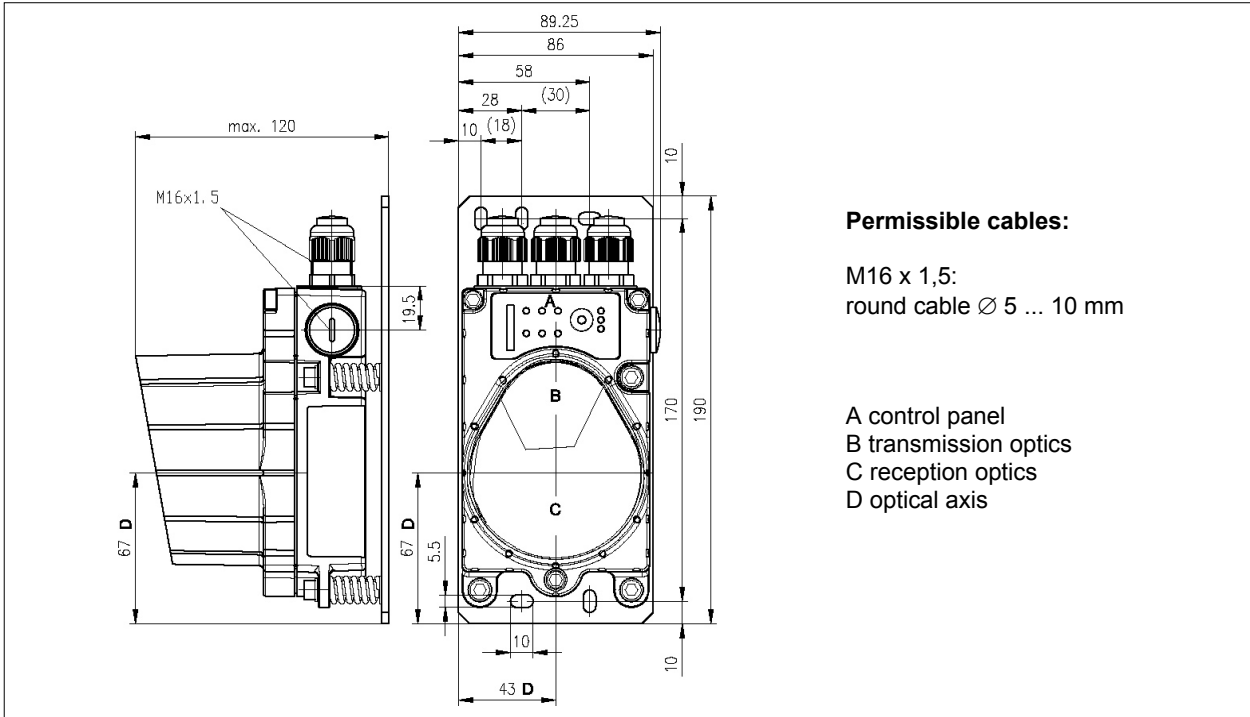
General characteristics

Electrical data	
Supply voltage Vin.....	18 ... 30 V DC
Current consumption without optics heating.....	Approx. 200 mA at 24 V DC (no load at switching output)
Current consumption with optics heating.....	Approx. 800 mA at 24 V DC (no load at switching output)
Optical data	
Sensing distance	0,2 ... 120 m, or 0,2 ... 200 m
Transmission diode	Infrared light, wavelength 880 nm
Opening angle	± 0,5° to optical axis
Ambient light.....	> 10000 Lux acc. to EN 60947-5-2 (2000)
Laser safety class.....	1 acc. to EN 60825-1 (2001)
Input/output	
Input.....	0 ... 2 V DC: transmitter/receiver deactivated 18 ... 30 V DC: transmitter/receiver activated
Output.....	0 ... 2 V DC: normal operation Vin - 2 V DC: limited performance reserve Output current max. 100 mA, short-circuit proof, protected against surge voltage, transients and overheating
Operating and display elements	
Membrane buttons.....	Change the operating mode
Individual LEDs	Indicate voltage supply, operating mode, data transmission
LED strip.....	Bar graph display of the receiving level
Mechanical data	
Housing	Aluminium diecast; light inlet/outlet, glass
Weight	Approx. 1200 g
Protection class	IP 65 acc. to EN 60529

Environmental Data

Operating temperature.....	-5°C ... +50°C without optics heating
Erweitert	-30°C ... +50°C with optics heating (non-condensing)
Storage temperature	-30°C ... +70°C
Air humidity	max. 90% rel. humidity, non-condensing
Vibrations	acc. to EN 60068-2-6
Noise	acc. to EN 60068-2-64
Shock	acc. to EN 60068-2-27 and EN 60068-2-29
EMC	acc. to EN 61326 (1998) + A1 (1999)

Dimensional Drawing, Copper Cable



Dimensional Drawing, Fibre Optic Cable

