Accessory

Optolink

fig. example

Optolink

- System for transmission of incremental encoder signals in an optical fibre
- Typical areas of use:
  - In environments with high electromagnetic disturbances
  - Transmission of signals over long distances
  - Where galvanic insulation is required

CE

Electrical specification

Transmitter	HTL	TTL
Supply voltage +EV	9-30 Vdc, polarity protected	5 Vdc +-10%
Current consumption excl. encoder	Max 0.7 W	Max 0,4 W
Startup delay	10 ms	10 ms
Encoder connection	Power supply: 9..30 V, Input frequency range: 0 .. 200 kHz Input load: 2,4 k Ohm	Power supply: 5 Vdc+-10% Input frequency range: 0 .. 200 kHz Input load: 0,5 k Ohm
Fibre (not included)	Multi mode. Fiber types: 50/125 µm, 62,5/125 µm, 100/140 µm, 200 HCS µm. Link distance: up to 2.7 km depending on fiber type. Connector: ST-type	

Receiver	HTL	TTL
Supply voltage +EV	9-30 Vdc, polarity protected	5 Vdc, +-10%
Current consumption without load	Max 1.0 W	Max 1.0 W
Startup delay	10 ms	10 ms
Outputs	HTL, short circuit protected	TTL, short circuit protected
Load max	± 40 mA	± 20 mA
Max cable length	200 m @ 50 kHz	50 m @ 50 kHz
U_{high} (at 10 mA load)	> +EV -2,0 Vdc	> 3,0 Vdc
U_{low} (at 10 mA load)	< 1,15 Vdc	0,4 Vdc
Frequency range	0 .. 200 kHz	0 .. 200 kHz
Propagation delay from input in Transmitter	3 µs excluded delay in fibre (delay in fiber depends on type, length and temperature)	

Mechanical specification

Housing	Aluminium
Weight	Approx. 400 g
Protection class	IP 65 according to IEC 60529
Temperature	-40 °C .. +85 °C
LED indication	Module and Status
Fiber connection	ST-type
Connection encoder	Screw terminal

Accessories

Fibre to Optolink system, free length	Contact Leine & Linde
Encoders	See datasheet for encoders

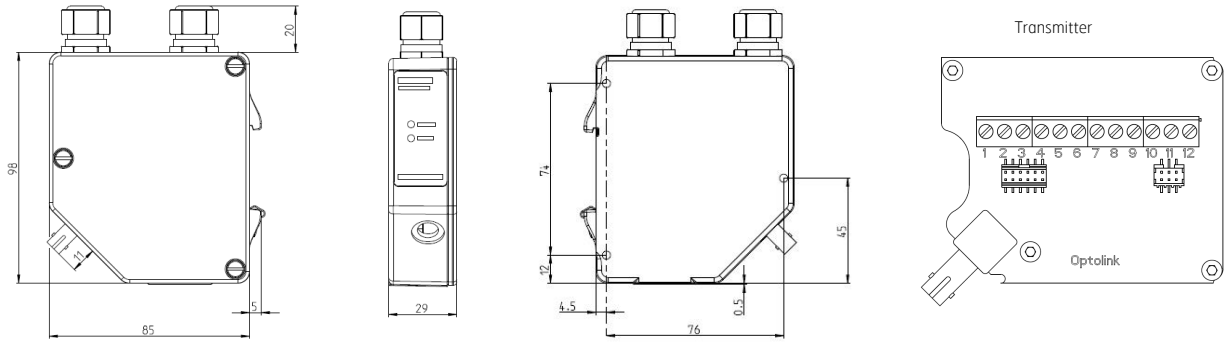
T +46-(0)152-265 00 F +46-(0)152-265 05 info@leinelinde.com www.leinelinde.com

Accessory

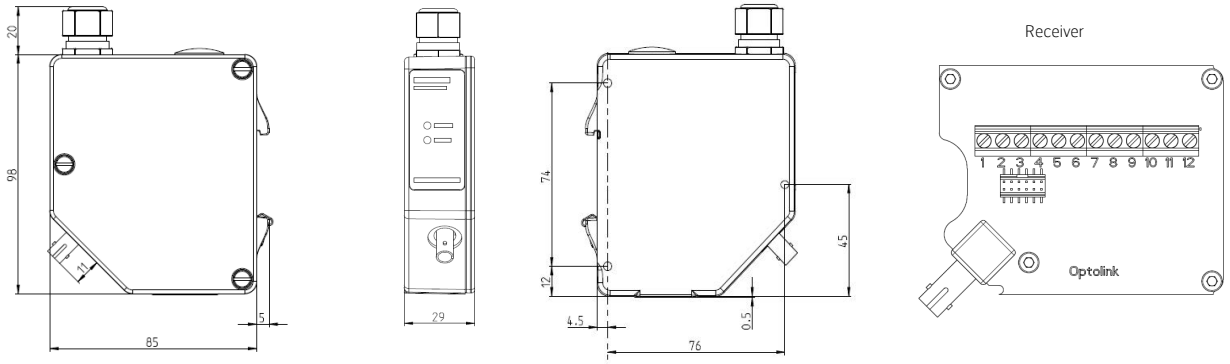
Optolink

Dimensions

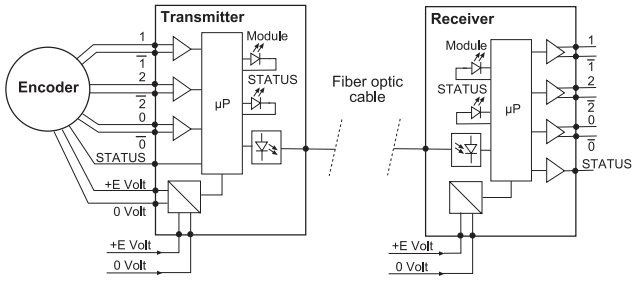
Transmitter



Receiver



System description



Pin configuration

Transmitter			Receiver		
Function	**Terminal**	**Cable**	**Function**	**Terminal**	**Cable**
+EV (Encoder supply)	1	Red	+EV	1	Red
0 V (Encoder supply)	2	Blue	0 V	2	Blue
1 (S90)	3	Green	1 (S90)	3	Green
$\overline{1}$ (S90/)	4	White	$\overline{1}$ (S90/)	4	White
2 (S00)	5	Yellow	2 (S00)	5	Yellow
$\overline{2}$ (S00/)	6	Black	$\overline{2}$ (S00/)	6	Black
0 (Sref)	7	Brown	0 (Sref)	7	Brown
$\overline{0}$ (Sref/)	8	Violet	$\overline{0}$ (Sref/)	8	Violet
STATUS	9	Grey	STATUS	9	Grey
+EV (Supply)	11	Red/blue	STATUS/	10	-
0 V (Supply)	12	Grey/pink	Housing		Shield
NC		Pink			
Housing		Shield			

Accessory

Optolink

LED Description

Transmitter LED

Status LED	Module LED	Description
Green	Red	Transmitter is overrun, Encoder input frequency is over 200kHz. This state is kept until the encoder frequency is below 120kHz
Green	Green	Normal Operation
Red	Green	Encoder status signal is low.

Receiver LED

Status LED	Module LED	Description
Red	Green	Transmitter Status signal input is low or the transmitter has been overrun with an encoder frequency over 200kHz
Red	Red	Fiber communication is lost, receiver output signals go into tri-state.
Green	Green	Normal Operation

Functional description

Over run mode
When the transmitter receives an encoder signal with a frequency over 200 kHz the transmitter goes into "Over run mode". When entering over run mode the transmitter sets the MODULE LED to red. When the transmitter receives an encoder signal of less than 120kHz the MODULE LED is set to green.

When the receiver detects a frequency over 200 kHz the STATUS LED on the receiver is set to red and the receiver STATUS output signal is set to low which indicates that the receiver output is not correct.

Low encoder STATUS signal
When the transmitter receives a low STATUS signal from the encoder, the STATUS LED on the transmitter and receiver are set to red and the receiver STATUS output signal is set to low which indicates that the encoder has a warning/failure.

Lost fiber communication
If the receiver loses fiber communication with the transmitter both the MODULE and STATUS LEDs on the receiver are set to red and the receiver outputs goes into a tri-state.

Ordering information

Transmitter:	**Part no.**
CRG Optolink Transmitter 9-30 Vdc supply, HTL input, 2.0 m free cable	1342027-01
CRG Optolink Transmitter 9-30 Vdc supply, HTL input, 2xPG, 12p terminal	1345262-01
CRG Optolink Transmitter 9-30 Vdc supply, HTL input, 1.0 m free cable, no STATUS, non-standard pinning and single cable *)	1348611-01
CRG Optolink Transmitter 9-30 Vdc supply, 3ch-HTL input, 2xPG, 12p terminal	1366129-01
CRG Optolink Transmitter 9-30 Vdc supply, 3ch-HTL input, 1.0 m free cable	1455995-01
CRG Optolink Transmitter 5 Vdc supply, TTL input, 1.0 free cable	1469985-01
CRG Optolink Transmitter 5 Vdc supply, 3ch-TTL input, 1.0 free cable	1470005-01
Receiver:	
CRG Optolink Receiver 9-30 Vdc supply, HTL output, 1xPG, 12p terminal	1202450-01
CRG Optolink Receiver 5 Vdc supply, TTL output, 1xPG, 12p terminal	1203448-01
CRG Optolink Receiver 9-30 Vdc supply, 422 output, 1xPG, 12p terminal	1203454-01
CRG Optolink Receiver 9-30 Vdc supply, HTL output, 1.5 m free cable, no STATUS, non-standard pinning *)	1213417-01
CRG Optolink Receiver 9-30 Vdc supply, HTL output, 1.0 m free cable, no STATUS, non-standard pinning *)	1213417-02
CRG Optolink Receiver 9-30 Vdc supply, HTL output, 1.5 m free cable	1310430-01
CRG Optolink Receiver 9-30 Vdc supply, HTL output, 1.0 m free cable	1310430-02
CRG Optolink Receiver 9-30 Vdc supply, HTL output, 2.0 m free cable	1310430-03
CRG Optolink Receiver 9-30 Vdc supply, HTL output, 1.0 m free cable, non-standard pinning *)	1464325-01

*) contact Leine Linde for separate datasheet for the pinning.