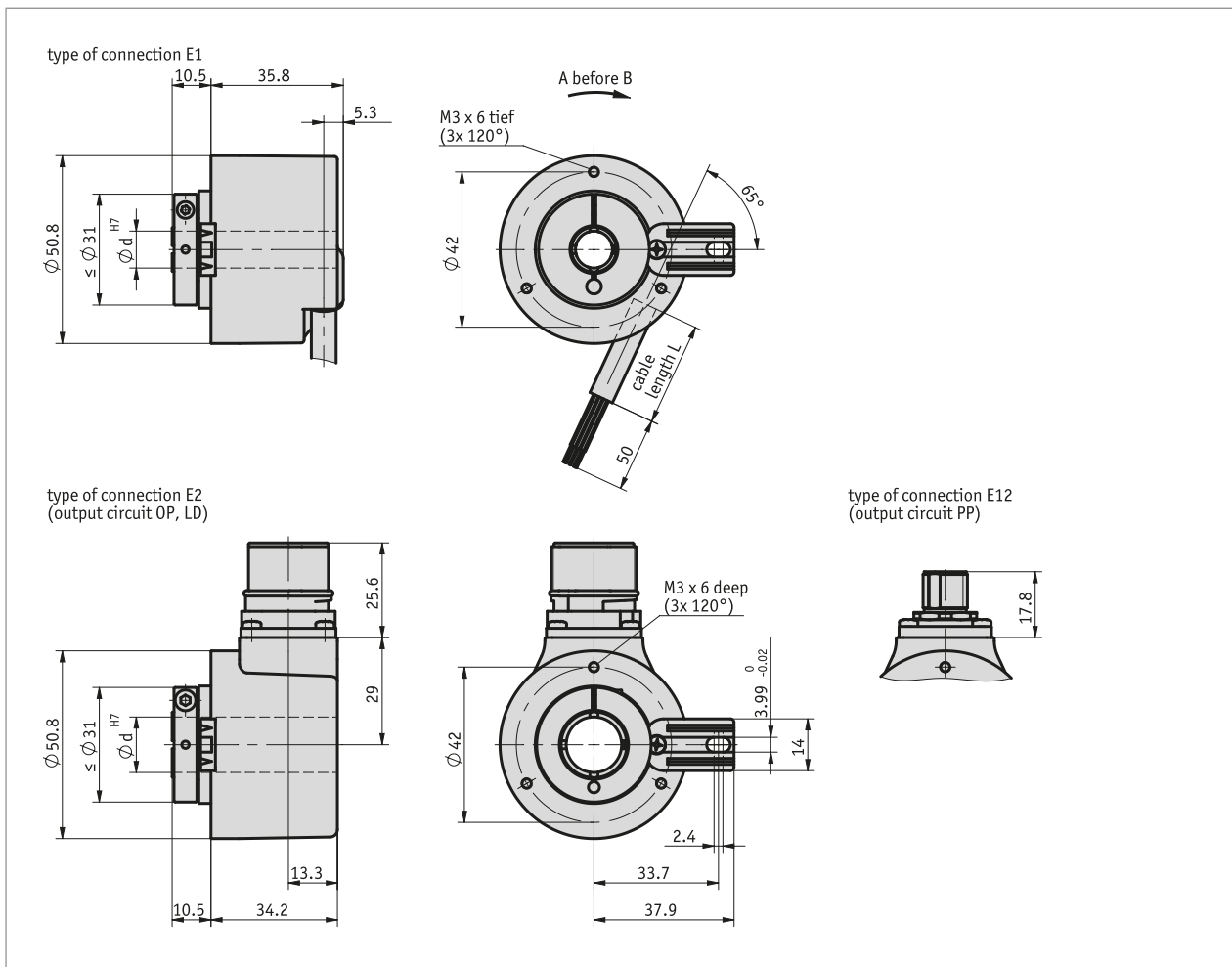


### Profile

- Resolution max. 5000 pulses/revolution
- Through hollow shaft up to max.  $\varnothing 15$  mm
- Robust bearing construction
- $-40 \dots 85^\circ \text{C}$  operating temperature
- High shock and vibration resistance



### Mechanical data

Feature	Technical data	Additional information
Shaft	rustproof stainless steel	
Housing	die-cast	
Speed	≤12000 min <sup>-1</sup>	IP65
	≤6000 min <sup>-1</sup>	IP65 continuous operation
	≤6000 min <sup>-1</sup>	IP66/IP67
	≤3000 min <sup>-1</sup>	IP66/IP67 continuous operation
Moment of inertia	~6 x 10 <sup>-6</sup> kgm <sup>2</sup>	
Starting torque	<0.01 Nm at 20 °C	IP65
	<0.05 Nm at 20 °C	IP66/IP67
Shaft load rating	100 N	radial
	50 N	axial
Cable sheath	PVC	~∅ 6.7 mm
Cable bending radius	75 mm	static
	110 mm	dynamic
Weight	~0.4 kg	

### Electrical data

#### ■ PP output circuit

Feature	Technical data	Additional information
Operating voltage	10 ... 30 V DC	reverse polarity protected, the power-supply unit corresponds to Class 2 (UL 1310)
Current consumption	50 mA, typical	≤100 mA (no load)
Output signal level high	≥UB - 1.0 V	short-circuit proof
Output signal level low	≤0.5 V	short-circuit proof
Pulse frequency	≤300 kHz	
Load	±20 mA	max. adm.
Type of connection	1x M12-plug connector	5-pole, 1x pin

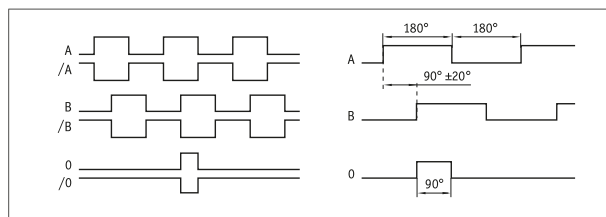
#### ■ OP output circuit

Feature	Technical data	Additional information
Operating voltage	10 ... 30 V DC	reverse polarity protected, the power-supply unit corresponds to Class 2 (UL 1310)
Current consumption	50 mA, typical	≤100 mA (no load)
Output signal level high	≥UB - 1.0 V	short-circuit proof
Output signal level low	≤0.5 V	short-circuit proof
Pulse frequency	≤300 kHz	
Load	±20 mA	max. adm.
Type of connection	open cable end 1x M23-plug connector	12-pole, 1x pin

#### ■ LD output circuit

Feature	Technical data	Additional information
Operating voltage	5 ... 30 V DC	reverse polarity protected, the power-supply unit corresponds to Class 2 (UL 1310)
Current consumption	40 mA, typical	≤90 mA (no load)
Output signal level high	≥2.5 V	short-circuit proof, not against UB
Output signal level low	≤0.5 V	short-circuit proof, not against UB
Pulse frequency	≤300 kHz	
Load	±20 mA	max. adm.
Type of connection	open cable end 1x M23-plug connector	12-pole, 1x pin

#### ■ Signal image



### System data

Feature	Technical data	Additional information
Approval	UL	UL 61010-1, File No. E503367

#### ■ Characteristics of functional safety

Feature	Technical data	Additional information
MTTFd	61.7 Year(s)	

### Ambient conditions

Feature	Technical data	Additional information
Ambient temperature	-40 ... 85 °C -30 ... 85 °C -20 ... 85 °C	connector static laying of cables dynamic laying of cables
EMC	EN 61326-1	immunity requirement of industry
Safety regulations	UL 61010-1	indoor use, outdoor use possible, not intended for use involving direct exposure to UV light.  Environment dry / wet.  Protection class III as per EN 61140.  Pollution degree 2 as per EN 61010.  Maximum humidity 93% at 40 °C.
Protection category	IP65, IP66/IP67	EN 60529 (protection type not yet reviewed by UL)
Shock resistance	3000 m/s <sup>2</sup> , 6 ms	EN 60068-2-27
Vibration resistance	300 m/s <sup>2</sup> , 10 ... 2000 Hz	EN 60068-2-6

### pin assignment

#### ■ Output circuit, LD, PP OP

Signal OP, LD	"Signal PP"	Cable color E1
/B	nc	Pink
+SUB (sense line)	+SUB (sense line)	red-blue
0	0	blue
/0	nc	red
A	A	green
/A	nc	yellow
B	B	gray
GND	GND	white
SGND (sense line)	SGND (sense line)	gray-pink
+UB	+UB	brown

#### ■ PP output circuit

Signal	PIN E12
GND	1
+UB	2
A	3
B	4
0	5

#### ■ Output circuit LD, OP

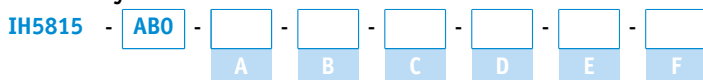
Signal	PIN E2
/B	1
+SUB (sense line)	2
0	3
/0	4
A	5
/A	6
nc	7
B	8
nc	9
GND	10
SGND (sense line)	11
+UB	12

### Order

#### ■ Ordering table

Feature	Ordering data	Spezifikation	Additional information
pulses/revolution	A ...	50, 64, 100, 200, 250, 256, 300, 360, 400, 500, 512, 600, 800, 1000, 1024, 1200, 2000, 2048, 2500, 3600, 4000, 4096, 5000	
Type of connection	B E1	open cable end	tangential, only with OP, LD
	E2	plug M23	radial, only with OP, LD
	E12	M12 plug	radial, only with PP
Cable length	C ...	01.0, 02.0, 03.0, 04.0, 05.0, 06.0, 08.0, 10.0, 15.0, 20.0 in m	only at E1
	OK	without	only with E2
Output circuit	D PP	push-pull	
	OP	push-pull with inversion	
	LD	LineDriver	
hollow shaft/diameter	E ...	6, 8, 10, 12, 14, 15 in mm	
Protection category	F IP65	IP65	
	IP66/67	IP66/IP67	

#### ■ Order key



**Scope of delivery:**  
IH5815, Quick Start Guide



**Accessories you can find:**

Cable extension KV05S0, with PP	<a href="http://www.siko-global.com">www.siko-global.com</a>
Cable extension KV12S1, with OP and LD	<a href="http://www.siko-global.com">www.siko-global.com</a>
Overview Mating connector	<a href="http://www.siko-global.com">www.siko-global.com</a>
Mating connector, with OP and LD, 12-pole, socket	Order key 81935
Mating connector, with PP, 5-pole, socket	Order key 84109