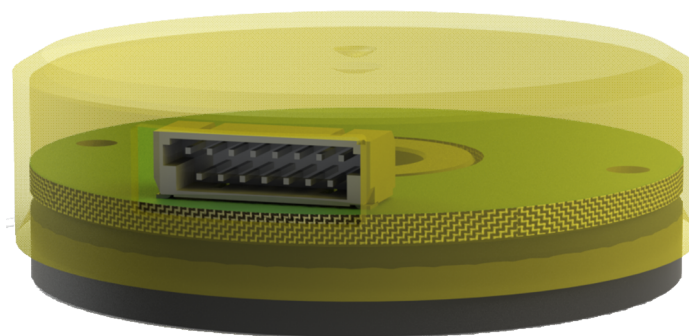


Optical incremental Encoder



Description

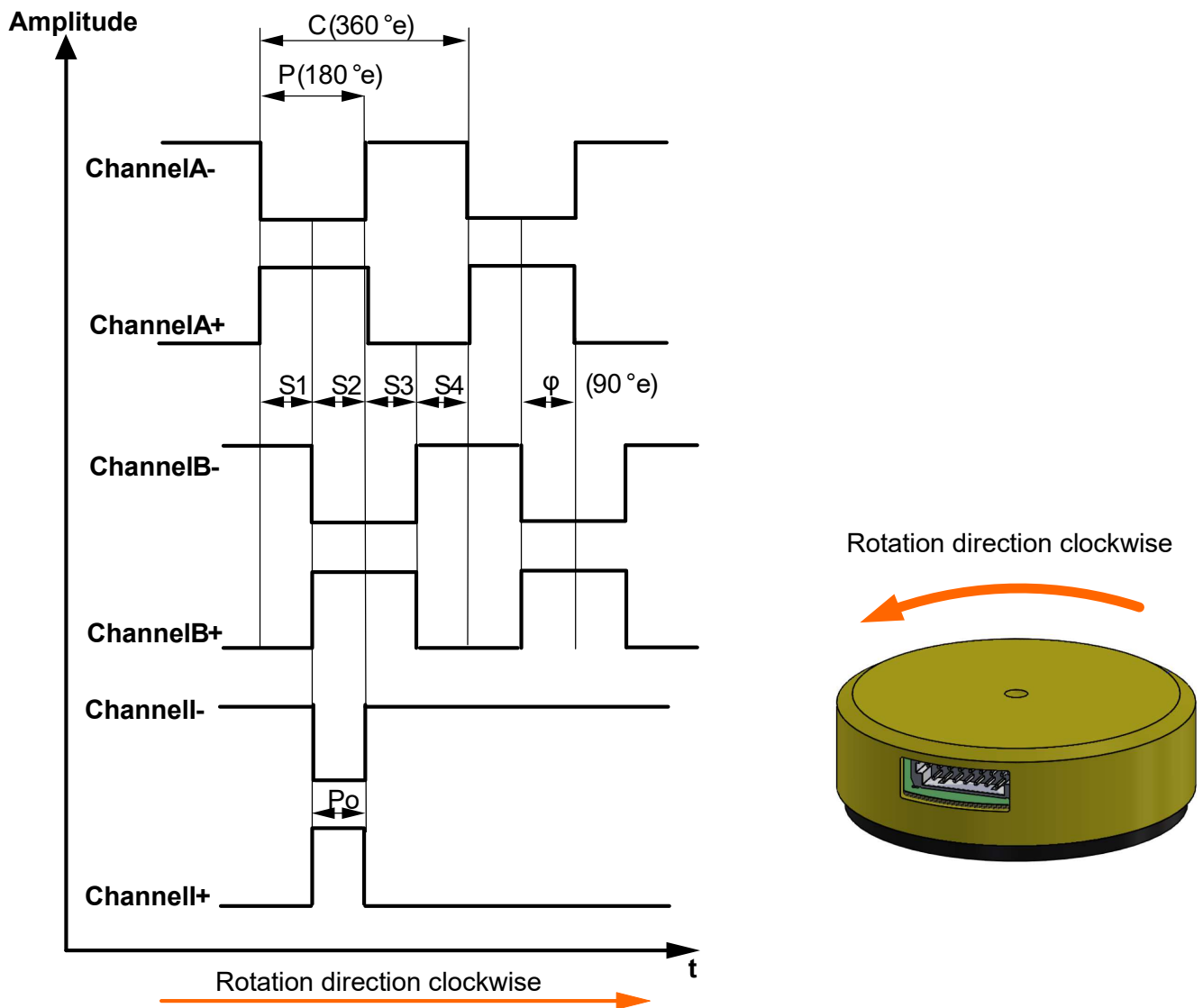
The **EBG 38** is a optical incremental encoder kit system. He is a reliable low cost hollow shaft encoder that can be fixed quickly and easily on different sizes of motor shafts. The encoder is developed for brushless motors, motor feedback applications and rotational speed control. The encoder provides two square wave outputs in quadrature (90 degrees phase shifted) for counting and direction information and one index channel (one pulse per revolution).

The resolution of the encoder is determined by the number of counts per revolution (CPR). The power supply is selectable in a wide voltage range (5V and 8V to 30V).

Features

- Output channels: 6 channel differential line driver
- Output type: TTL compatible
- Resolution: up to 4096 CPR (counts per revolution)
- Frequency up to 200 kHz
- Power supply: 5V, 8 – 30 VDC
- Quick and easy assembly
- Small size: 38.0 mm diameter x 12,9 mm length
- Maximum shaft diameter: 10.0 mm
- Operating temperature: -20°C to +85°C
- Compliant EU-directive 2011/65/EG (RoHS)

Electrical interface

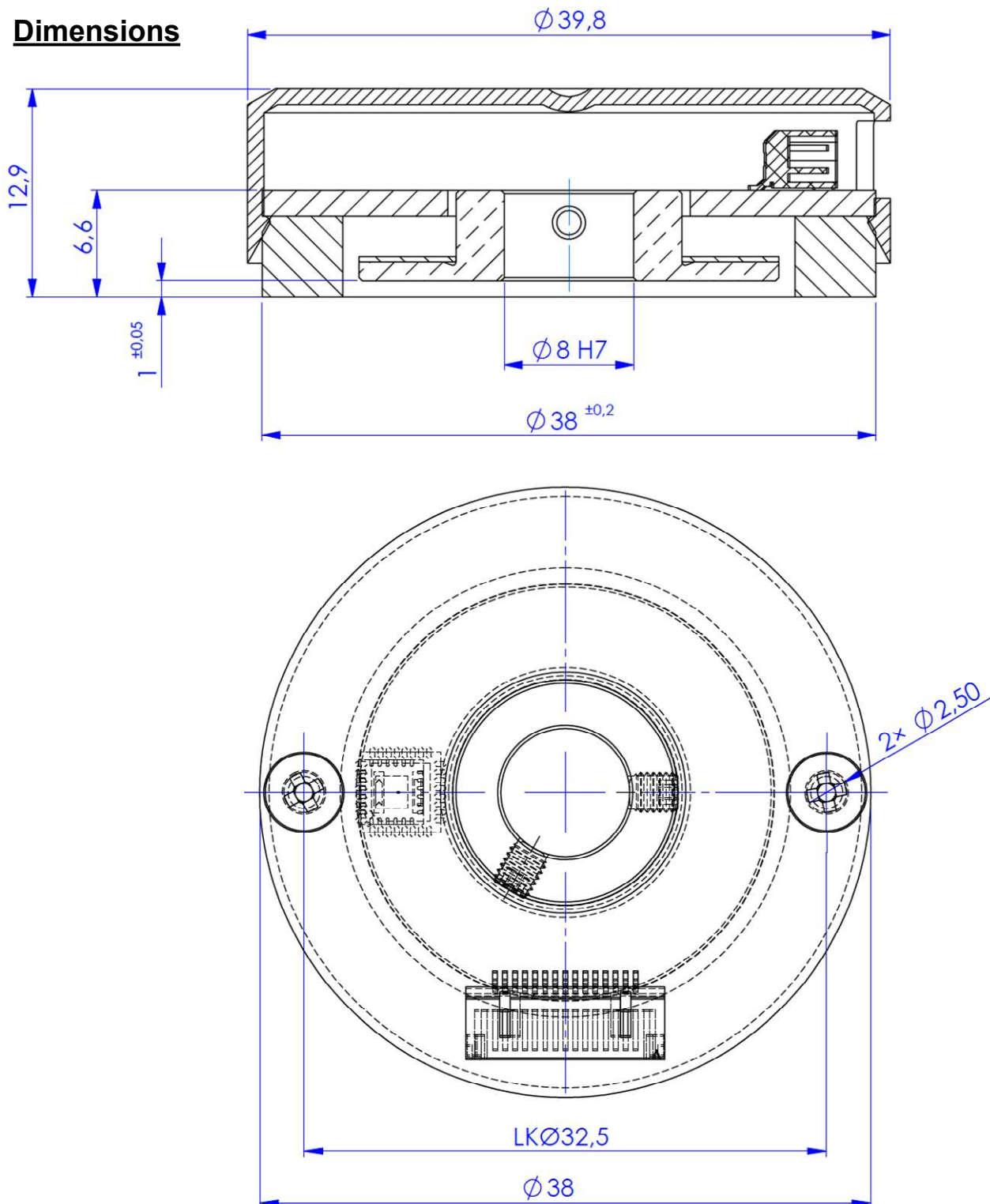


IMPORTANT NOTICE

The guarantee will be voided by misuse, accident, modification, unsuitable physical or operating environment, operation in other than the specified operating environment, or failure caused by a product for which **PWB encoders GmbH** is not responsible.

PWB encoders GmbH reserves the right to make corrections, modifications, enhancements, improvements, and other changes to its products and services also datasheets at any time.

Dimensions



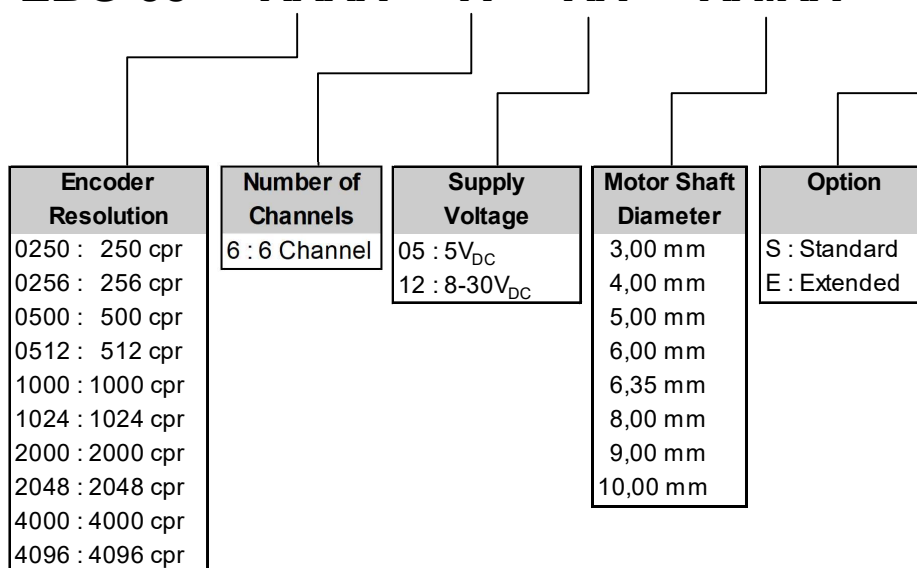
ESD Warning: Normal handling precautions should be taken to avoid static discharge damage to the sensor.

Recommended operating conditions

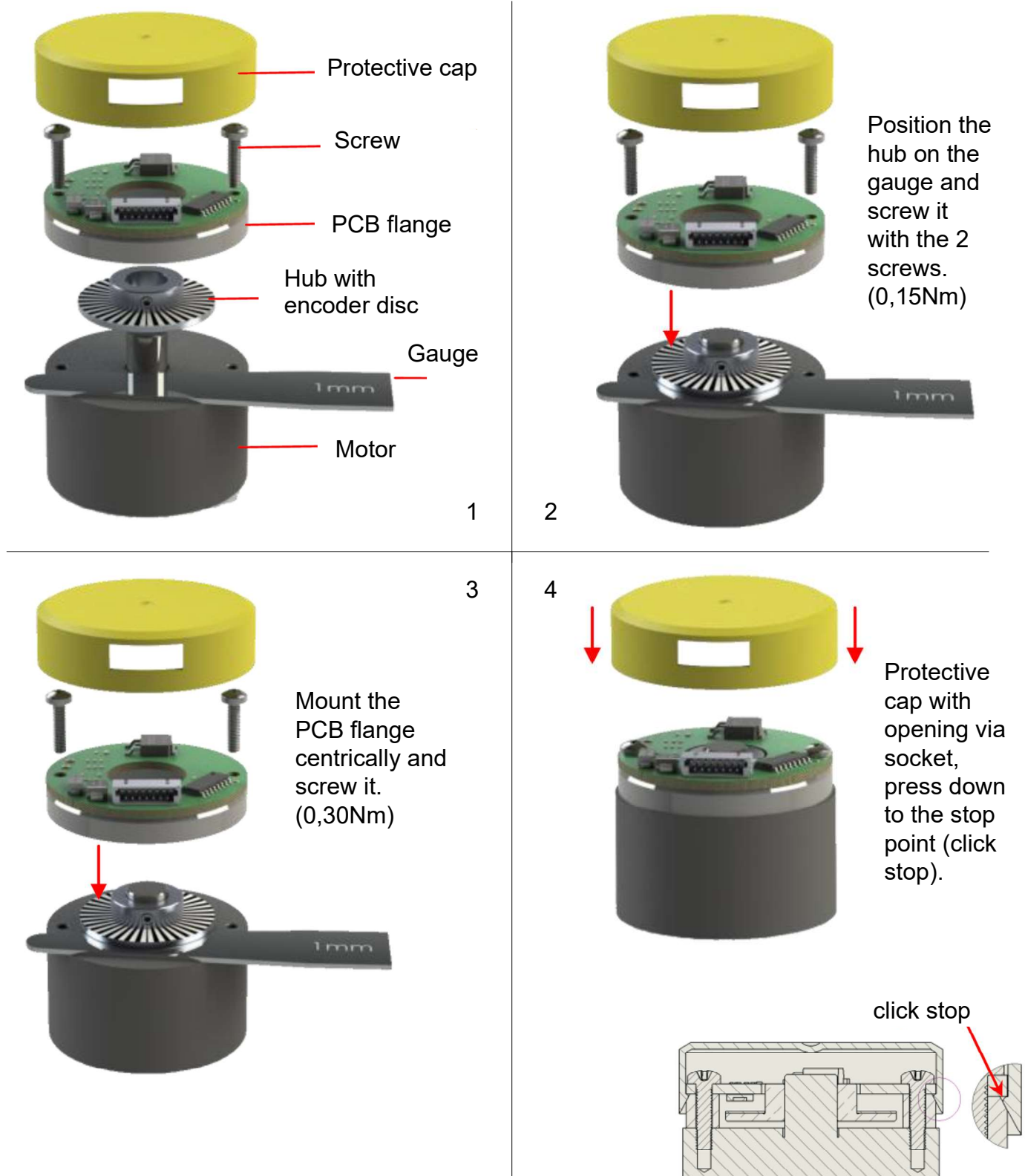
Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Supply voltage	U_B	4.5	5.0	5.5	V_{DC}	
	U_B	8.0	12.0	30.0	V_{DC}	
Supply current	I_{UB}	40	50	60	mA	no load
Reverse polarity protection	U_B	-36		0	V_{DC}	8-30V Version
			None			
Output current per channel	I_{out}	-1.0		20	mA	
High level output voltage	V_{oH}	2.4		5.5	V_{DC}	TTL output
Low level output voltage	V_{oL}			0.7	V_{DC}	TTL output
Output frequency	f			200	kHz	
Environment						
Operating temperature	T_A	-20	25	85	°C	
Mechanical notes						
Required shaft length		6,5	8,0	10,0	mm	
Max. allowable axial shaft play of motor				±0,25	mm	
Max. allowable radial shaft play of motor				0,025	mm	
Protection grade according to DIN 40500				IP50		

Ordering code

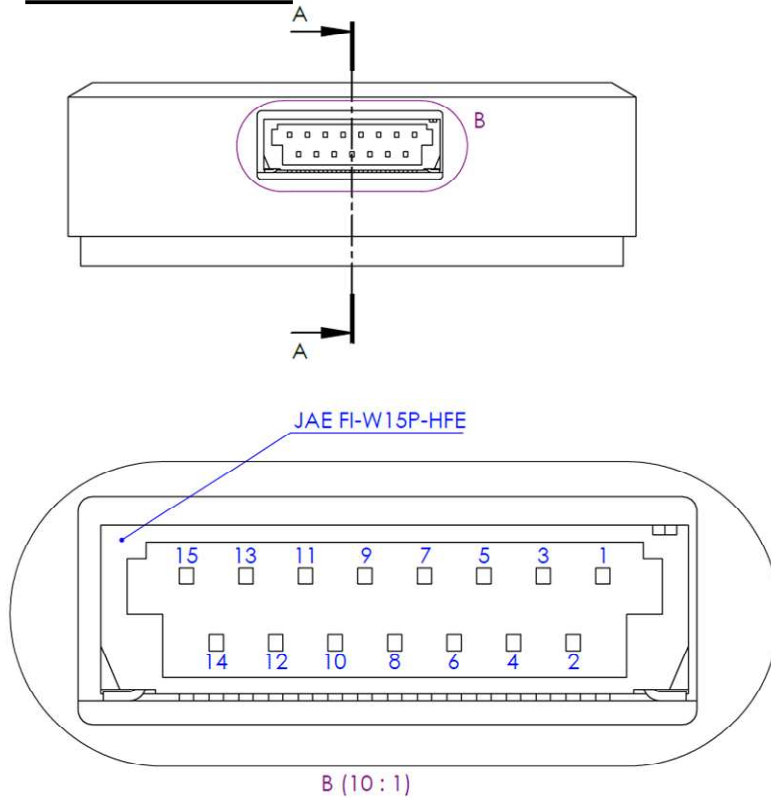
EBG 38 - XXXX - X - XX - XX.XX - S



MOUNTING INSTRUCTION

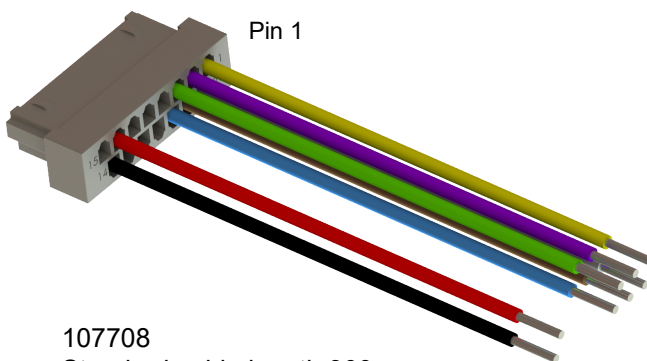


Pin connection

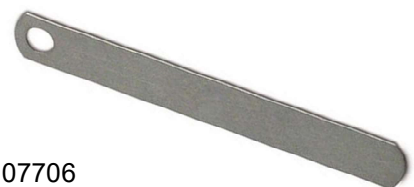


Pin	Signal	Color
1	A+	yellow
2	A-	white
3	B+	purple
4	B-	brown
5	I+	green
6	I-	blue
7	NC	/
8	NC	/
9	NC	/
10	NC	/
11	NC	/
12	NC	/
13	+UB (5V)	red
14	GND	black
15	NC	/

Available accessories



107708
Standard cable length 300 mm
8 wires (LD version)
(UL 10002 / AWG 28)



107706
Gauge 1mm
for adjusting hubs to the correct height



107438
2 x Screws DIN 7045 A2
M2,5 X 10