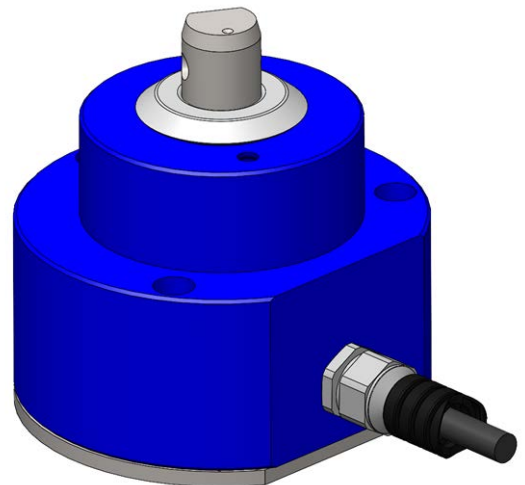


Special features

- contactless measuring principle
- Integrated signal amplifier
- Compact housing
- Redundant design for safety-relevant applications
- Approval according to ECE-R10
- Extremely robust design with stainless steel shaft and seawater resistant aluminium alloy
- Long lifetime
- High resolution
- Available in numerous versions (see order code), customized versions on request



Electrical data

Signal output range	0,25 V ... 4,75 V	4 mA ... 20 mA
Supply voltage	+9 VDC +34 VDC	+9 VDC +34 VDC
Current consumption	25 mA typical	max. 60 mA
Output current	≤ 1 mA *)	-
Working resistance	-	max. 250 Ω
External voltage at signal output	≤ 34 V	≤ 34 V
Resolution	12 Bit	12 Bit
Repeat accuracy	≤ 0,1°	< 0,2% of working range **)
Linearity (related to the measuring range)	≤ ±0,75 %	- ±1 %

*) ≤ 0,05 mA for specified accuracy
 **) after noise reduction

Environmental properties (ISO16750)

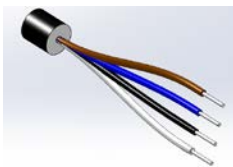
Protection class (ISO 20653) Housing/cable inlet	IP6K6K / IP6K8 (1m;12h) / IP6K9K
Operating temperature	-40 °C bis +85 °C (Deviations possible depending on the cable/connector used)
Storage temperature	-40 °C bis +85 °C (Deviations possible depending on the cable/connector used)
Vibration resistance	(in preparation)
Broadband noise	10 ... 2000 Hz average acceleration 57,9 m/s²
Sinusoidal oscillations	35 Hz, 100 ... 300 m/s²
Shock resistance	500 m/s² Half sine 6 ms (in preparation)

Mechanical data

Shaft diameter	12 mm
Maximum axial load	200 N
Maximum radial load	400 N
Maximum moment	6 Nm
Lifetime	wear-free
Mechanical function angle	360° rotatable
Corrosion resistance	
Shaft:	Stainless steel
Housing:	Aluminum alloy, anodized (stainless steel on request)
Cover:	Stainless steel
Cable gland:	Brass, nickel plated

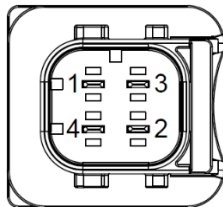
Electrical connection

4 wire cable with open end



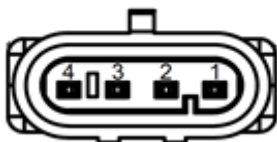
Wire color	Assignment
brown	Supply +U _B
black	Out A
white	Out B
blue	Ground GND

4-pin HDSCS connector (TE Connectivity 2-1703818-1, contacts tin plated)



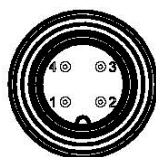
Pin	Assignment
1	Ground GND
2	Out A
3	Supply +U _B
4	Out B

4-pin connector AMP-Superseal (1.5 Series 282106-1, contacts tin plated) (operating temperature -30°C ... +85°C)



Pin	Assignment
1	Supply +UB
2	Out A
3	Out B
4	Ground GND

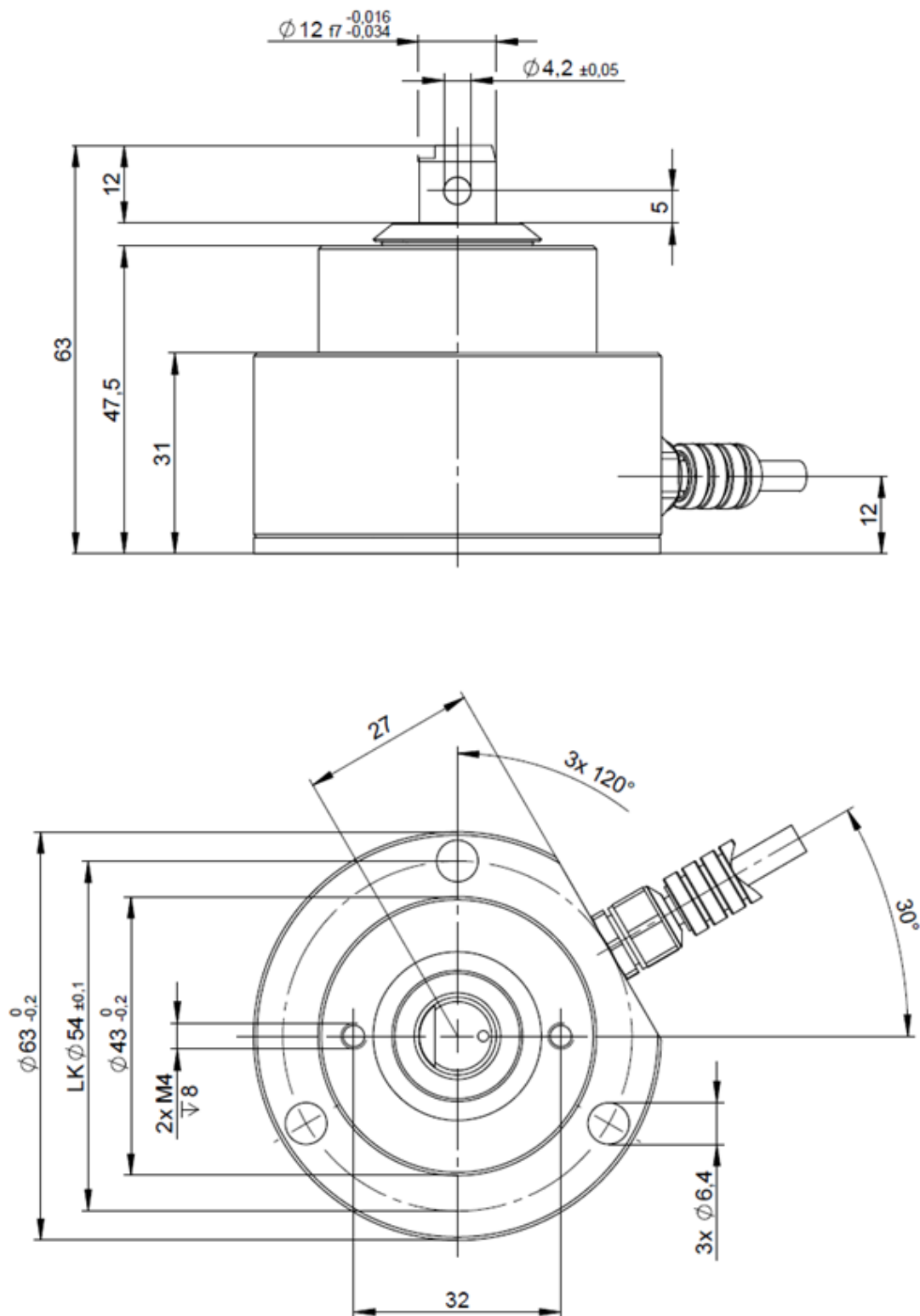
4-pole M12 connector (Lumberg Automation - Type: RST, contacts gold plated)



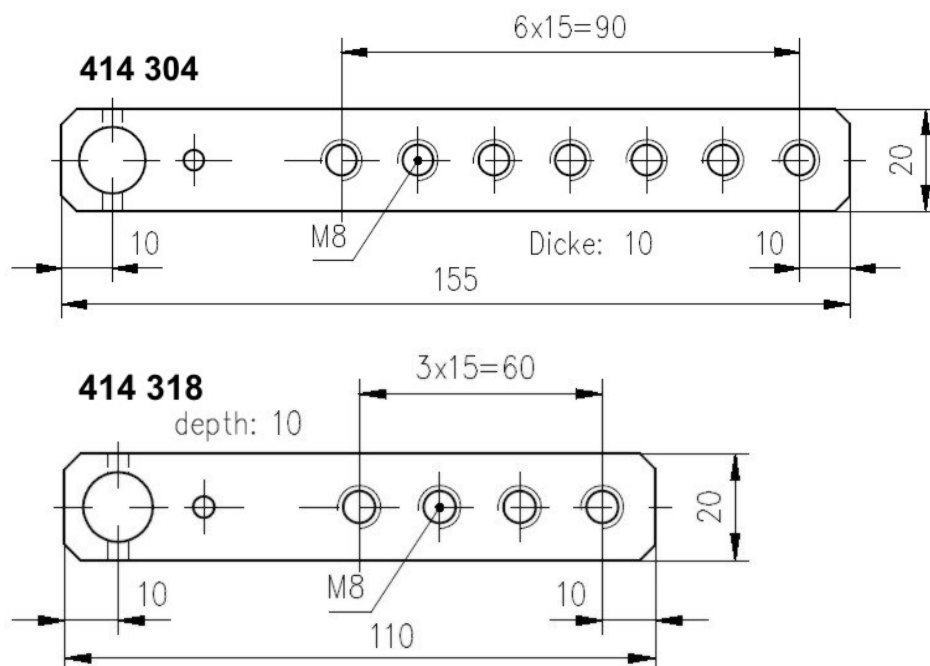
Pin	Assignment
1	Versorgung +U _B
2	Out B
3	Masse GND
4	Out A

				533				-						-	
Type	Output signal	redundant	6												
Mechanical design (housing)	Standard (aluminium)		K												
Measuring range to center position			$\pm 35^\circ$ * $\pm 60^\circ$ $\pm 45^\circ$ $\pm 90^\circ$ $\pm 135^\circ$ $\pm 175^\circ$	3 4 5 7 8 9											
Connector, cable type / length															
	without connector, 4x0.34 PUR unshielded for flexible use, cable length 1.0 m		A	1	0	E									
	without connector, 4x0.34 PUR unshielded for flexible use, cable length 4.0 m		A	4	0	E									
	4-pin M12x1 cable plug, 4x0.34 PUR unshielded for flexible use, cable length 0.5 m		J	0	5	H									
	4-pin HDSCS plug, 4x0.34 PUR unshielded, flex. use, cable length 1.5m + corrugated tube		E	1	5	F									
	4-pin AMP Superseal, 4x0.34 PUR unshielded for flexible use, cable length 0.5 m		S	0	5	E									
Signal direction for clockwise rotation			inverse (channel A decreasing)			3									
Signal output						4mA ... 20mA 0,25V ... 4,75V	W X								
Customized special version						Standard	0								
Lever variants						Standard:	Type:								
						Without	-								0
						155 mm / 7 x M8	414 304								1
						110 mm / 4 x M8	414 318								3

Dimensional drawing



Lever (pre-assembled)



Definition of rotational direction

When looking at the shaft, a clockwise rotation of the shaft results in a decreasing signal OUT A and an increasing signal OUT B.



This data sheet describes the typical values and properties of the series. Deviations are possible here depending on the product. For product-specific values and properties, please refer to the product data sheet.

Technical changes due to further technical development reserved.