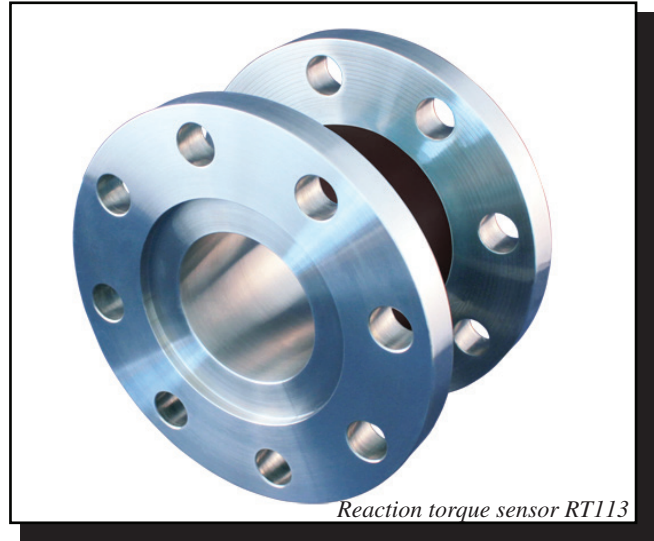

RT 100 Series Reaction Torque Sensor

FEATURES

- Torque Range: 200 N·m to 50 kN·m
- High accuracy 0.05% to 0.2%
- Through hole
- Overload capacity: up to 200%
- Compact and robust
- High torsional stiffness
- Protection class: IP 42 or IP65
- Specific design available on demand
- Other ranges under development

DESCRIPTION

With its compact, robust and maintenance-free design, the RT 100 Series Reaction Torque Sensor from Magtrol brings many appealing advantages to torque measurement applications. Based on strain-gauge technology, the RT Sensor provides highly accurate signal transmission. The RT 100 Series Torque Meter has been designed to perform static torque measurement

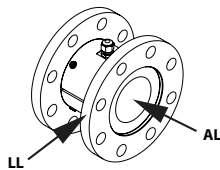


and small dynamic rotation (with limited angle) in both clockwise and counterclockwise direction with high precision. The sensor measures small-reaction torque levels using flange-to-flange connections in-line with the component under test. Main field applications include actuator and valve testing, fastener testing and automotive braking.

RATINGS

MODEL	RT 112	RT 113	RT 114	RT 115	RT 116	RT 117	RT 118	RT 119	RT 120	
TORQUE MEASUREMENT										
Static Rated Torque	200 N·m	500 N·m	1 kN·m	2 kN·m	5 kN·m	10 kN·m	20 kN·m	50 kN·m	100 kN·m	
Combined Error (Linearity + Hysteresis)	0.05%			0.1%		0.2%		0.4%		
Overload Capacity (% of R.T.)	200%									
Max. Static Torque (% of R.T.)	400%				350%		400%			
MECHANICAL CHARACTERISTICS										
Bending max	100 N·m	250 N·m	500 N·m	1,000 N·m	2.5 kN·m	5 kN·m	12 kN·m	25 kN·m	50 kN·m	
Max axial load (AL)*	30 k·N	40 k·N	70 k·N	80 k·N	150 k·N	90 k·N	600 k·N	1,000 k·N		
Max lateral load (LL)*	6 k·N	15 k·N	18 k·N	35 k·N	70 k·N	60 k·N	300 k·N	750 k·N	1,100 k·N	
Execution material	Stainless Steel									
Stiffness	90.7 x10 ³ N·m/rad	247 x10 ³ N·m/rad	528 x10 ³ N·m/rad	1.11 x10 ⁶ N·m/rad	2.65 x10 ⁶ N·m/rad	5.77 x10 ⁶ N·m/rad	50 x10 ⁶ N·m/rad	100 x10 ⁶ N·m/rad	142 x10 ⁶ N·m/rad	
ENVIRONMENT										
Nominal Temperature Range	+20 °C to +60 °C									
Service Temperature Range	-20 °C to +85 °C									
Reference Temperature	+23 °C									
Temperature Influence on Zero	0.01% / °C									
Temperature Influence on Sensitivity	0.01% / °C									
Protection Class	IP 42 (optional IP 65)									
INPUT AND OUTPUT SIGNALS										
Input Resistance	700 Ohm									
Insulation Resistance	10 GOhm									
Power Supply	0.5 VDC to 12 VDC (max 15 VDC)									
Torque Output Signal**	1 mV/VDC +/- 0.5%						0.5 mV/VDC +/- 0.5%		~0.5 mV/V DC	

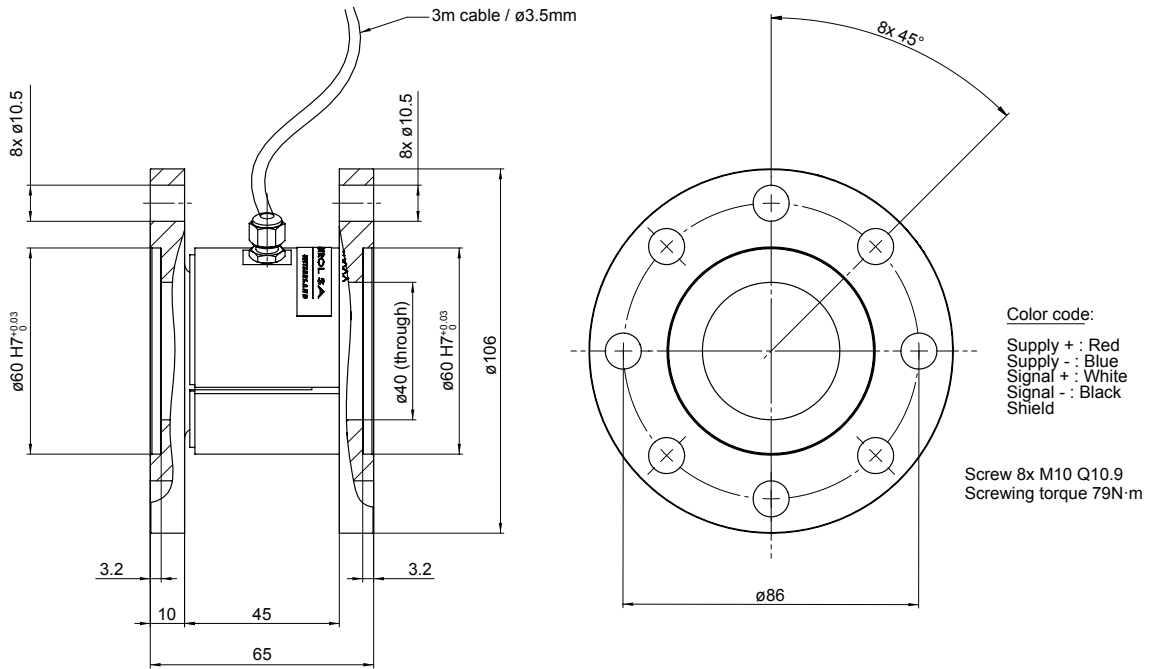
* Max axial load (AL) and Max lateral load (LL) (see diagram below)



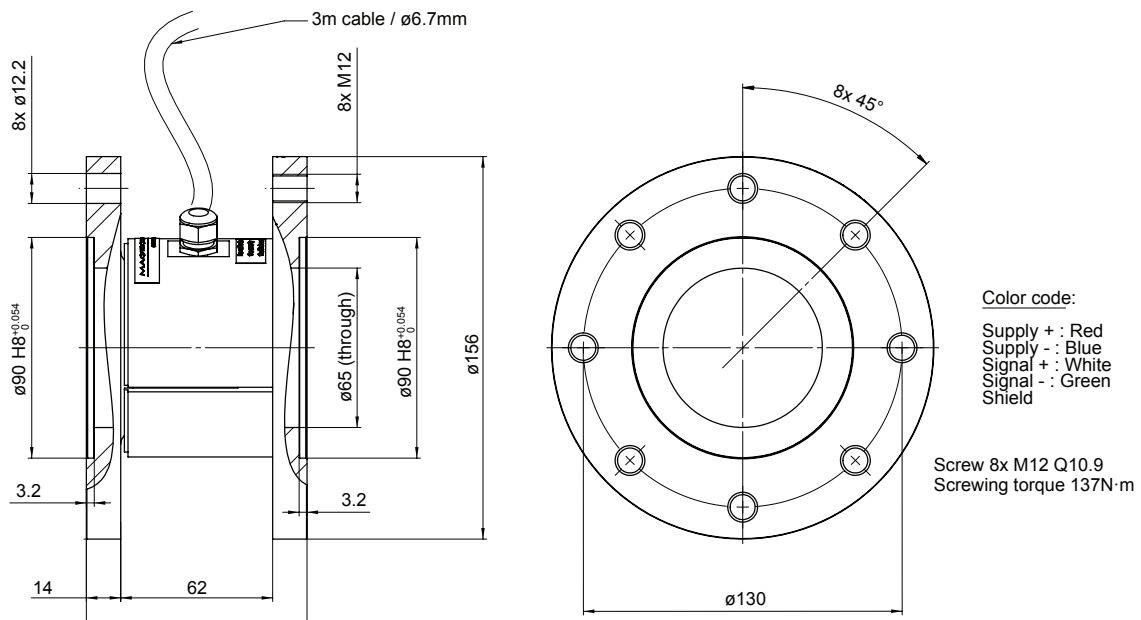
** Suitable strain gauge amplifier options: LMU 209, LMU212, AN 1500 M, GM 80

For dynamic measurement, LMU 209 is recommended

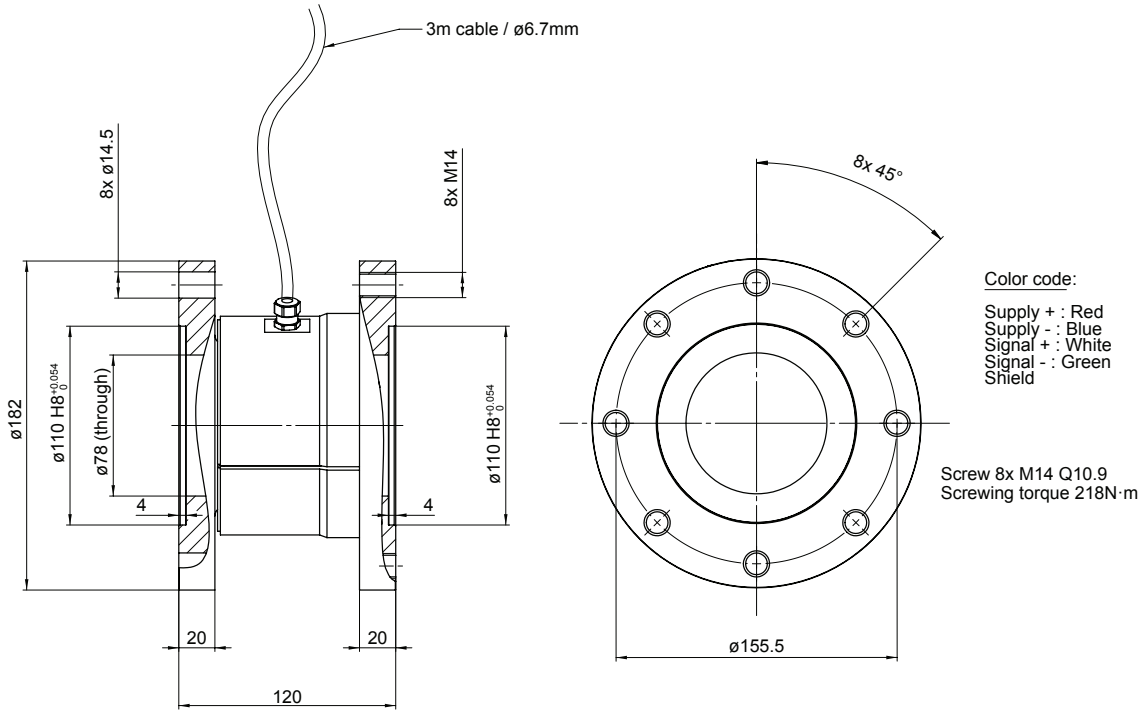
RT 112 AND RT 113



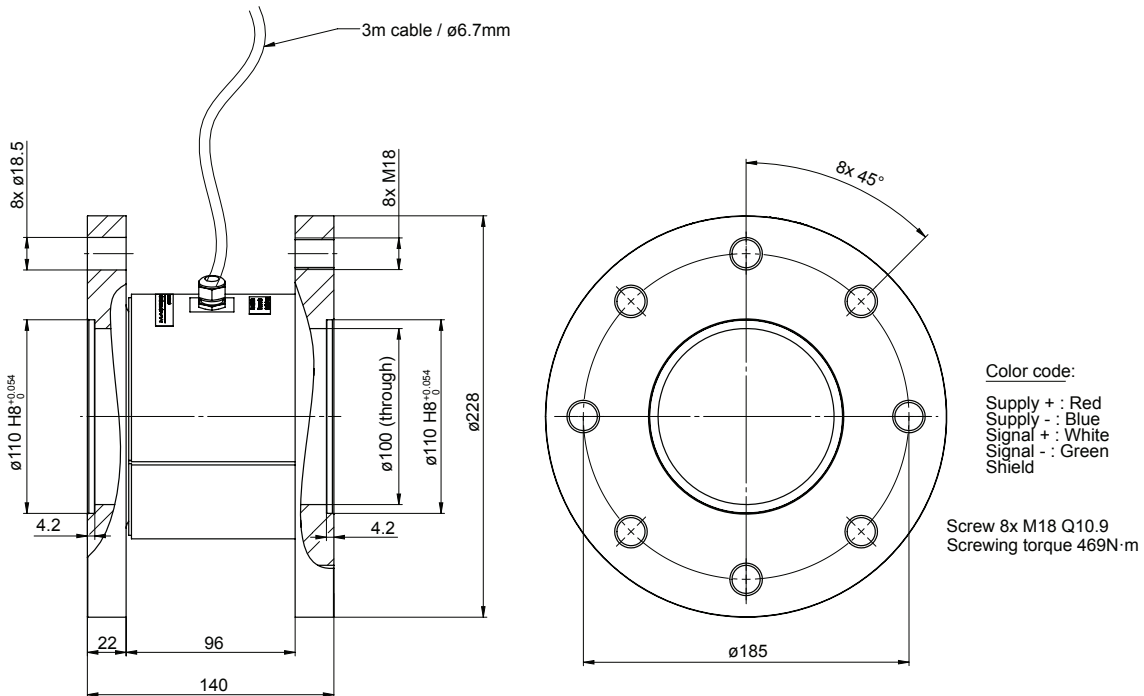
RT 114 AND RT 115



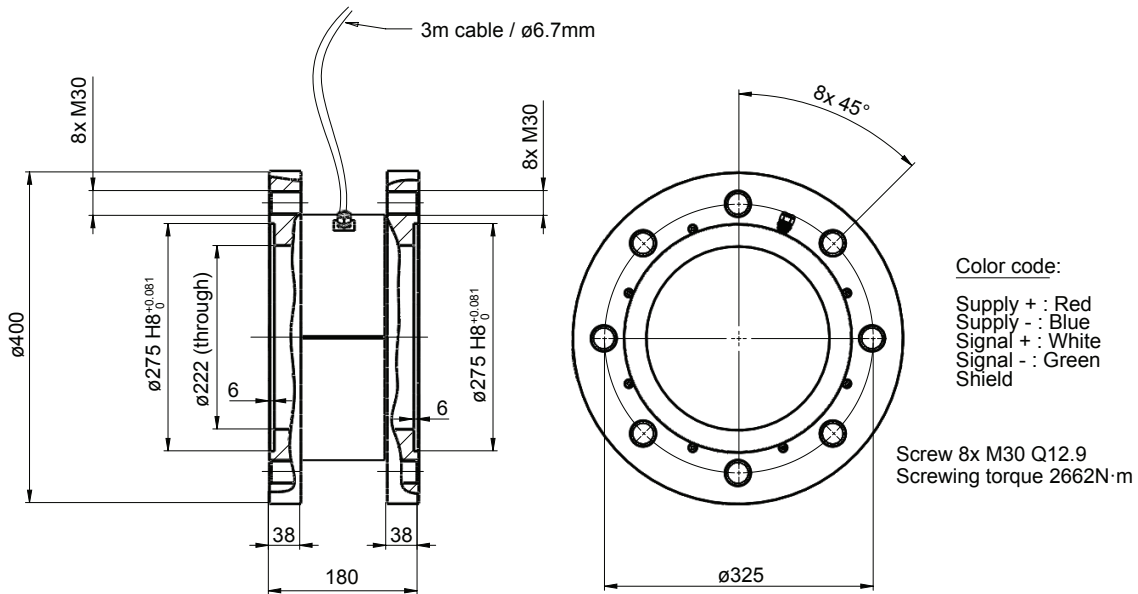
RT 116



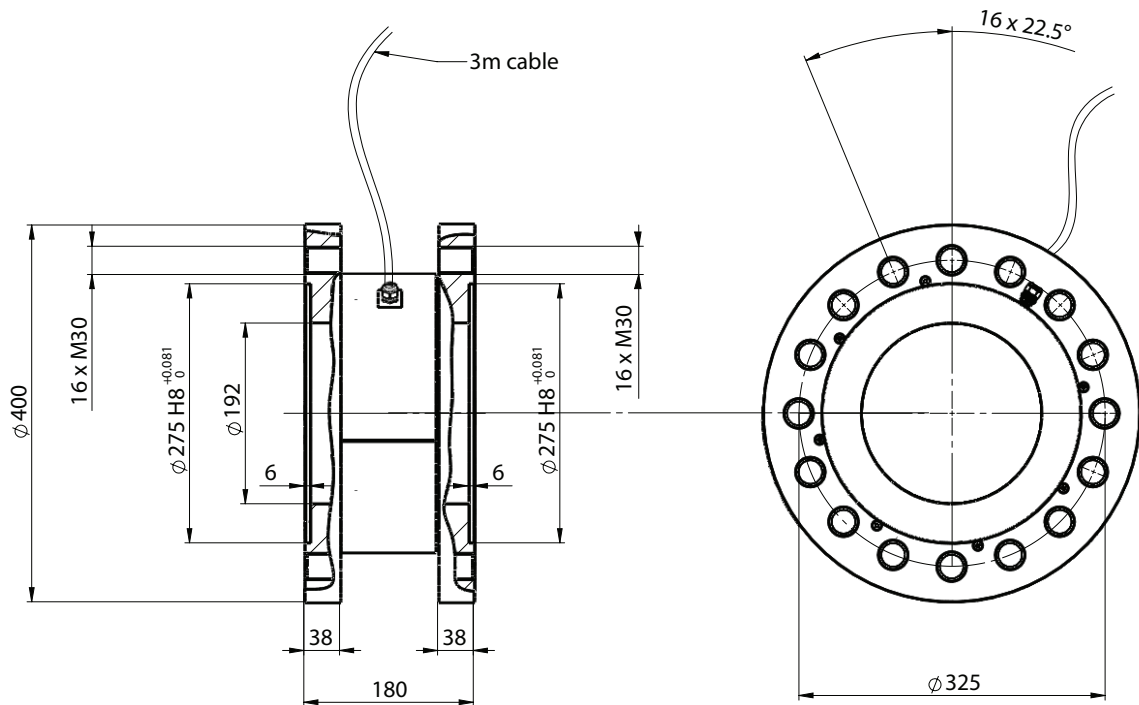
RT 117



RT 118 AND RT 119



RT 120



Color code:

Supply + : Red
 Supply - : Blue
 Signal + : White
 Signal - : Green
 Shield

Nominal Torque: 100 kN·m

Sensitivity: ca. 0.5 mV/V/Nominal Torque
 Impedance: 700 Ohm

Screws: 16 x M30 (12.9)
 Screwing torque: 2662 N·m



ORDERING INFORMATION

MODEL NUMBER:	RT	<input type="text"/>	<input type="text"/>	<input type="text"/>	/	<input type="text"/>	1
MODEL RT							
• IP42							0
• IP65							1

Due to the continual development of our products, we reserve the right to modify specifications without forewarning.



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