

RTN Ring Torsion Load Cells

- Legal-for-trade design according to OIML (up to 5000 d and 7500 d for multi-interval scales)
- High accuracy, even for very small application areas (for legal-for-trade applications up to at least 15 %)
- Large output signal and this high-resolution useful signal range
- Because of the low power consumption, multi-scale systems can also be realized with simple control electronics
- Use in hazardous zone with protection class Ex ia IIC T4 Gb / Ex ia IIIC T125 °C Db or protection class Ex nA IIC T4 Gc / Ex tb IIIC T125 °C Db
- Protection class IP68



Application

The load cell as transducer converts the mechanical input variable force proportionally into the electrical output variable voltage.

The consistent optimization of the ring torsion load cell offers the user specific advantages:

- The extremely small frame size simplifies the use in almost all weighing device applications
- The robust construction allows problem-free transport, installation and operation, also under very rough ambient conditions (disturbance forces, temperature)

Construction

- Hermetically sealed encapsulation through laser welding (IP68)
- High corrosion protection through electrolytically polished stainless steel
- All electrical components are located inside the load cell and thus are optimally protected

- The high quality and robust connecting cable is guided radially into the load cell
- In connection with adapter kits the RTN load cells are compatible previous designs

Function

- High measuring sensitivity
- High reproducibility
- High long-term stability and therefore consistently high accuracy permanently
- Extremely small measured value influence as a result of lateral forces
- High functional safety, even with frequently unavoidable impact loads and constraining forces, as well as with electrical interferences
- Integrated overvoltage protection
- Torque-free force input/output as a result of the direct, vertical power train

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Variants

Design	Accuracy class		
	0.05	C3	C5 / C4 MI 7.5
RTN 1 t	D726173.04	D726173.02	D726173.10
RTN 2.2 t	D726174.04	D726174.02	D726174.10
RTN 4.7 t	D726175.04	D726175.02	D726175.10
RTN 10 t	D726176.04	D726176.02	D726176.10
RTN 15 t	D726177.04	D726177.02	D726177.10
RTN 22 t	D724781.04	D724781.02	D724781.10
RTN 33 t	D724754.04	D724754.02	D724754.10
RTN 47 t	D724782.04	D724782.02	D724782.10
RTN 68 t	D724783.04	D724783.02	D724783.10
RTN 100 t	D724784.04	D724784.02	D724784.10
RTN 150 t	D726178.04	D726178.02	
RTN 220 t	D726179.04	D726179.02	
RTN 330 t	D726180.04	D726180.02	
RTN 470 t	D726181.04	D726181.02	

Optional feature ATEX/IECEX approval

Intrinsically safe explosion-proof design according to ATEX category 2GD and IECEx EPL Gb, Db:

Gas-Ex II 2G Ex ia IIC T4 Gb (Zone 1)

Dust-Ex II 2D Ex ia IIIC T125 C Db, IP67 (Zone 21)

Attention: The verification of intrinsically safe circuit must be verified. New barriers are provided in particular for new systems. Verifications of intrinsically safe circuit are available for all load cells and barriers.

Accuracy class		
0.05 2GD	C3 2GD	C5 / C4 MI 7.5 2GD
Model .82	Model .81	Model .83

Load cells marked as intrinsically safe - Ex "i" - are also operated intrinsically safely irrespective of the zone.

Not intrinsically safe explosion-proof design according to ATEX category 2D, 3G and IECEx EPL Db, Gc:

Gas-Ex II 3G Ex nA IIC T4 Gc (Zone 2)

Dust-Ex II 2D Ex tb IIIC T125 °C Db, IP67 (Zone 21)

Accuracy class		
0.05 2D3G	C3 2D3G	C5 / C4 MI 7.5 2D3G
Model .86	Model .85	Model .87