

Strain Ring with Axial Cable Exit DSRC AX

Features

- Ideal for use with telemetry system
- For tension and compression measurement
- Installation without surface preparation
- For cyclical applications only



Strain Gage Data

Strain gage type	Foil gages
Bridge resistance at 24 °C	350 Ω 2 x quarter bridge (without cable)
Sensitivity at 24 °C	Gage factor K= 2.00 ±0,5% (compensated with resistors)
Temp. compensation	Steel
Transverse sensitivity nominal	+0,7%
Bridge circuit	2 x 1/4 bridge (see electrical connections)

Mechanical Data

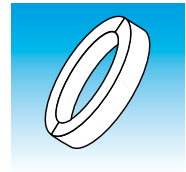
Connection	Open leads
Material	
- Ring	Aluminum anodized
- Protective foil	Stainless steel
- Screws	M8 (torque 3 Nm)
- Hinge	Nitril
Cable	5 m
	2 core, shielded, PVC

Environmental Conditions

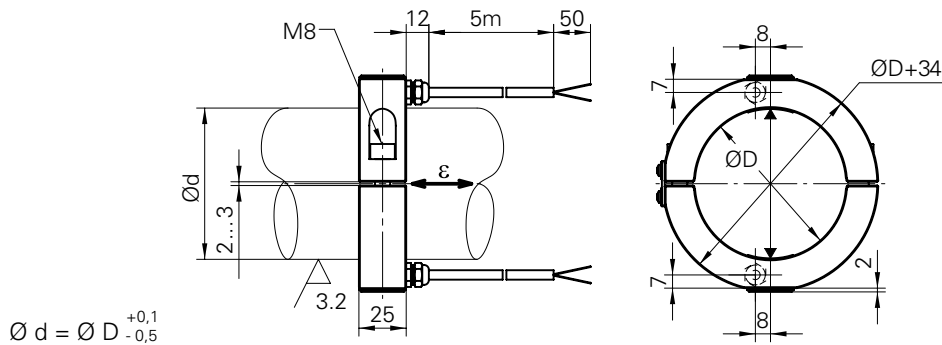
Surface installation spot	Ra 3.2 (N8) or better
Operating temp. range	-10...+60 °C
Storage temperature	-40...+100 °C
Protection class	IP 54

Electrical Data

Measuring range	±1000 µε (1 µε = 0,001 mm/m resp. 1 µε equals 0,001 mm strain per meter of shaft)
Output signal per 1000 µε	1 mV/V (with completed full bridge)
Combined error	< 1% FS
Linearity	< 0,5% FS
Hysteresis	< 0,5% FS
Non-repeatability	< 0,2% FS
Zero, bridge balance	< ±200% FS (depending on installation) Since the gages are pressed-on, the bridge can have any arbitrary zero offset after the ring is mounted. Baumer amplifiers and display boxes are equipped with a reset function to tare this offset. The bridge should be reset before each measuring cycle.
Excitation max.	9 VDC
Recommended	5 VDC
Signal polarity	The signal polarity depends on the bridge circuit. In combination with Baumer amplifiers, the polarity is positive under tensile load.
Rise time (10 - 90%)	< 1 ms (on steel)



Dimensions (mm)



$\varnothing D$ = Nominal diameter

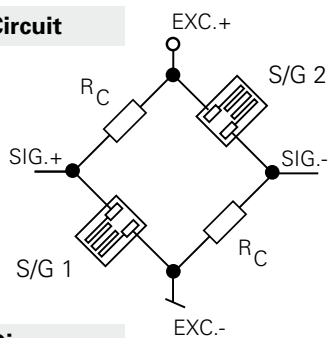
$\varnothing d$ = Shaft diameter

ε = Strain

▲ = Gage location

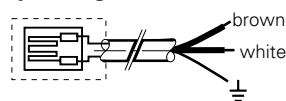
Electrical Connections

Bridge Circuit



Wire Color

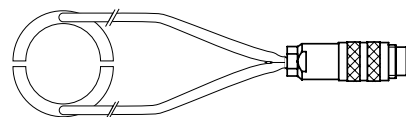
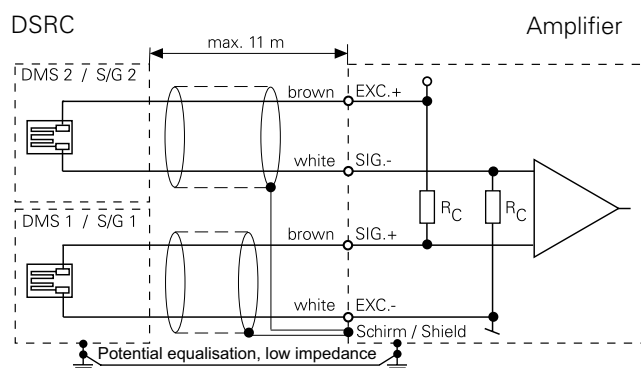
(per ring half)



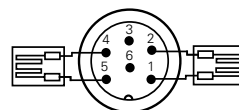
Color	Signal
brown	S/G
white	S/G

Option /CN

Wiring Diagram



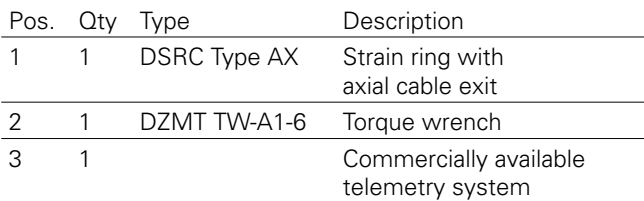
Series 712



Pin	Signal
1	S/G 1
2	S/G 1
3	n.c.
4	S/G 2
5	S/G 2
6	n.c.

DSRC AX

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1" 025	5" 127	9" 229
1,5" 038	5,5" 140	9,5" 241
2" 051	6" 152	10" 254
2,5" 064	6,5" 165	10,5" 267
3" 076	7" 178	11" 279
3,5" 089	7,5" 191	11,5" 292
4" 102	8" 203	12" 305
4,5" 114	8,5" 216	12,5" 318

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