

Strain Ring with Quick Mount Latch DSRC QM

Features

- Installation without surface preparation
- Simple and fast installations thanks to a quick mount latch
- For tension and compression measurement
- Ideal for restricted space conditions
- For cyclical applications only



Strain Gage Data

Strain gage type	Foil gages
Bridge resistance at 24 °C	350 Ω 2 x quarter bridge
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	6 pin female (bayonet quick con.)
Material	
- Ring	Aluminum anodized
- Protective foil	Stainless steel
- Hinge	Steel
- Mounting buckle	Steel

Environmental Conditions

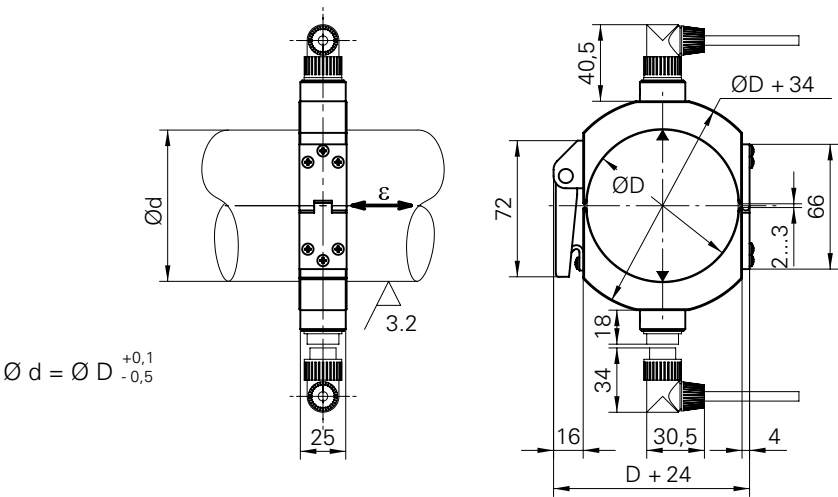
Surface installation spot	Ra 3.2 (N8) or better
Operating temp. range	-10...+60 °C
Storage temperature	-40...+100 °C
Protection class	IP 54

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
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. Recommended	9 VDC 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)



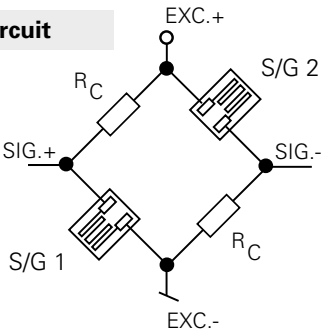
Dimensions (mm)



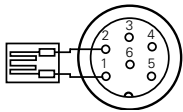
- Ø D = Nominal diameter
- Ø d = Shaft diameter
- ε = Strain
- ▲ = Gauge location

Electrical Connections

Bridge Circuit

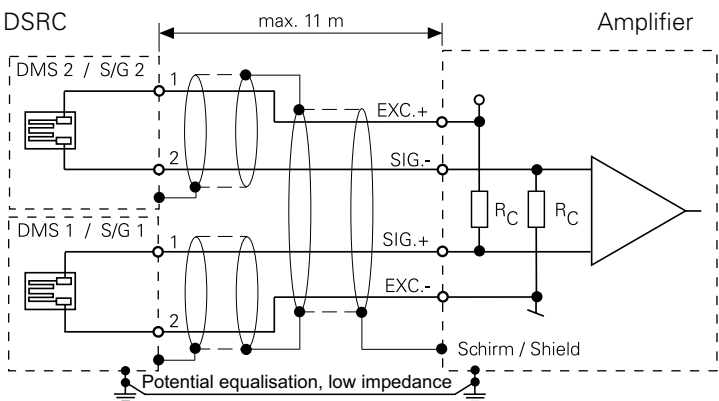


Pin Assignment
(per ring half)



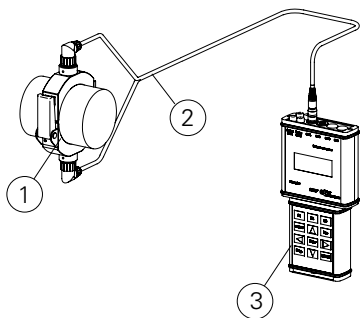
Pin	Signal
1	S/G
2	S/G
3	n.c.
4	n.c.
5	n.c.
6	n.c.

Wiring Diagram

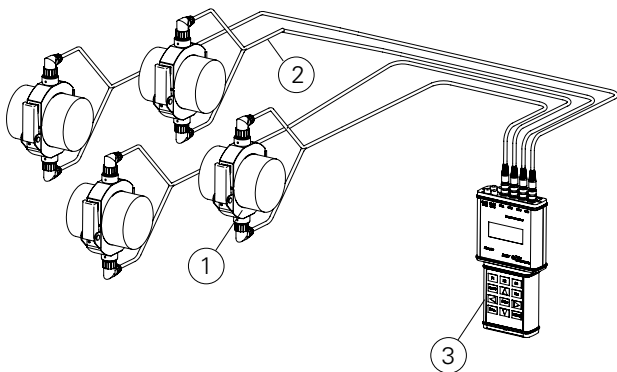


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Typical Measuring Chains



Pos.	Qty	Type	Description
1	1	DSRC Typ QM	Strain ring with quick mount latch
2	1	DZCY 05-ST-BM-C	Connecting cable for strain ring, 5 m
3	1	DDBC 2-SC	2-Channel display box incl. power adapter and Analysis Software



Pos.	Qty.	Type	Description
1	4	DSRC Typ QM	Strain ring with quick mount latch
2	4	DZCY 05-ST-BM-C	connecting cable for strain ring, 5 m
3	1	DDBF 4-SC	4-Channel display box incl. power cord and Analysis Software

Order Code

DSRC QM				M
				Unit
				M Metric sizes
				Nominal diameter*
				Metric (M)
				045 080 130 185 260
				048 085 135 190 270
				050 090 140 195 300
				053 095 145 200 335
				055 100 150 205 350
				057 105 155 220 360
				060 110 160 225
				065 115 165 230
				070 120 170 240
				075 125 180 250

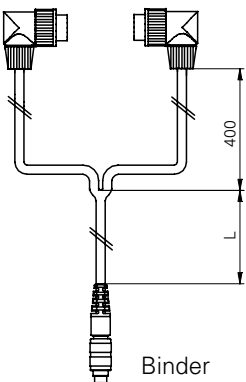
* Other diameters available upon request



Accessories

Connecting Cable for Display and Bridge Amplifier

Binder Series 678



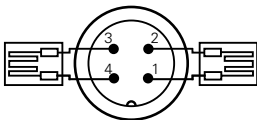
Binder Series 712

DZCY -ST-BM-C

Length L

05 5 m
10 10 m

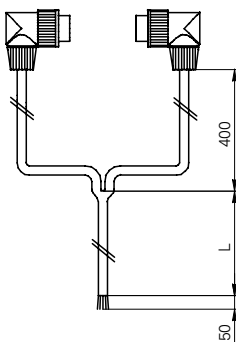
Binder Series 712



Pin	Signal
1	S/G 1
2	S/G 1
3	S/G 2
4	S/G 2

Connecting Cable with Open Leads

Binder Series 678

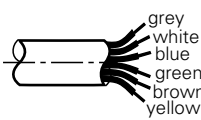


DZCY -ST-BO-C

Length L

05 5 m
10 10 m

Wire Color



color	Signal
grey	S/G 1
white	S/G 1
blue	n.c.
green	S/G 2
brown	S/G 2
yellow	n.c.

Order Code

DZCY -ST -C

Length L

05 5 m
10 10 m
00 00 m

Connection types

- BO** right angle connector 6-pin open end
- BM** right angle connector 6-pin / 4-pin straight connector (amplifier DDBF/DABU AD2T)