

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

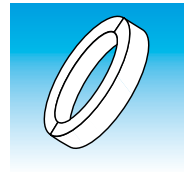
Connection	6 pin female (bayonet quick con.)
Material	
- Ring	Aluminum anodized
- Protective foil	Stainless steel
- Hinge	Steel
- Mounting buckle	Steel

Environmental Conditions

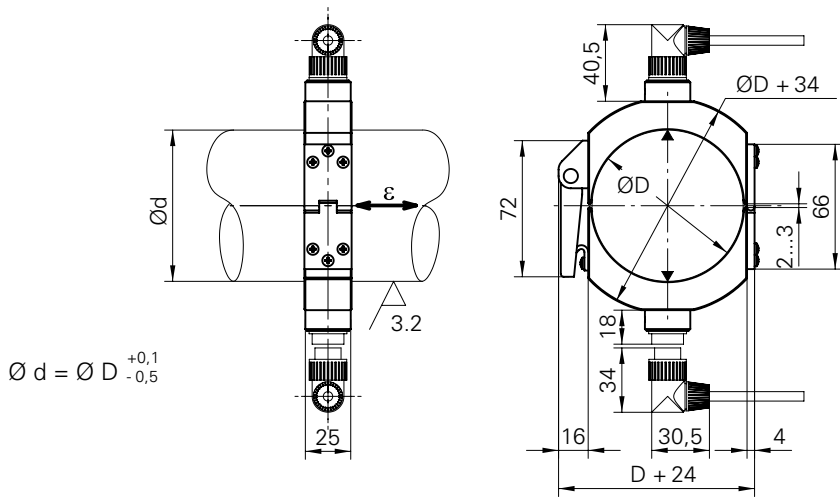
Surface installation spot	Ra 3.2 (N8) or better
Operating temp. range	-10...+60 °C
Storage temperature	-40...+100 °C
Protection class	IP 54

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
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. 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)

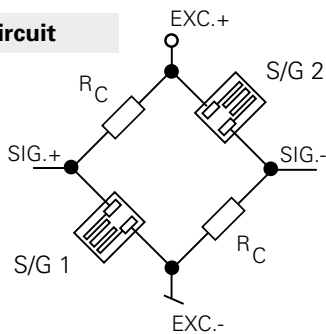


$\varnothing d = \varnothing D \begin{matrix} +0,1 \\ -0,5 \end{matrix}$

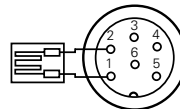
- Ø D = Nominal diameter
- Ø d = Shaft diameter
- ε = Strain
- ▲ = Gage location

Electrical Connections

Bridge Circuit

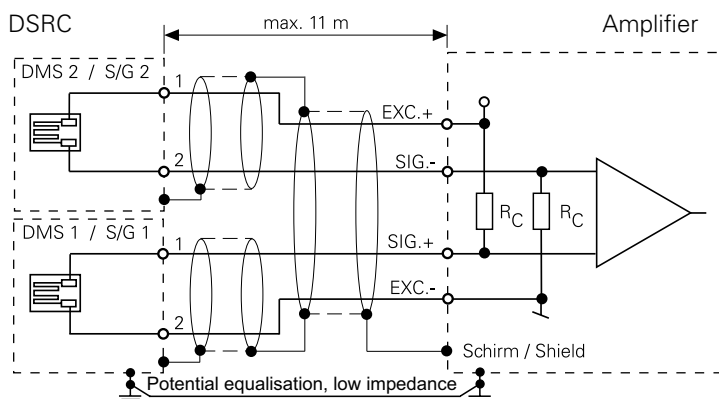


Pin Assignment (per ring half)



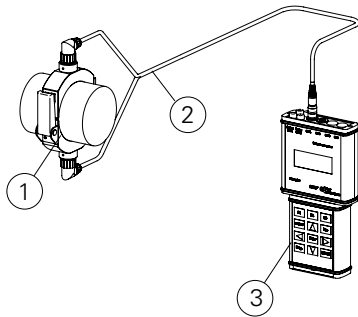
Pin	Signal
1	S/G
2	S/G
3	n.c.
4	n.c.
5	n.c.
6	n.c.

Wiring Diagram

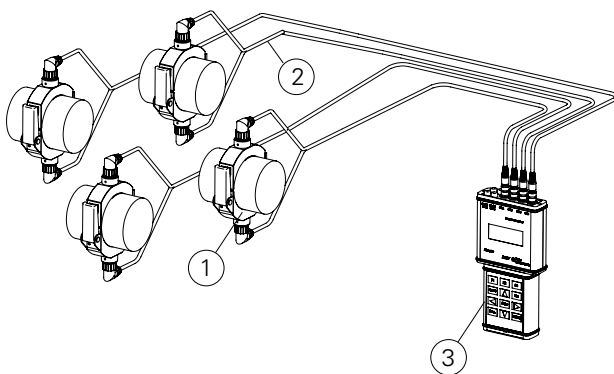


Strain Ring with Quick Mount Latch DSRC QM

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

Unit

M Metric sizes

Z Inch sizes

Nominal diameter*

Metric (M)

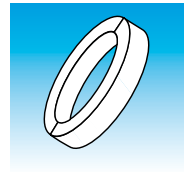
045	080	130	185	260
048	085	135	190	270
050	090	140	195	300
053	095	145	200	335
055	100	150	205	350
057	105	155	220	360
060	110	160	225	
065	115	165	230	
070	120	170	240	
075	125	180	250	

Nominal diameter*

Inch (Z)

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

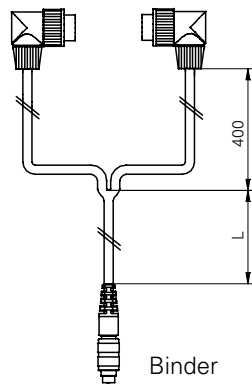
* Other diameters available upon request



Accessories

Connecting Cable for Display and Bridge Amplifier

Binder Series 678

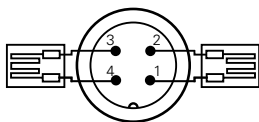


Binder Series 712

DZCY -ST-BM-C

Length L
 05 5 m
 10 10 m

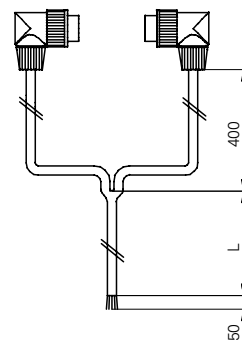
Binder Series 712



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

Connecting Cable with Open Leads

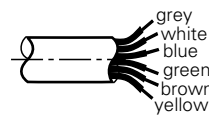
Binder Series 678



DZCY -ST-BO-C

Length L
 05 5 m
 10 10 m

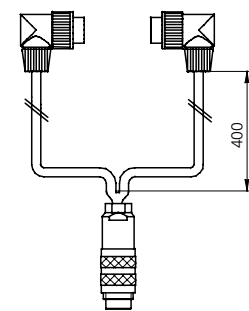
Wire Color



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

Connecting Cable with Bridge Completion for Amplifier

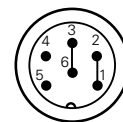
Binder Series 678



Binder Series 423

DSZY xx-ST-C/BC350

Binder Series 423



Pin	Signal
1	EXC.+
2	EXC.+
3	EXC.-
4	SIG.+
5	SIG.-
6	EXC.-

Order Code

DZCY -ST -C/

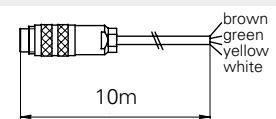
Length L
 05 5 m
 10 10 m
 00 00 m

Option
 /BC350 350 Ω connector bridge compensation

- Connection types
- BO** right angle connector 6-pin open end
 - BS** right angle connector 6-pin straight connector 6-pin (amplifier connection DABx AD1R)
 - BM** right angle connector 6-pin / 4-pin straight connector (amplifier DDBF/DABU AD2T)

Extension for Connecting Cable with Bridge Completion

DZCS 10/404131



Color	Signal
brown	EXC.+
green	EXC.-
yellow	SIG.+
white	SIG.-