

DLM20-BU Compression

Compression - Load cells

DLM20-BU.###.CP3.M4

overview

- Compression load from 50 N
- Max. Nonlinearity of 0.2%
- Small outer diameter for limited space conditions
- Sensor body made of stainless steel with protection class IP68
- Fully welded sensor design
- Durable with 100% working stroke



Technical data

general data

Nominal force	50 ... 2000 N
Non-linearity	< 0.1 %
Repeatability	< 0.1 %
Temperature effect zero	< 0.2 % / 10K
Zero point deviation	< 20 %

electrical data

Nominal sensitivity	1 mV/V
Bridge resistance	1000 Ω
Supply voltage	0.5 ... 12 VDC
Signal polarity positive	Compression

mechanical data

Overload	150 %
Breaking load	200 %
Nominal displacement	1 mm
Weight	999 g
Material sensor body	Stainless steel, 1.4542

Fatigue strength >10 Mio cycles at 0...100% FS

Electrical connection M5,4 pin, male

environmental conditions

Protection class EN 60529, ISO20653	IP 67
Operating temperature range	-40 ... 85 °C
Storage temperature range	-40 ... 85 °C
Vibration IEC 60068-2-6	10 ... 57 Hz: 1.5 mm p-p, 58 ... 2000 Hz: 10 g
Random IEC 60068-2-64	20 ... 1000 Hz: 0.1 g ² /Hz
Shock IEC 60068-2-27	50 g / 11 ms, 100 g / 6 ms

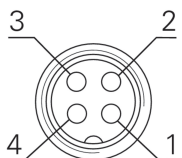
Compliance and approvals

EMC	EN 61000-6-2 EN 61000-6-3 EN 61326-2-3
UL listed	E217824

Measuring principle

The force sensors consist of a body and strain gauges. Under force, the body of the sensor deforms, resulting in strain on the surface of the material. This strain is measured by strain gauges applied to the surface of the body. The strain gauges convert the mechanical strain into an electrical resistance change and act as a mechanical-electrical converter. By intelligently connecting the individual strain gauges to a Wheatstone measuring bridge, even the smallest strains can be detected. These strains measured with the aid of the strain gauges, generate a stress change proportional to the force.

Electrical connection



- 1 +Vs
- 2 Sig -
- 3 Sig +
- 4 -Vs

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Ordering key - Configuration possibilities see website

	DLM20	-	BU	.	###	.	C	P3	.	M4
Product	DLM20-BU									
Type	Button									
Nominal force	50 N									
	100 N									
	200 N									
	500 N									
	1 kN									
	2 kN									
Measuring direction positive	Compression									
Output signal	Nominal sensitivity 1.00 mV/V									
Electrical connection	M5, 4 pin, male									