

Small capacity bending beam type UL/ULA

2023/03/22

Features



A low capacity, universal, bending beam loadcell. The UL is excellent when small force measurements are required.

Specification

Specification name	Specification contents
Rated capacity	19.61 mN{2 gf}~980.7 mN{100 gf}
Safe overload	130 %R.C.
Ultimate overload	130 %R.C.
Rated output	$\pm 1.75 \text{ mV/V} \pm 0.35 \text{ mV/V}$ (UL-2GR : $\pm 0.65 \text{ mV/V} \pm 0.15 \text{ mV/V}$)
Non-linearity	0.2 %R.O. (UL-2GR: 0.3 %R.O.)
Hysteresis	0.2 %R.O. (UL-2GR: 0.3 %R.O.)
Repeatability	0.2 %R.O. (UL-2GR: 0.3 %R.O.)
Excitation, recommended	3 V or less
Excitation, maximum	6 V
Zero balance	$\pm 0.175 \text{ mV/V}$ (UL-2GR : $\pm 0.05 \text{ mV/V}$)
Input resistance	$270 \Omega \pm 40 \Omega$
Output resistance	$270 \Omega \pm 40 \Omega$
Insulation resistance	1.000 M Ω or more (DC50 V)

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Insulation Resistance	1,000 MΩ or more (500V _{DC})
Temp. range, compensated	0 °C ~ 50 °C
Temp. range, safe	-10 °C ~ 60 °C
Temp. effect on zero	0.5 %R.O./10 °C
Temp. effect on output	0.5 %LOAD/10 °C
Class of protection	IP30 or equivalent
Durability	1,000,000 times with rated load applied.

Table of P/N

Parts No.	Rated capacity [mN]	Rated capacity [gf]	Weight(Approx.) [g]	Natural frequency [Hz]	Rated displacement [mm]	Cable
UL-2GR	19.61	2	100	60	±0.12	4-cores parallel vinyl60 cm directly attached, cable end is separated
ULA-10GR	98.07	10	100	133	±0.4	4-cores parallel vinyl60 cm directly attached, cable end is separated
ULA-20GR	196.1	20	100	192	±0.4	4-cores parallel vinyl60 cm directly attached, cable end is separated
ULA-50GR	490.3	50	100	208	±0.4	4-cores parallel vinyl60 cm directly attached, cable end is separated
ULA-100GR	980.7	100	100	286	±0.4	4-cores parallel vinyl60 cm directly attached, cable end is separated

Parts No.	3D CAD files [STEP]	CAD files[DXF]
UL-2GR	UL-2GR.STEP	ul2gr.dxf
ULA-10GR	ULA-10GR.STEP	ul10gr.dxf
ULA-20GR	ULA-20GR.STEP	ul10gr.dxf
ULA-50GR	ULA-50GR.STEP	ul10gr.dxf
ULA-100GR	ULA-100GR.STEP	ul10gr.dxf