

RS-M10 · RS-M12 · RS-M16 PIEZOELECTRIC FORCE SENSOR

Properties

- High sensitivity to detect smallest process force variations
- Embedded charge amplifier
- Suitable for rough environmental conditions
- Compact design

Typical applications

- Typical applications: Lathe finishing and hard turning
- Different sizes available
- Using the respective measuring transducer, it suits all ARTIS monitoring systems



Illustration similar

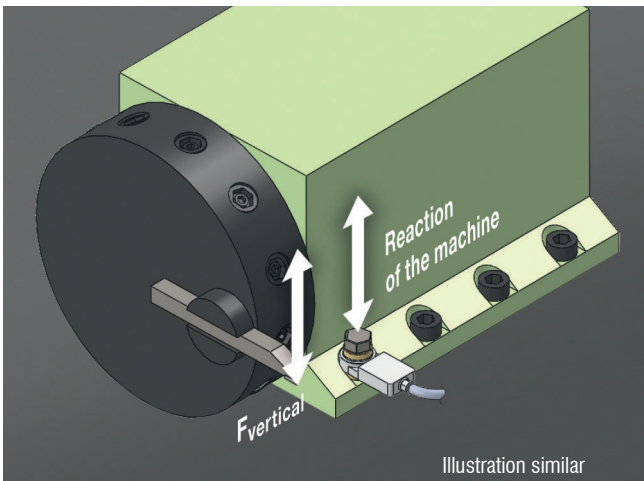
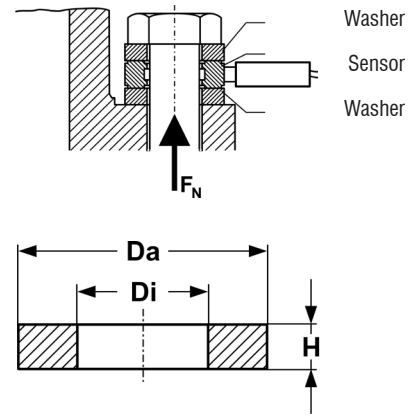
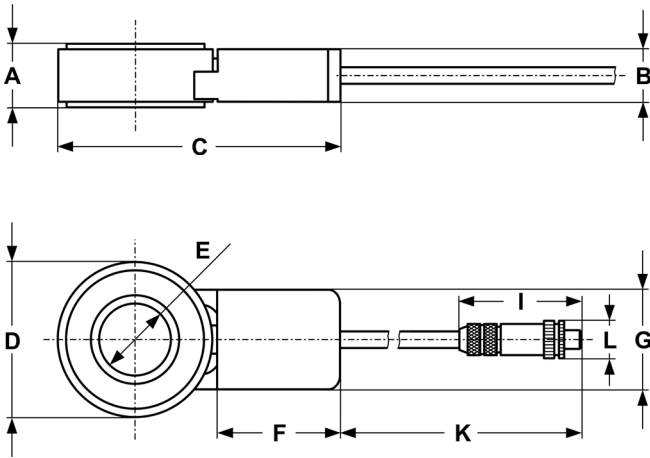


Illustration similar

RS-Mxx Sensor connection (pin side)

PIN	Description	Cable CMD
1, 6	Ground (bridged in connector)	white, pink
2	Measuring range Gnd (1145 N) 15 V (6510 N)	brown
3	Reset → 0 V Amplifier active → 15 V Reset active	green
5	Signal output ±10 V	gray
8	Supply voltage + 15 V	red
4, 7	n.c.	yellow, blue



	M10 03PZ0211021	M12 03PZ0211020	M16 03PZ0211022
NOM. FORCE	50 kN	100 kN	140 kN
MAX. OPERATING FORCE	120 % of nominal force	120 % of nominal force	120 % of nominal force
DIMENSIONS			
A	10.3 mm	11.3 mm	12 mm
B	10.6 mm	10.6 mm	10.6 mm
C	52 mm	57 mm	63 mm
D Ø	22.76 mm	28.6 mm	34.5 mm
E Ø	10.5 mm	13 mm	17 mm
F	27.7 mm	27.7 mm	27.7 mm
G	22.6 mm	22.6 mm	22.6 mm
H	4 mm	5 mm	6 mm
I	69 mm	69 mm	69 mm
K	1085 mm	1085 mm	1085 mm
L	20 mm	20 mm	20 mm
Da Ø _{-0,1}	24 mm	26.5 mm	34 mm
Di Ø ^{+0,1}	10 mm	12.7 mm	16 mm
WEIGHT (CABLE INCL.)	135 g	160 g	197 g
REC. PRE-LOAD	18 kN	30 kN	45 kN
SENSITIVITY			
MEAS. RANGE 1	0.1145 kN/V	0.1145 kN/V	0.1145 kN/V
MEAS. RANGE 2	0.6510 kN/V	0.6510 kN/V	0.6510 kN/V

	Valid for all sizes
STORAGE TEMPERATURE	-40 °C...+60 °C
OPERATING TEMPERATURE	-10 °C...+60 °C
DEGREE OF PROTECTION	IP66/IPx7, resistant to cooling lubricants
INSULATION RESISTANCE	> 10 MOhm
NOM. DISPLACEMENT	7.5 µm at 18 kN
FUNDAMENTAL FREQUENCY	35 kHz
CROSSTALK FROM F _{xy} TO F _z FROM M _{xy} TO M _z	0.03 N/N 0.002 N/Nm
REL. LINEARITY ERROR	2 % of full scale
MATERIAL (SENSOR)	Stainless steel
MATERIAL (WASHER)	Stainless steel
SCOPE OF SUPPLY	Sensor, two washers
SENSOR CABLE, 5 CORES	
CABLE LENGTH, OUTER-Ø	1 m, unit with sensor, 6.5 mm
INSULATION RESISTANCE	< 1 GΩ
CABLE PROTECTION	Protective braid from steel
MIN. BENDING RADIUS	25 mm
TEMPERATURE RANGE	-25...+80 °C
ACCESSORIES	
CONNECTING CABLE CODE 06739797059	Cable CMD, 20M also refer to separate data sheet
WASHER CODE 04390140002 CODE 04390140003 CODE 04390140008	2 washers, stainless steel M10 M12 M16
CONFORMITY	CE, UKCA



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For a full list of address locations, please consult the Marposs official website

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