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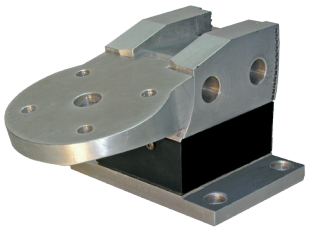
Lower Neck Load Cell

Type M56126A...

Six-axial, adjustable

Type M56126A... measures forces and moments in the lower neck of the dummy type SID-IIs (S2).



- Six-axial (F_x, F_y, F_z, M_x, M_y, M_z)
- UPS module available
- Small linearity error and low hysteresis
- Adjustable in 2° steps
- Kistler system cabling
- Polarities according to SAE J211/1

Description

The load cell is made of elements on which forces are transmitted. The mechanical deformation element, applied with strain gage, serves for mechanical electrical deformation. The forces to be measured create mechanical stretches and buckling in the gaging member. In order to avoid linearity errors, the deformation paths are constructively held small (high rigidity); thus a proportional behavior is realized.

The force and moment proportional resistance variations are measured by a Wheatstone-type bridge circuit. The load cell is available with UPS module which is integrated in an external housing in the wiring or in the connector. Customized cable lengths and connectors with specific pin assignments are optionally available.

Technical Data

Axial Data		F_x	F_y	F_z	M_x	M_y	M_z
Measuring range	kN	8,95	8,95	14,311			
	N·m				409	340	340
Bridge output voltage (typ.)	mV/V	1,65	1,65	0,62	1,53	1,37	1,89
Sensitivity (typ.)	µV/V/kN	184	184	43			
	µV/V/N·m				4,0	4,0	5,5
Bridge resistance	Ω	350	350	1 400	700	700	350
Ultimate load, static	%	150	150	150	150	150	150

General Data		
Supply voltage	VDC	5 ... 15
Insulation resistance[1)]	GΩ	>10
Operating temperature range[2)]	°C	–20 ... 80
Storage temperature range[2)]	°C	–30 ... 90
Amplitude non-linearity (typ.)	%	<1
Hysteresis (typ.)	%	<1
Channel cross talk	%	<5
Bridge zero output (typ. / max.)	mV/V	0,01 / 0,03
Weight, without cable and plug	grams	650

All specifications are typical at 25 °C and rated at 10 V sensor supply voltage, unless otherwise specified.

1) All wires to screen (GND), measured with 10 VDC
2) Without dew

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Application

The load cell is directly assembled at the designated location in the dummy and provides important information about the loads on the human body occurring during a crash test.

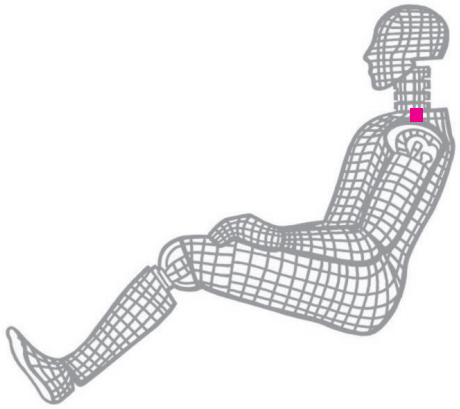

Fig. 1: Dummy application, location lower neck

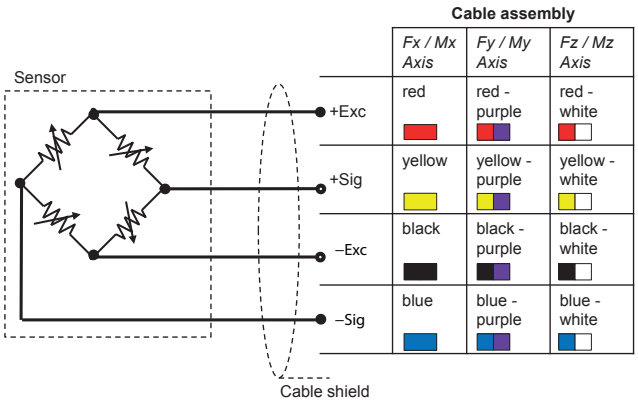

Fig. 2: Cable assembly

Included Accessories

- None

Optional Accessories	Type No.
• Add. label with serial number, plug side	M015KABID
• UPS module	on request
• Add. label with ID number at sensor	M015KABID
• Add. shunt	on request

Ordering Key

Type M56126A ☐☐☐☐☐☐

Design

Standard	**GM**

Cable Length before Electronics

0 cm	**00**
<10 cm (digit x 1 cm)	**C#**
10 cm ... 9,9 m (digit x 10 cm)	**##**
10 m ... 90 m (digit x 10 m)	**D#**

Additional Electronics

Sensor detail, as per type declaration force-moment TP-650-2	**#**

Cable Length after Electronics

0 cm	**00**
<10 cm (digit x 1 cm)	**C#**
10 cm ... 9,9 m (digit x 10 cm)	**##**
10 m ... 90 m (digit x 10 m)	**D#**

Connector

Conn. type, as per TP-600	**#-**
Conn. type assignment, as per TP-600	**-#**

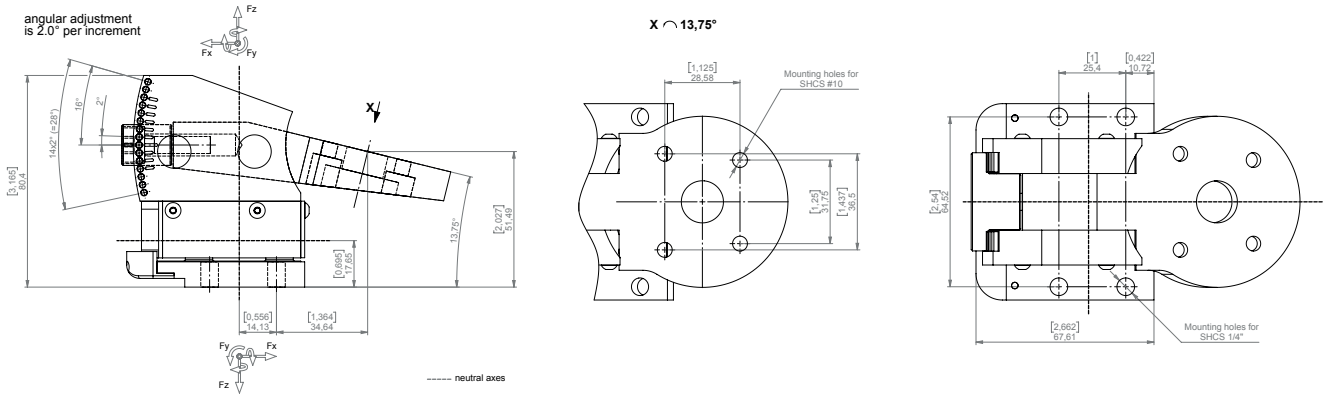

Fig. 3: Dimensions