

# Strain Gage Meter

Type 4703B

## Electrical measuring device for strain gage sensors

Universal AC independant measuring device for testing of force measuring equipment (DMF-P B100, DMF-P A300, DMF-P A300 NCF and DMF-P A400) by verification with strain gage force sensors.

Applicable in Quality assurance, production line monitoring, service and commissioning.

- Rigid versatile handheld instrument
- Robust battery-operated equipment
- Max./Min. value display
- Taring
- 16 programmable measurement ranges
- Different dimensions free available
- Linearity 0,05 %

### Description

The electronic measuring device Type 4703B for strain gage sensors is mobile and AC power independent. It is equipped with a backlighted and well readable display. Simple operable by front panel keys with all the important functions (e.g. taring, minimum and maximum value display, quick measuring range selection). The intuitive menu makes parametrisation easy.

The strain gage sensor is directly connected to the unit and will be supplied by it. Instead of a force sensor also a slip-ring torque sensor Type 4501A... may be connected. The measuring unit of the display is freely defineable. The following values may be displayed: momentary value, maximum value, minimum value, overload, units and battery charge.

The measuring unit is splash-proof (IP54) and will be delivered in a solid case.

### Application

The measuring unit is distinguished for static verification measurement of force measuring equipment with the force sensors Type 4570A... to 4577A... as well as the torque sensors Type 4501A... .

With torque sensors Type 4501A... or passive reactional torque strain gage sensors torque measuring equipment may be verified.



### Technical data

#### Input

For up to 2 transducers with strain gage full bridges connected	$\Omega$	350
Sensitivity (S)	mV/V	max. 5
Excitation voltage	VDC/V	5

#### Display

5-digit LC graphic display		
128x64 pixel, illuminated		
Character height	mm	14
Display range		$\pm 99\ 999$
Display rate	1/s	3
Scaling points for linearization		up to 6
Internal resolution at 2mV/V	Div./Bit	22
Measuring rate (average value)	1/s	6,25 ... 1 600

#### Power supply

Supply voltage	VDC	3,0 ... 4,8
(Accumulators or primary cells)	AA	3
Power input (without illumination, strain gage bridge)	W	0,24
	$\Omega$	350
Operating time (batteries)	h	approx. 40

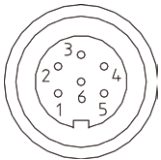
#### Environmental conditions

Operating temperature range	$^{\circ}\text{C}$	-10 ... 50
Storage temperature range	$^{\circ}\text{C}$	-20 ... 70

#### Errors for S = 2 mV/V

Linearity	%S	0,05
Noise (for measuring rate)	%S	0,002 (6,25 Hz)
	%S	0,04 (1 600 Hz)
Zero drift	%S/10K	0,002
USB-Interface Mini-USB-B	Connect.	5 pin
Dimensions	mm	82x162x54
Protection (EN 60529)		IP54

**Interface for force sensors**



Pin	Assignment
1	Excitation – (EX–)
2	Excitation + (EX+)
3	Not connected
4	Measuring signal + (SI+)
5	Measuring signal – (SI–)
6	Not connected

**Strain gage meter, electrical measuring device with strain gage force sensor**



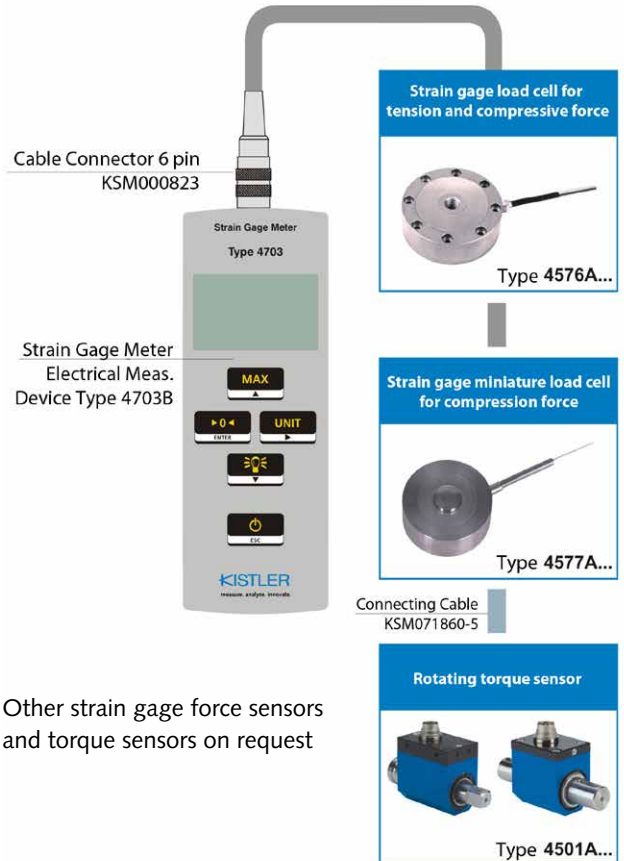
Force Sensor Type 4577A...

**Strain gage meter, electrical measuring device in hard-top case**



Pos.	Description
1	Strain Gage Meter
2	Screwdriver
3	Batteries
4	USB cable

**Possible combinations with strain gage force sensors and torque sensors**



Other strain gage force sensors and torque sensors on request

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**Included accessories**

- Hard-top case, USB cable and screwdriver, batteries

**Optional accessories**

- |   |                           |
|---|---------------------------|
| • Strain gage load cell for tension and compressive force | Type/Art. No.<br>4576A... |
| • Strain gage miniature load cell for compression forces  | 4577A...                  |
| • Rotating torque sensor                                  | 4501A...                  |

**Ordering key**

**Type 4703B**  
Strain Gage Meter, electrical measuring device for strain gage sensors