

DMP41

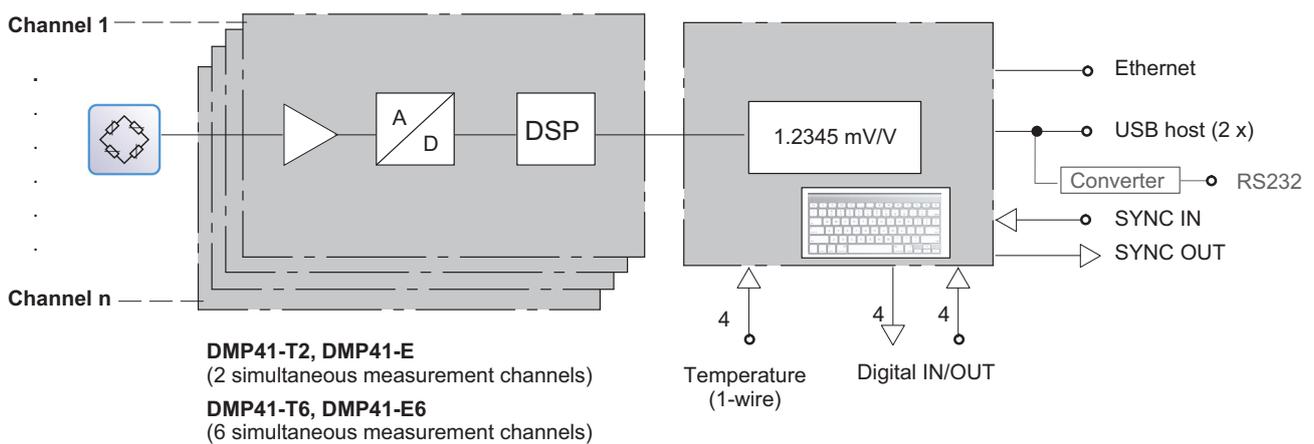
Digital precision measuring devices



Special features

- Accuracy class 0.0005
- Simultaneous measurement with optional 2 or 6 channels
- Resolution of measured signals up to the physical limit
- Individual linearization
- Powerful digital filters
- Patented background calibration
- Operation via touchscreen, keyboard or computer
- PC connection via Ethernet
- Available as a desktop housing or rack frame

Working method of the devices



Specifications

Type		DMP41-T2 / DMP41-E2	DMP41-T6 / DMP41-E6
Accuracy class		0.0005 ^{1), 2), 3)}	
Number of amplifiers		2	6
Transducers that can be connected		2 SG full bridges	6 SG full bridges
Excitation voltage U_b	V	2.5; 5; 10	
Measuring range per transducer excitation voltage			
at $U_b = 2.5\text{ V}$	mV/V	5; 10	
at $U_b = 5\text{ V}$	mV/V	2.5; 5	
at $U_b = 10\text{ V}$	mV/V	2.5	
Carrier frequency	Hz	225 ±100 ppm	
Transducer resistance per amplifier			
at $U_b = 2.5\text{ V}$	Ω	75 ... 4,000	
at $U_b = 5\text{ V}$	Ω	150 ... 4,000	
at $U_b = 10\text{ V}$	Ω	300 ... 4,000	
Length of transducer cable	m	< 50	
Digital filter (6th order)	Hz	40...0.01 (15 steps)	
Common-mode rejection	dB	> 120	
Input resistance (DC)	MΩ	> 100	
Sampling rate, per amplifier	1/s	1 ... 450	
Taring range/Zeroing range		Total display range	
Linearization of transducer characteristic curve		2...11 points	
Non-linearity			
rel. to full scale value	%	< 0.0005	
Temperature effect per 10 K in nominal (rated) temp. range			
on zero point (rel. to full scale value)	%	< 0.0002	
on sensitivity (rel. to actual value)	%	< 0.0005	
Short-term drift over 5 min, from 2 h after switch-on	ppm	max. ±2	
Long-term drift over 24 h, from 2 h after switch-on	ppm	max. ±5	
Nominal (rated) temperature range	°C	10...+40	
Operating temperature range	°C	10...+50	
Storage temperature range	°C	-10...+60	
Operating voltage (mains voltage)	V	85 ... 264 (50...60 Hz)	
Power consumption	W	approx. 35	approx. 45
Weight (net weight)	kg	approx. 9 (T2), 8 (E2)	approx. 9.5 (T6), 8.5 (E6)
Dimensions DMP41-T2, DMP41-T6 (W x H x D)	mm	458 x 171 x 367	
Dimensions DMP41-E2, DMP41-E6 (W x H x D)	mm	482 x 131 x 369	
Connections for			
SG transducer in six-wire configuration		2 x D-Sub-15 2 x Amphenol	6 x D-Sub-15 6 x Amphenol
Temperature sensor (1-wire), max. 4 sensors		RJ45	
Digital inputs and outputs		D-Sub-15	
Computer interface Ethernet		RJ45	
USB host interface		2 x USB Host	
Computer interface serial (optional)		Adapter D-Sub-9	
Range of use		Indoor	
Altitude, max.	m	2000	
Protection class		I	
Overvoltage category		II	
Permitted degree of contamination		2	

Type		DMP41-T2 / DMP41-E2	DMP41-T6 / DMP41-E6
Rel. air humidity, max.		80 % at 31 °C, decreasing linearly to 50% at 40°C	
Degree of protection		IP 20 per DIN EN 60529	

- 1) With cable lengths <10 m; for longer cables, resistors with half the value of the bridge resistance (output resistance of the transducer) must be soldered into the sense leads as close as possible to the transducer to achieve the accuracy class.
- 2) For $U_b = 2.5 \text{ V}$ the accuracy class is 0.001.
- 3) When operated in a controlled electromagnetic environment the accuracy class of 0.0005 is valid. This means that RF transmitters such as mobile phones may not be used in close proximity.
In industrial electromagnetic environments under the influence of continuous disturbance variables the accuracy class is 0.0025.

Scope of delivery

Article	Order No.
Network cable (Ethernet cable CAT6A), Patch, 1 piece	1-KAB239-2
Network cable IEC 320 C13, 1 piece Please enter the land in which the cable is to be used in the order (various versions: DE/CH/GB/IT/USA)	1-KAB274- . . .
Synchronization cable for synchronization between 2 DMP41 devices	1-KAB261-2
Operating manuals, 2 copies	-
USB-RS232 adapter (from the new USB interface of the DMP41 to the RS232 interface previously present on the DMP40)	1-KAB297
Cable RS232	1-KAB2114-3

Accessories (not included among the items supplied)

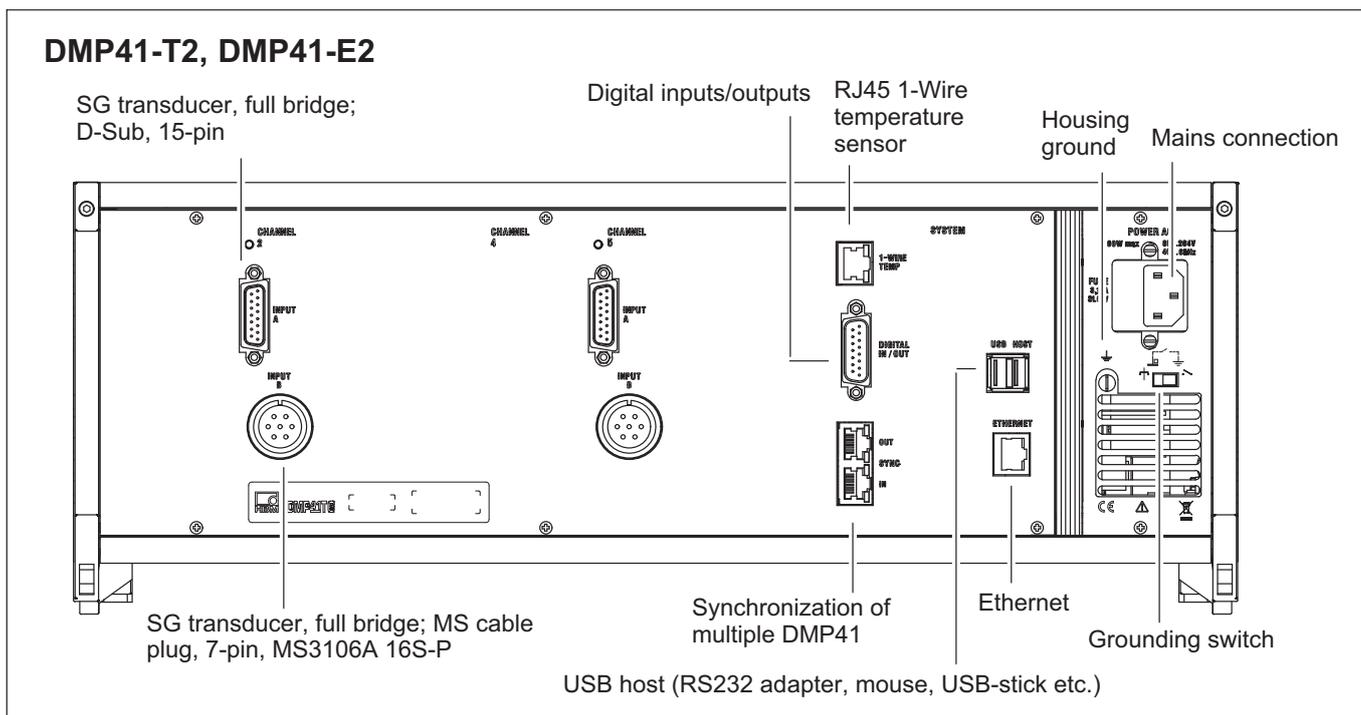
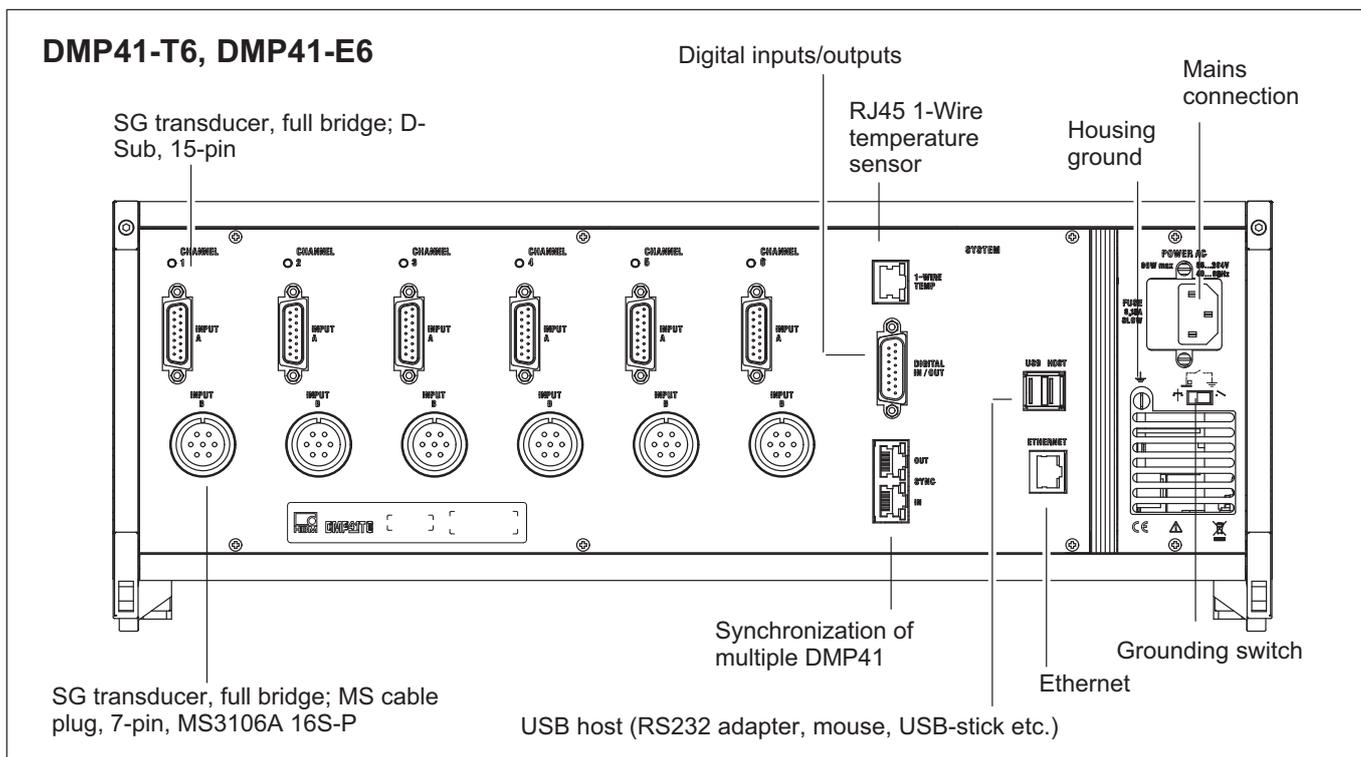
Article	Order No.
Temperature sensor (1-wire); with open ends; 1 sensor per temperature channel	available from www.wiregate.de
RJ45 connector for tool-free fitting	1-RJ45-EMV

Application areas

- Calibration measurements within scope of quality management for compliance with DIN-ISO 9000, particularly for comparison measurements of comparison standards / test piece
- Measurements under adverse conditions, extreme interference signal suppression
- Precision measurement with SG transducers

Specifications

Housing rears



Subject to modifications.
All product descriptions are for general information only. They are not to be understood as a guarantee of quality or durability.

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