

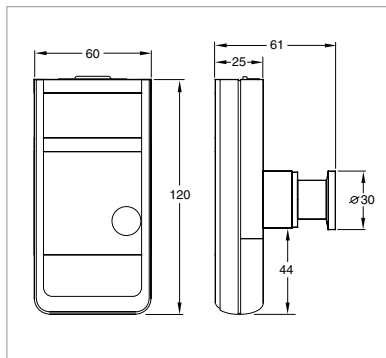
Digital THERMOVAC Sensor TM 101



The digital compact THERMOVAC TM 101 combines high-quality sensor technology with modern process technology in a handy design. The THERMOVAC TM 101 can operate optionally as a datalogger saving the pressure data during the measurement. Of course a subsequent simple transfer to a PC is possible via a USB.

The fully electronic THERMOVAC TM 101 is capable of measuring pressures within the pressure range of 1200 to 5×10^{-4} mbar (900 to 3.75×10^{-4} Torr) (7 decades).

By combining a piezo-resistive pressure sensor for the upper and a Pirani sensor for the lower pressure range, the measurements made by the THERMOVAC TM 101 are independent of the type of gas above pressures of 15 mbar. Especially noteworthy is the exceptionally long battery life



Maßzeichnung zum THERMOVAC TM 101



Windows Software VacuGraph

Advantages to the User

- Utilization is directly possible in a vacuum
- Measurement range 1200 to 5×10^{-4} mbar (7 decades)
- Adjustable gas type correction factor
- Pressure measurements above 15 mbar are independent of the type of gas
- Pressure unit of measurement selectable between mbar, Torr and Pascal
- Large 4 digit 7 segment display
- Cordless power supply through a standard 9 V battery
- Data logging function with USB interface and internal memory for up to 2000 measured values
- Minimum and maximum memory function
- Online measurements via USB are possible
- Measurement data can be exported by way of ASCII text to Microsoft Excel, for example
- Protection class IP 40

Typical Applications

- Mobile pressure measurements of all kinds
- Checking and setting up of vacuum systems
- Ensuring operation and quality of vacuum pumps
- Maintenance and service
- Graphic representation of pumpdown curves
- Coating systems
- Pressure measurements
 - on evaporators and vacuum melting furnaces
 - in chemical process engineering
 - on refrigerating and air-conditioning systems before filling in the refrigerant
 - during the production of gas filled pressurised lamps, respectively refilling
- Leak tests

Technical Data

THERMOVAC Sensor

TM 101

Measurement principle	Piezo-resistive (gas-type independent) and thermal conductance Pirani	
Indicated units of measurement	mbar, Torr, Pa	
Measurement range	mbar (Torr)	1200 to 5×10^{-4} (900 to 3.75×10^{-4})
Maximum overload	bar abs.	2
Accuracy		
1200 to 10 mbar	%	± 0.3 of full-scale
10 to 2×10^{-3} mbar	approx. %	10 of measured value
$< 2 \times 10^{-3}$ mbar	approx. %	< faktor 2
Materials in contact with the vacuum	Stainless steel, gold, tungsten, nickel, glass, Viton	
Measurement cycle	s	1.6
Data storing rate	s	1 bis 999
Operating temperature		
TM 101	°C	+5 to +50
battery	°C	-20 bis +45
Storage temperature		
TM 101	°C	-20 to +60
battery	°C	+10 bis +25
Supply voltage	Rechargeable 9 V battery (recommendation: type Panasonic 6LR61PM, 9 V / 500 mAh) or 12 V AC adaptor (miniature jack, + terminal at the tip)	
Power consumption		
< 200 mbar	mW	60
> 200 mbar	mW	0.5
Operating duration		
6LR61 alkaline (vacuum operation)	h	up to 75
Display	LCD 12 mm	
Connection (stainless steel)	DN	16 ISO-KF
PC interface	Mini USB-B connector	
Dimensions (without flange)	mm	60 x 120 x 25
Protection class	IP	40
Weight (including battery)	kg (lbs)	0.23 (0.51)

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Ordering Information

THERMOVAC Sensor

TM 101

TM 101, DN 16 ISO-KF Including AlMn battery, 9 V block 6LR 61	Part No. 230 081 V01
Accessory kit for VacuGraph Windows software, Including USB interface cable (shielded, 2 m) protection case with foam insert and 12 V wall power supply for 100 - 260 V, 50/60 Hz mains	Part No. 230 082 V01