

DISPLAY ONE



Cost-effective, compact single channel display unit for the transmitters from the THERMOVAC series and for PTR 90.

Advantages to the User

- Power supply voltage for the transmitters
- Four digit mantissa in the range from 5×10^{-9} to 2000 mbar
- Readout selectable between mbar, Torr or Pascal
- 0 to 10 V chart recorder output via plug-in screw terminals
- The switching threshold of the transmitters has been looped through to plug-in terminals
- The transmitter switching threshold settings are displayed
- Compact bench top enclosure (1/4 19", 2 HU)
- For fitting into 19", 3 HU racks
- Supply voltage 100 – 240 V

Connectable Sensors

THERMOVAC

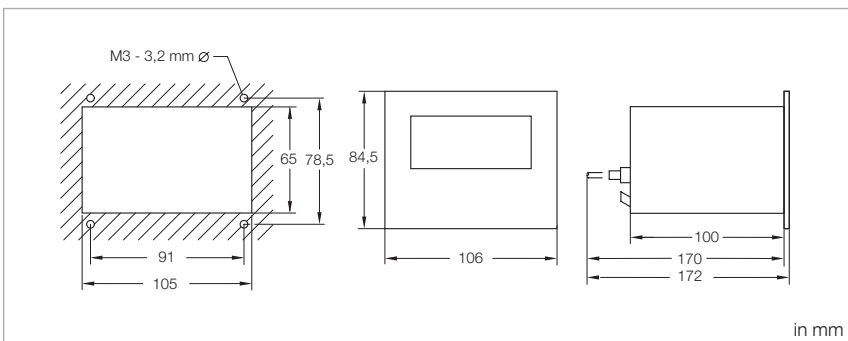
- TTR 100 *)
- TTR 101 / TTR 101
- TTR 101 S / TTR 101 N S
- TTR 211 *)
- TTR 216 S *)
- TTR 90 *)
- TTR 90 S *)
- TTR 91 / TTR 91 N
- TTR 91 S / TTR 91 N S
- TTR 96 S / TTR 96 N S
- TTR 911 / TTR 911 N
- TTR 916 / TTR 916 N

PENNINGVAC

- PTR 90 / PTR 90 N

Linear pressure sensor

- DU 200
- DU 201
- DU 2000
- DU 2001
- DU 2001 rel.



Dimensional drawing and panel cut-out for the DISPLAY ONE

*) Connecting of older sensors possible

Technical Data**DISPLAY ONE**

Number of measurement channels	1		
Display for measured values	digital, 7 segment LED		
Measurement range	mbar (Torr)	5 x 10 ⁻⁹ to 2000 (3.8 x 10 ⁻⁹ to 1500)	
Unit of measurement (selectable)	mbar, Torr, Pa		
Switching thresholds	from the transmitter are run to a terminal strip		
Chart recorder output (R _a > 2,5 kΩ)	0 – 10 Volt, characteristic corresponds to the connected transmitter		
Mains connection			
EURO version	V AC / Hz		100 – 240 / 50/60
US version	V AC / Hz		100 – 240 / 50/60

Ordering Information**DISPLAY ONE**

	Part No.
DISPLAY ONE with mains cord (EURO and US)	230 001
THERMOVAC Transmitter PENNINGVAC Transmitter PTR 90	see chapter "Products", para. "Active Sensors"
Linear pressure sensors DU	see chapter "Products", para. "Additional Sensors"
Connection cables for THERMOVAC and PENNINGVAC (Type A)	see chapter "Products", para. "Connection Cables for Active Sensors"
Adapter panel for installation in a 3 HU, 19" rack	230 005

DISPLAY TWO, THREE



Cost-effective, operating and display units for the transmitters from the THERMOVAC and PENNINGVAC series.

All channels are displayed simultaneously.

Advantages to the User

- Power supply voltage for the transmitters
- Display range from 1×10^{-9} to 2000 mbar (0.75×10^{-9} to 1500 Torr)
- Readout selectable between mbar, Torr or Pascal
- Adjustable switching thresholds with variable hysteresis, floating change-over contacts and visual indication of the switching status in the display
- Option of entering gas correction factors
- Separate chart recorder outputs 0 – 10 V for each measurement channel
- Compact bench top enclosure (1/4 19", 3 HU)
- For fitting into 19", 3 HU racks

Connectable Sensors

THERMOVAC

- TTR 211 *)
- TTR 216 S *)
- TTR 90 *)
- TTR 91 / TTR 91 N
- TTR 96 S / TTR 96 N S
- TTR 100 *)
- TTR 100 S *)
- TTR 101 / TTR 101 N
- TTR 101 S / TTR 101 N S
- TTR 911 / TTR 911 N
- TTR 916 / TTR 916 N

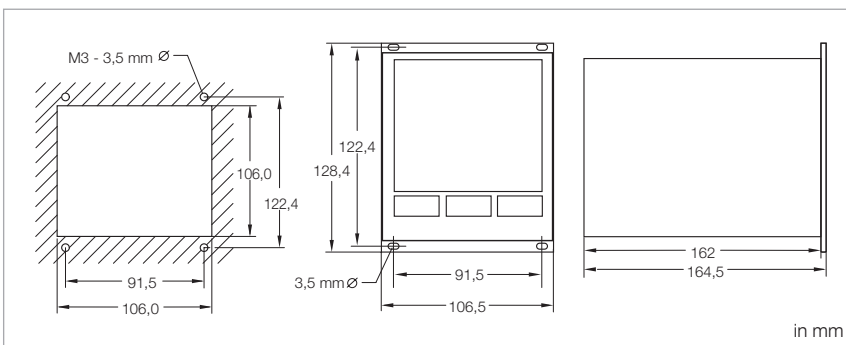
PENNINGVAC

- PTR 90 / PTR 90 N
- PTR 225 / PTR 225 N
- PTR 225 S / PTR 225 N S
- PTR 237 / PTR 237 N

Linear pressure sensor

- DU 200
- DU 201
- DU 2000
- DU 2001
- DU 2001 rel.

*) Connecting of older sensors possible



Dimensional drawing and panel cut-out for the DISPLAY TWO and THREE

Technical Data

DISPLAY TWO

DISPLAY THREE

Number of measurement channels	2	3
Display for measured values	2 (1 per channel)	3 (1 per channel)
Measurement range mbar (Torr)	1 x 10 ⁻¹⁰ to 2000	1 x 10 ⁻¹⁰ to 2000
Unit of measurement (selectable)	adjustable	adjustable
Gas type correction (for PTR)	4 floating changeover contacts	6 floating changeover contacts
Sensor connection	60 V, 1 A DC / 30 V, 1 A AC	60 V, 1 A DC / 30 V, 1 A AC
Sensor power supply V DC	1 per channel,	1 per channel,
Electrical outputs	configurable as 2nd switching threshold	configurable as 2nd switching threshold
Switching thresholds Number Adjustment range Hysteresis Relay contact Load rating Ready signal relay	2 (1 per channel) sensor dependent adjustable 4 floating changeover contacts 60 V, 1 A DC / 30 V, 1 A AC 1 per channel, configurable as 2nd switching threshold	3 (1 per channel) sensor dependent adjustable 6 floating changeover contacts 60 V, 1 A DC / 30 V, 1 A AC 1 per channel, configurable as 2nd switching threshold
Error message Relay contact Load rating	normally open contact 60 V, 1 A DC / 30 V, 1 A AC	normally open contact 60 V, 1 A DC / 30 V, 1 A AC
Chart recorder output (R _s > 10 kΩ)	0 - 10 V per measurement channel, output characteristic corresponds to the connected transmitter	0 - 10 V per measurement channel, output characteristic corresponds to the connected transmitter
Control input	PENNINGVAC PTR: high voltage on	PENNINGVAC PTR: high voltage on
Mains connection V AC / Hz	85 – 240 / 50/60	85 – 240 / 50/60
Power consumption W	< 10	< 15
Nominal temperature range °C	+5 to +50	+5 to +50
Weight kg (lbs)	1.3 (2.87)	1.4 (3.09)
Protection class IP	40	40

Ordering Information

DISPLAY TWO

DISPLAY THREE

	Part No.	Part No.
DISPLAY TWO / THREE with mains cord (EURO and US)	230 024	230 025
THERMOVAC Transmitter	see chapter "Products", para. "Active Sensors"	see chapter "Products", para. "Active Sensors"
PENNINGVAC Transmitter	see chapter "Products", para. "Active Sensors"	see chapter "Products", para. "Active Sensors"
Connection cables for THERMOVAC and PENNINGVAC (Type A)	see chapter "Products", para. "Connection Cables for Active Sensors"	see chapter "Products", para. "Connection Cables for Active Sensors"