



**Digital panel meter
3½-digit**

DV3, DT3

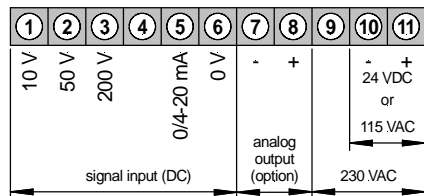
- Without setpoints
- Analog output

Digital panel meter

- Direct voltage
- Alternating voltage
- Resistance
- PT100/PT1000
- Direct current
- Alternating current
- Potentiometer
- Thermocouple
- Shunt



• Direct voltage, direct current



Transmitter connections see page 6

Power supply 230/115 VAC

ORDER NUMBER OF TYPE EUR
(without options)

DV 3.001.610B 132,95

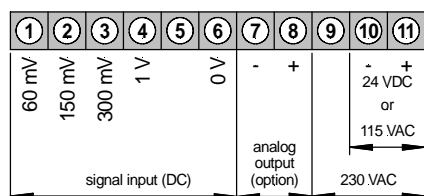
Power supply 24 VDC

DV 3.001.630B 120,15

Power supply 24 VDC (galv. insulated)

DV 3.001.670B 150,85

• Direct current (Shunt)



Power supply 230/115 VAC

DV 3.002.610B 148,25

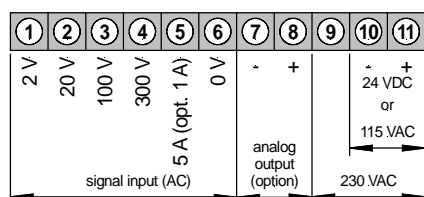
Power supply 24 VDC

DV 3.002.630B 135,50

Power supply 24 VDC (galv. insulated)

DV 3.002.670B 166,15

• Alternating voltage, alternating current



Power supply 230/115 VAC

Standard

DV 3.004.610B 163,60

True effective value RMS

DV 3.104.610B 184,05

Power supply 24 VDC

Standard

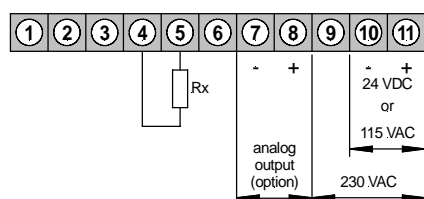
DV 3.004.670B 181,50

(galv. insulated)

True effective value RMS

DV 3.104.670B 217,30

• Resistance, potentiometer



Power supply 230/115 VAC

Measuring range $\leq 10k\Omega$

DV 3.506.610B 148,25

Measuring range $\leq 100k\Omega$

DV 3.606.610B 148,25

Measuring range $\leq 1M\Omega$

DV 3.706.610B 148,25

Power supply 24 VDC

Measuring range $\leq 10k\Omega$

DV 3.506.630B 130,40

Measuring range $\leq 100k\Omega$

DV 3.606.630B 130,40

Measuring range $\leq 1M\Omega$

DV 3.706.630B 130,40

Power supply 24 VDC

Measuring range $\leq 10k\Omega$

DV 3.506.670B 166,15

(galv. insulated)

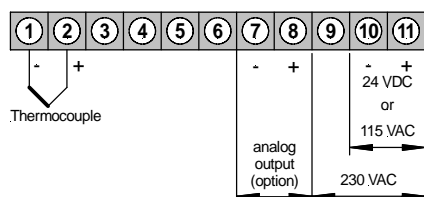
Measuring range $\leq 100k\Omega$

DV 3.606.670B 166,15

Measuring range $\leq 1M\Omega$

DV 3.706.670B 166,15

• Thermocouple L, J or K



Power supply 230/115 VAC

DT 3.40x.610B 150,85

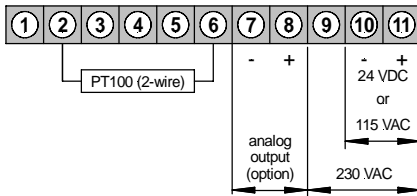
Power supply 24 VDC (galv. insulated)

DT 3.40x.670B 176,40

Type L (FeCuNi - DIN) -50 up to +500°C
Type J (FeCuNi - americ.) -50 up to +500°C
Type K (NiCrNi) -100 up to +800°C

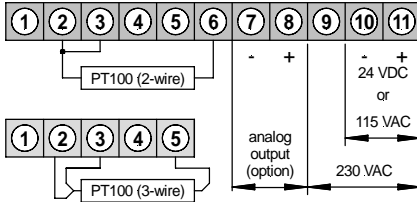
(Fill in the desired type of thermocouple in the order number instead of x!)

• **PT100 (2-wire)**



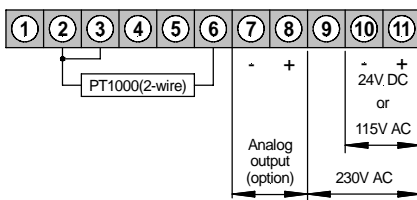
Power supply 230/115 VAC	2-wire	DT 3.202.610B (199.9°C)	145,70
	2-wire	DT 3.206.610B (600°C)	145,70
	3+2-wire	DT 3.302.610B (199.9°C)	166,15
	3+2-wire	DT 3.306.610B (600°C)	166,15

• **PT100 (2 + 3-wire)**



Power supply 24 VDC (galv. insulated)	2-wire	DT 3.202.670B (199.9°C)	171,30
	2-wire	DT 3.206.670B (600°C)	171,30
	3+2-wire	DT 3.302.670B (199.9°C)	191,75
	3+2-wire	DT 3.306.670B (600°C)	191,75

• **PT1000 (2 wire)**



Power supply 230/115 VAC	2-wire	DT 3.602.610B (199.9°C)	145,70
Power supply 24 VDC (galv. insulated)	2-wire	DT 3.602.670B (199.9°C)	171,30
Power supply 230/115 VAC	2-wire	DT 3.606.610B (600°C)	145,70
Power supply 24 VDC (galv. insulated)	2-wire	DT 3.606.670B (600°C)	171,30

OPTIONS

	DV 3.001... Direct voltage	DV 3.002... Shunt	DV 3.004... Alternating voltage	DV 3.006... Resistance	DT3.40x... Thermocouple	DT3.x02.../3.x06... PT100/0 (2 +3 wire)	Additional price
	EUR						
Green LED	x	x	x	x	x	x	
Protection IP54 at the front	x	x	x	x	x	x	6,15
Protection IP65 at the front (see following table)	x	x		x			28,10
Plug-in terminal	x	x	x	x		x	9,20
Analog output 0-10 VDC/2 mA (supply voltage 230/115 VAC)	x	x	x	x	x	x	32,70
Analog output 0-20 mA/load 500 Ω (supply voltage 230/115 VAC)	x	x	x	x	x	x	32,70
Analog output 4-20 mA/load 500 Ω (supply voltage 230/115 VAC)	x	x	x	x	x	x	32,70
Analog output 0-10 VDC/2 mA (supply voltage 24 VDC galv. insulated)	x	x	x	x	x	x	61,35
Analog output 0-20 mA/load 500 Ω (supply voltage 24 VDC galv. insulated)	x	x	x	x	x	x	61,35
Analog output 4-20 mA/load 500 Ω (supply voltage 24 VDC galv. insulated)	x	x	x	x	x	x	61,35
Analog output with customer specified offset (S26)	x	x	x	x	x	x	10,25
Analog output and protection IP65	See type PVE						
Measuring range 0-1 mA (S10)!	x						15,35
Measuring range 1 A on demand (S108)!			x				
Dimension strips are selectable (max. 7 signs)	x	x	x	x	x	x	
Other power supplies on demand!	x	x	x	x	x	x	
Setpoints	See type PVE						

• **Settings ex works with protective system IP65, adjustable on rear side**

Settings deviating from the standard settings must be indicated in the order description.	Standard	As desired	DV 3.001... Direct voltage	DV 3.002... Shunt	DV 3.004... Alternating voltage	DV 3.006... Resistance	DT3.40x... Thermocouple	DT3.x02.../3.x06... PT100/0 (2 +3 wire)
	Plus sign	Active	Inactive	x	x		x	x
Blanking	no	yes	x	x		x		
Decimal point	100,0	no	x	x		x		
		10,00	x	x		x		

Technical data

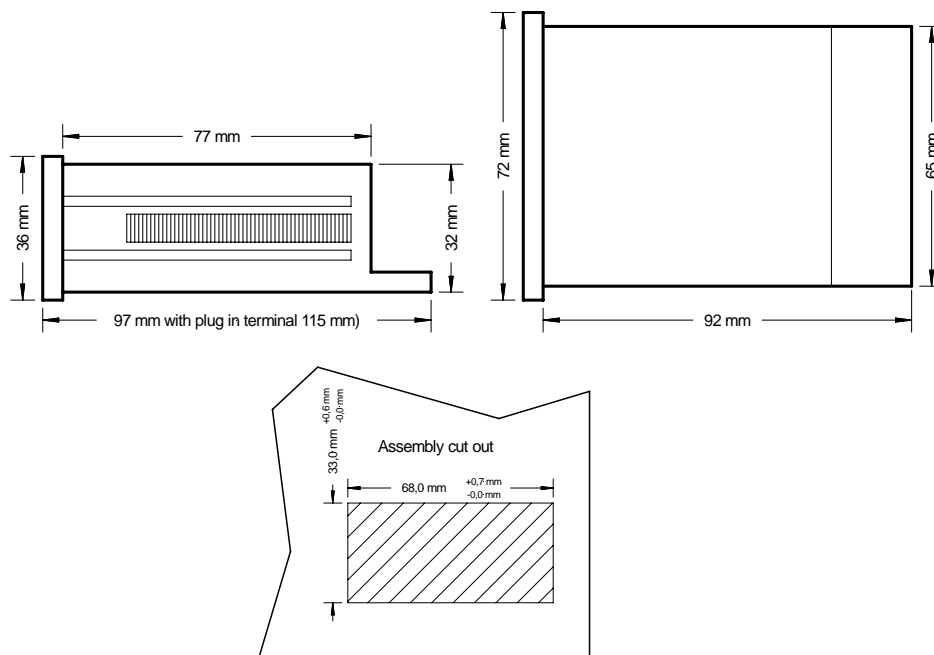
for all units of the DV3, DT3 series, if not indicated otherwise

Dimensions	Housing	W 72 x H 36 x D 97 mm, including screw terminal (D =115 mm, including plug-in terminal)
	Assembly cut out	68.0 ^{+0.7} x 33.0 ^{+0.6} mm
	Fastening	special quick plastic clamp proper to fix in wall thickness up to 50 mm
	Housing material	PC/ABS-plastic blend, colour black, UL94V-0
	Protective system	at the front IP40
		connection IP00
	Weight	approx. 0.19 kg
	Connection	At the rear via terminals up to 2.5 mm ²
Input		
DV3.001.... Direct voltage, direct current	Measuring range	0-10 V, 50 V, 200 V, 0-20 mA - 4-20 mA, 0-200 mA All ranges selectable via connection terminal. Offset adjustment supported by offset potentiometer (-500 up to +500).
	Input resistance	Ri with 10 V = ~55 kΩ 50 V = ~290 kΩ 20 mA = ~100 Ω 200 V = ~1.8 MΩ
DV3.002.... Direct voltage (Shunt)	Measuring range	0-60 mV, 150 mV, 300 mV, 1 V - all ranges selectable via connection terminal Offset adjustment supported by offset potentiometer (-100 up to +100)
	Input resistance	Ri with 60 mV = ~15 kΩ 300 mV = ~75 kΩ 150 mV = ~39 kΩ 1 V = ~320 kΩ
DV3.004.... Alternating voltage, Alternating current	Measuring range	0-2 V, 20 V, 100 V, 300 V, 1 A (Option), 5 A – all ranges selectable via connection terminal Offset adjustment supported by offset potentiometer (-100 up to +100).
	Input resistance	Ri with 2 V = ~20 kΩ 300 V = ~4 MΩ 20 V = ~200 kΩ 1 A = ~276 mΩ 100 V = ~1 MΩ 5 A = ~56 mΩ
DV3.006.... Resistance	Measuring range	≤10 kΩ, ≤100 kΩ, ≤1 MΩ Offset adjustment supported by offset potentiometer (-100 up to +100)
DT3.x02.... PT100	Sensor	2-wire, 3-wire
	Measuring range Sensor current	-50.0 up to 199.9°C approx. 1 mA
DT3.x06.... PT100	Sensor	2-wire, 3-wire
	Measuring range Sensor current	-100 up to + 600°C approx. 1 mA
DT3.602.... PT1000	Sensor	2-wire
	Measuring range Sensor current	-50 up to + 199.9°C approx. 0.1 mA
DT3.606.... PT1000	Sensor	2-wire
	Measuring range Sensor current	-100 up to + 600°C approx. 0.1 mA
DT3.40x.... Thermocouple	<u>L</u> FeCuNi (DIN)	-50 up to + 500°C
	<u>J</u> FeCuNi (americ.)	-50 up to + 500°C
	<u>K</u> NiCrNi	-100 up to + 800°C
Output For all versions	Analog output	0-10 VDC/2 mA (0.1% of measuring value, +/-0.05% of full scale) 0-20 mA, 4-20 mA - load 500 Ω (0.1% of measuring value, +/-0.05% of full scale) Not changeable, offset analogue output corresponds to 0 digit, see options! Adjustable to 10 V or 20 mA, within the indication range 350 to 1999. (The measuring inputs are not galv. insulated from the analog output!)
	Offset	
	Final value	
DT3.x02....	Final value 200°C	10 V or 20 mA adjustable for range from 35,0°C up to 199,9°C
DT3.x06....	Final value 600°C	10 V or 20 mA adjustable for range from 200°C up to 600°C
DT3.40x....	Final value 500°C	10 V or 20 mA adjustable for range from 200°C up to 500°C
	Final value 800°C	10 V or 20 mA adjustable for range from 200°C up to 800°C
Accuracy		
For all versions	Measuring principle	Dual-Slope-Integration
DV3.001....	Temp. drift	~ 100 ppm/K
DV3.002....		~ 150 ppm/K
DV3.004....		I ~ 200 ppm/K / U ~ 100 ppm/K
DV3.006....		~ 100 ppm/K
DT3.40x....		~ 100 ppm/K
DT3.x02....		~ 100 ppm/K
DT3.x06....		~ 100 ppm/K

Technical data

<i>For all versions</i>	Measuring fault	+/-0.1% of measuring value, +/-1 digit
DV3.0x4....	Frequency range Measuring fault Measuring principle (input)	Nominal precision 40 Hz up to 100 Hz +/-1.0% of final value, +/-1digit precision rectifier – effective value with sine waveform only
DV3.1x4....	Frequency range Measuring fault Measuring principle (input)	Nominal precision 40 Hz up to 1000 Hz +/-0.7% of final value, +/-1 digit, crest factor 3 True effective value RMS
DT3.x02....	Measuring fault	max. +/-0.5°C, +/-1 digit
DT3.x06....	Measuring fault	max. +/-1°C, +/-1 digit
DT3.60x....	Measuring fault	$R_L \leq 10 \Omega = +/-1 K$ $R_L > 10 \Omega \leq 20 \Omega = +/-2 K$
DT3.40x....	Measuring fault type J, L Measuring fault type K	max. 5°C Range from -100°C up to -50°C max. 15°C Range > -50°C up to 600°C max 5°C Range > 600°C up to 800°C max 15°C
<i>For all versions</i>	Resolution	+/-1999 digit
DT3.x02....		0.1°C
DT3.x06....		1°C
DT3.40x....		1°C
Power unit	Supply voltage Power consumption	230/115 VAC +/- 10% (50-60 Hz), 24 VDC (18-30 V), 24 VDC (+/-10%) galv. insulated max. 5 VA
Indication	Display Overflow	LED with 7 segments, 14 mm high, red 3½-digit = indication 1.999 by showing „1“ on the fourth digit
DV3.001.... DV3.002.... DV3.006....	Decimal point Measuring time Blanking Plus sign	adjustable by bridging on front side (possible for 1 or 2 decimal points only) 1 second blanking out of last digit (selectable by bridge) adjustable by bridging on front side
DV3.004....	Decimal point Measuring time Blanking	adjustable by bridging on front side 1 second blanking out of last digit (selectable by bridge)
DT3.xx2.... DT3.xx6....	Measuring time	1 second
Ambient conditions	Working temperature Storing temperature	0 up to + 60 °C -20 up to + 80 °C

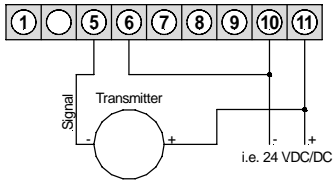
Housing:



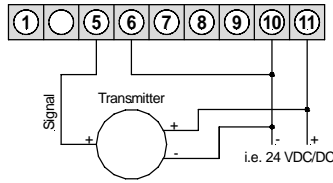
Wiring diagrams

DV3.001...

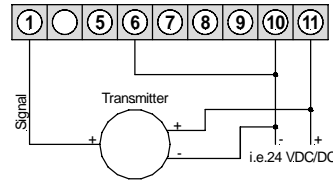
2-wire: 4-20 mA



3-wire: 0-20 mA
4-20 mA



3-wire: 0-10 V / 0-5 V
0-1 V / 1-6 V



Ordering code DV3, DT3

Digital panel meter

D V 3 0 0 1 6 1 0 B

Basic model

Voltage metering
Temperature metering

Number of digits
3½ digits

Sensor supply
no sensor supply

Temperature devices
PT100-2 wire
PT100-3 wire
PT1000-2 wire
Thermocouple

Resistance
Measuring range up to 10 kΩ
Measuring range up to 100 kΩ
Measuring range up to 1 MΩ

Alternating voltage, current
Standard
True effective RMS

Outputs
no output
0-10 V
0-20 mA
4-20 mA

Internal index

Mechanical options

- Protection IP40
- Protection IP65
- Protection IP54
- Plug-in terminal, protection IP54
- Plug-in terminal, protection IP40
- Plug-in terminal, protection IP65

Power supply

- 230/115 VAC
- 24 VDC
- 24 VDC (galvanic insulated)

Size of housing

- 72x36

Measuring input

- Direct voltage, direct current
- Direct voltage, shunt measuring
- Alternating voltage, alternating current
- Resistance
- Range PT100/1000 (200°C) – for DT
- Range PT100/1000 (600°C) – for DT
- Thermocouple type L – for DT
- Thermocouple type J – for DT
- Thermocouple type K – for DT