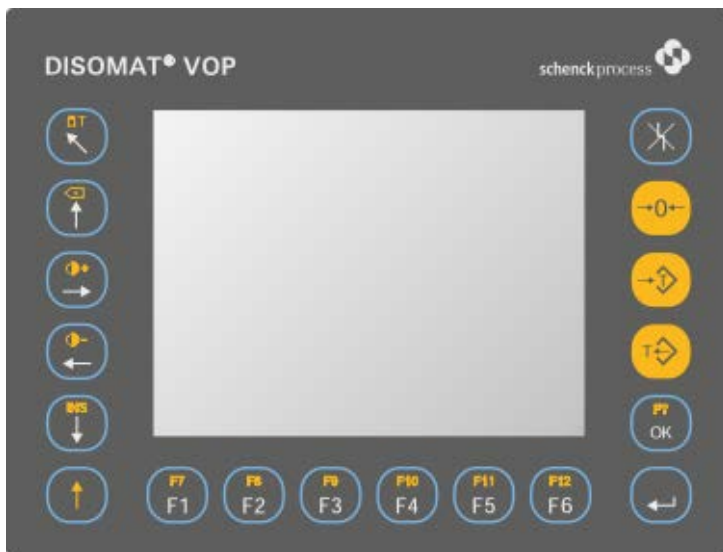


Display and Operating Panels VOP 28090/VFG 28090 ATEX 2GD Keyboard VTT 28090 ATEX 2GD



- **Display and Operating Terminal for DISOMAT®/DISOBOX®**
- **Suitable for Explosion-Hazard Environments defined by ATEX Category 2 GD (Zone 1 or 21)**
- **Front-of-Panel or Field Device**
- **Built-in Keyboard**
- **Enlarged Keyboard (Optional)**
- **Protection Class IP65**
- **Approved for Legal-for-Trade Operation**

Application

Operation in explosion-hazard areas. The equipment of the VOP 28090/VFG 28090/VTT 28090 series is used as display and control terminals for the weighing electronics of the DISOMAT® and DISOBOX® types.

The control electronics itself is installed in the safe area. This creates a second operating station in the safe area for one DISOMAT® Tersus. For the DISOBOX® Plus the VOP is the (legal-for-trade) main operating station.

For all DISOMAT® and DISOBOX® devices (including older types) the VOP also can be used in the explosion-hazard area as a secondary display with no operating functions (DTA mode).

Construction

VOP equipment is available as:

- Front-of-panel unit (frontal IP65/NEMA 4X)
- Stainless steel field device for wall-mounting incl. VTT 28090 keyboard and additional operating buttons.

The backlit, transfective LCD display in QVGA format (320 x 240 pixels) ensures excellent legibility.

The devices can be supplied with 24 VDC ±10 %. A serial RS485 connection is available as the interface to the weighing terminal.

A big advantage of the VOP 28090 is the protection class used, 'encapsulation' (Ex m). It allows the device to be connected in an explosion-hazard area WITHOUT requiring safety barriers or switch amplifiers.

Function

The screen of the VOP shows a 1:1 copy of the display of a DISOMAT® Tersus in its mirror function. Thus the user does not need to learn to use a new device.

In this operating mode, the buttons on the VOP function parallel to those of the main unit because the button symbols were kept identical. You key in numbers with the 12 function keys and you can overlay help wherever needed.

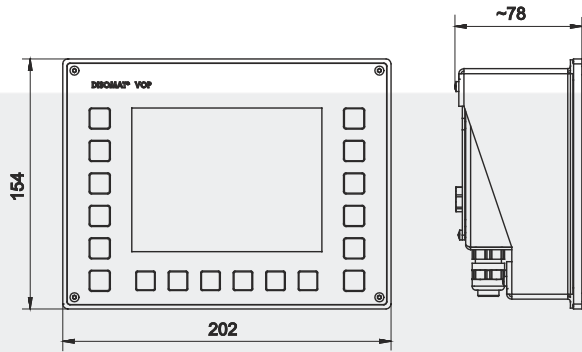
If numerical inputs frequently are required we recommend the use of the optional keyboard VTT 28090 with numerical 10-digit block (identical dimensions to VOP). Occasional α-entries also are possible using the VTT.

It shows the weight of a DISOMAT® unit in large letters in the 'secondary display' operating mode although no input is possible. This operating mode can also be combined with older DISOMAT® units.

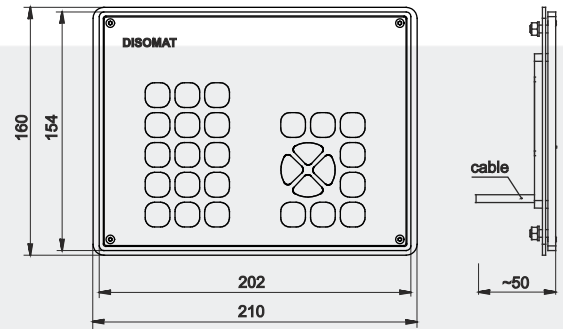
The large buttons of the field device can be assigned flexibly to the device functions.

Dimensional Drawings [mm]

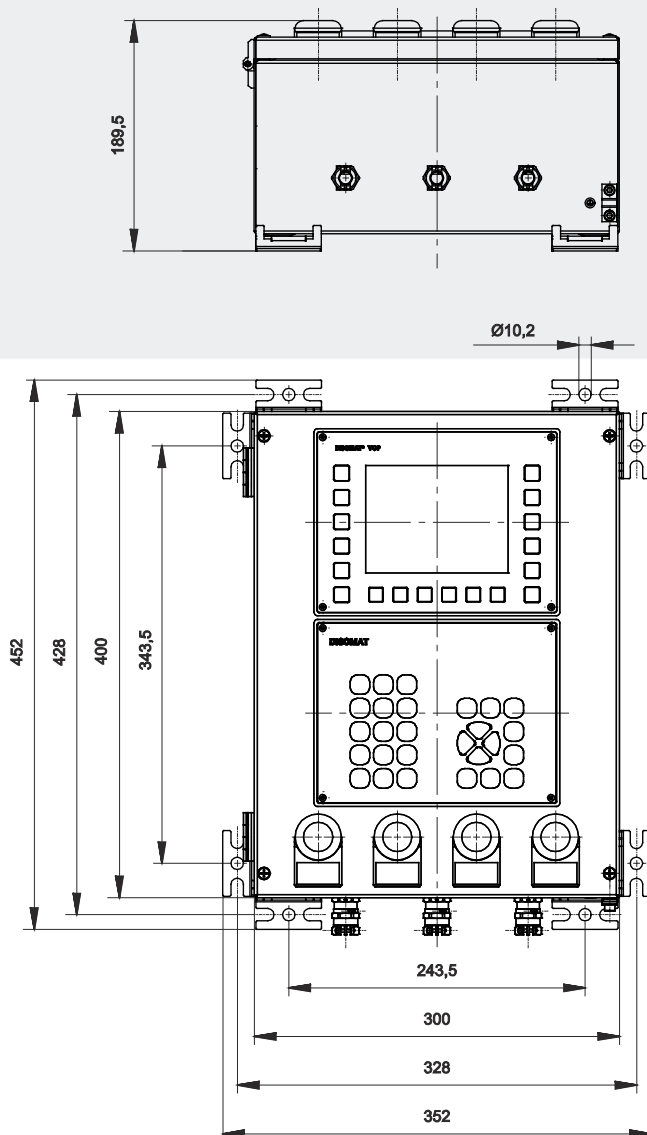
Front-of-Panel Unit VOP 28090



Keyboard VTT 28090



Field Device VFG 28090



Technical Data

Front-of-Panel Unit VOP 28090

External dimensions [mm] Width x Height x Depth	202 x 154 x 78 ⁺⁵
Panel cutout [mm] as per DIN IEC 61554	186 ^{+1.1} x 138 ^{+1.1} ; Panel thickness max. 5
Display	5.7", 320 x 240 pixels (QVGA), transfective
Keyboard	Membrane keyboard, 18 keys
Interfaces	1 x RS485-2/4-wire for communicating over longer distances (increased safety, Ex-e) 1 x serial for external keyboard (intrinsically safe, ex i) 7 x parallel for external operating buttons (intrinsically safe, ex i)
Supply voltage	Rated voltage 24 VDC \pm 10 %; typically 3 W
Protection class	Front: IP65, NEMA 4X Rear: IP65
Operating temperature range	-20 °C ... +60 °C

Keyboard VTT 28090

External dimensions [mm] Width x Height x Depth	210 x 160 x 50
Panel cutout [mm] as per DIN IEC 61554	186 ^{+1.1} x 138 ^{+1.1} ; Panel thickness max. 5
Display	No display
Keyboard	Membrane keyboard, 27 keys
Interfaces	1 x serial for the connection to VOP, intrinsically safe
Cable	Front-of-panel version: 1 m cable permanent plug connection to the VOP
Supply voltage	Supply is sourced from the VOP
Protection class	Front: IP65, NEMA 4X Rear: IP20
Operating temperature range	-20 °C ... +60 °C

Field Device VFG 28090

External dimensions [mm] Width x Height x Depth	300 x 400 x 190
Display	5.7", 320 x 240 pixels (QVGA), transfective
Keyboard	Membrane keyboard, 18 and 27 keys
Control button	4 x Functions, individually configurable
Interfaces	1 x RS485-2/4-wire for communicating over longer distances (increased safety, Ex-e)
Supply voltage	Rated voltage 24 VDC \pm 10 %; typically 3 W
Protection class	All sides: IP65, NEMA 4X
Operating temperature range	-20 °C ... +60 °C

Order Numbers

Design	Material Number
VOP 28090 ATEX 2GD display and operating unit, front-of-panel unit, stainless steel, 24 VDC	V097000.B01
Keyboard VTT 28090 ATEX 2GD	V097001.B01
VFG 28090 ATEX 2GD display and operating unit field device, stainless steel, incl. VOP 28090 and VTT 28090	V559477.B01

VOP/VFG 28000 display and operating unit and VTT 28000 keyboard for use in safe areas, see data sheet BV-D2396.