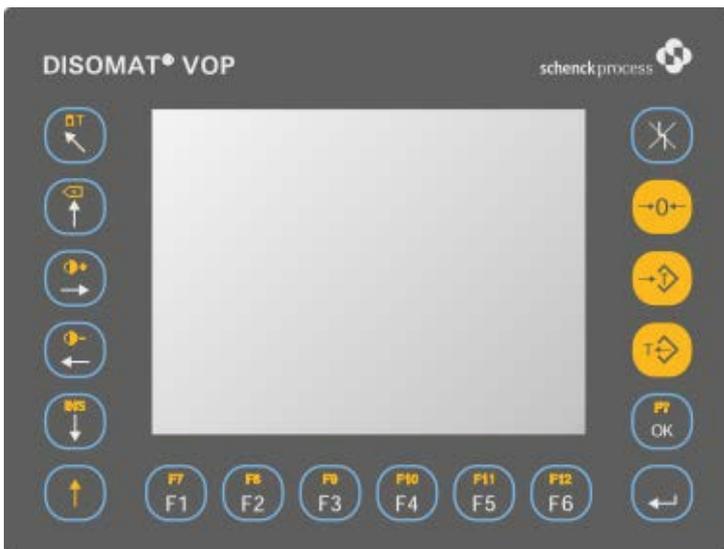


Display and Operator Panels VOP 280xx/VFG 28000 Keyboard VTT 28000



- **Display and Operating Terminal for DISOMAT®/DISOBOX®**
- **As a Front-of-Panel, Table, Hand-Held or Field Device**
- **Contrast-Rich LCD Display, Suitable for Daylight**
- **Built-In Keyboard**
- **Enlarged Keyboard (Optional)**
- **Protection Class IP65**
- **Approved for Legal-for-Trade Operation**

Application

The equipment of the VOP 28000/ VFG 28000/VTT 28000 series is used as display and control terminals for the weighing terminals of the DISOMAT® and DISOBOX® types. The VOP is the main - Legal-for-trade - display of a DISOBOX® Plus. Its built-in flexible membrane keyboard allows you the entire range of scale operation.

The VOP is used as a remote second control terminal on a DISOMAT® Tersus 'its mirror'. This makes it possible to visualise and operate the scale from a second work station.

Applications could be e.g.:

- Alternating operator's workplaces
- Operated by the set-up man and plant operator
- Mounting the terminal in a remote control room

The VOP can also be used as a secondary display for all DISOMAT® and DISOBOX® units (including older types) without an operating unit (DTA mode).

Construction

VOP equipment is available as:

- Front-of-panel unit (Frontal IP65/NEMA 4X)
- A portable plastic unit with a cable (IP65) or with a storage battery and Bluetooth connection
- Stainless steel unit for desktop- or wall-mounting (IP65)
- Stainless steel field unit for wall-mounting incl. VTT 28000 keyboard and additional operating buttons.

The backlit, transfective LCD display in QVGA format (320 x 240 pixels) ensures excellent legibility both indoors and outdoors in full sunlight.

The devices can be supplied either with 24 VDC or mains voltage. The auxiliary voltage of a DISOMAT® Tersus can be used directly as a power supply. A serial RS485 connection is available as the interfaces to the weighing electronics – another option is using the permanently integrated Ethernet connection.

The integrated USB connection allows the use of a PC keyboard.

Function

The screen of the VOP shows a 1:1 copy of the display of a DISOMAT® Tersus in its mirror function. This is why using the unit as a second control terminal does not require the operator to change habits in any way.

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.

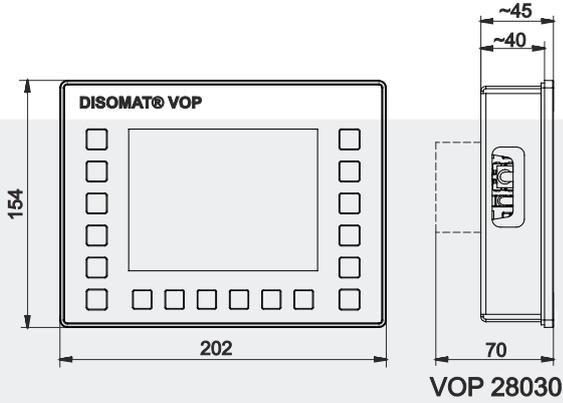
If numerical inputs frequently are required we recommend the use of the optional keyboard VTT 28000 with numerical 10-digit block (identical dimensions to VOP). Occasional α-entries also are possible using the VTT.

A standard off-the-shelf USB keyboard of any kind can be used for more comprehensive text entries.

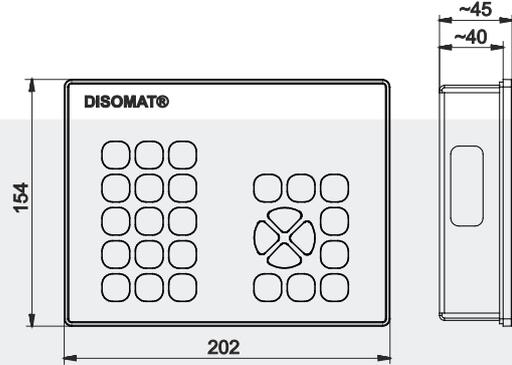
It shows the weight of a DISOMAT® unit in large letters in the secondary display operating mode although no input is possible. This operating mode can also be combined with other DISOMAT® units.

Dimensional Drawings [mm]

Front-of-Panel Unit VOP 28000/28030

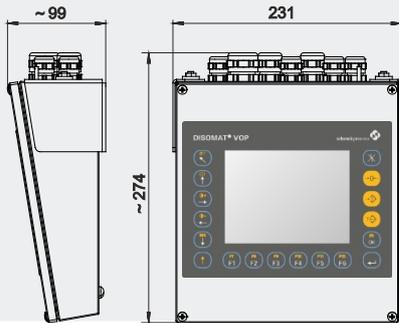


Keyboard VTT 28000

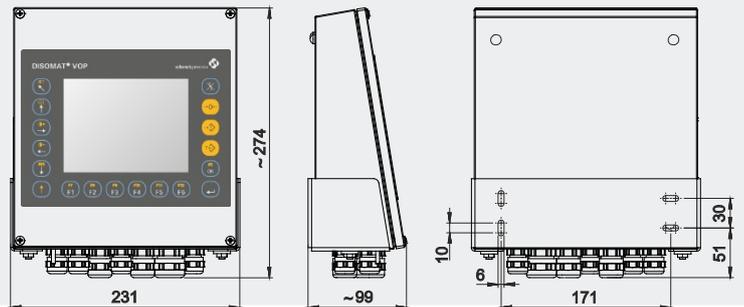


VOP 28040

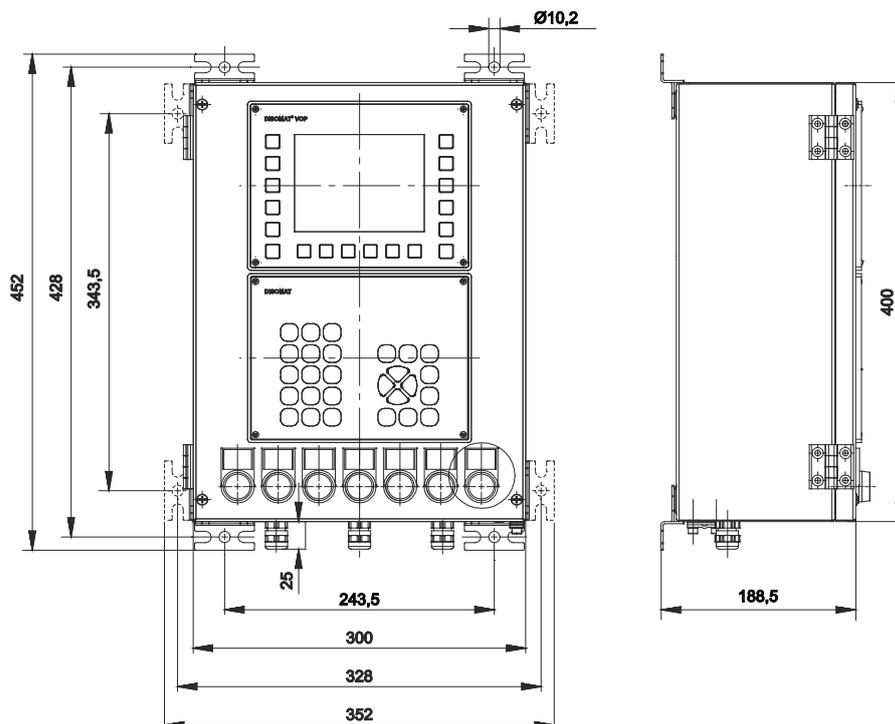
Desktop



Wall-Mounting



Field Device VFG 28000



Technical Data

Front-of-Panel Unit VOP 28000, VOP 28030/Hand-Held Unit VOP 28010

External dimensions [mm] Width x Height x Depth	202 x 154 x 45 ⁺⁵
Panel cutout [mm] as per DIN IEC 61554	186 ^{+1.1} x 138 ^{+1.1} ; Panel thickness max. 5
Hand-Held unit Width x Height x Depth [mm] Weight	202 x 154 x 50 1.5 kg
with power supply unit VOP 28030 [mm]	202 x 154 x 70
Display	5.7" LCD with graphics capabilities, 320 x 240 pixels (QVGA), transfective
Keyboard	Membrane keyboard, 18 keys of which 12 are configurable function keys
Interfaces	1 x Ethernet RJ45 (10/100 MBaud, protocol Modbus-TCP) 1 x RS485-2-wire for communication over greater distances 1 x RS232 for external PC keyboard (or TTL for DTT 20) 1 x USB (for external PC keyboard)
Supply voltage	24 VDC (Range: 18 ... 36 VDC); VOP 28030: 85 ... 264 VAC, 47 ... 63 Hz
Protection class: Front-of-panel unit Hand-held unit	Front: IP65, NEMA 4X; Rear: IP20 IP65
Temperature ranges	Operating temperature: -20 °C ... +60 °C Legal-for-trade: -10 °C ... +40 °C

Keyboard VTT 28000

External dimensions [mm] Width x Height x Depth	202 x 154 x 45 ⁺⁵
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 RS232 for the connection to VOP
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	-20 °C ... +60 °C

Desktop or Wall Mounting VOP 28040

External dimensions [mm] Width x Height x Depth	231 x 99 x 274
Display	5.7" LCD with graphics capabilities, 320 x 240 pixels (QVGA), transfective
Keyboard	Membrane keyboard, 18 keys of which 12 are configurable function keys
Interfaces	1 x Ethernet RJ45 (10/100 MBaud, protocol Modbus-TCP) 1 x RS485-2-wire for communication over greater distances 1 x RS232 for external PC keyboard (or TTL for DTT 20) 1 x USB (for external PC keyboard)
Supply voltage	85 ... 264 VAC, 47 ... 63 Hz; Alternatively: 24 VDC (Range: 18 ... 36 VDC)
Protection class	IP65, NEMA 4X
Operating temperature	-20 °C ... 60 °C

Field Unit VFG 28000

External dimensions [mm] Width x Height x Depth	352 x 452 x 188.5
Display	5.7" LCD with graphics capabilities, 320 x 240 pixels (QVGA), transfective
Keyboard	Membrane keyboard, 18 and 27 keys of which 12 are configurable function keys
Interfaces	1 x Ethernet RJ45 (10/100 MBaud, protocol Modbus-TCP) 1 x RS485-2-wire for communication over greater distances 1 x RS232 for external PC keyboard (or TTL for DTT 20) 1 x USB (for external PC keyboard)
Control button	7 x Functions, individually configurable
Supply voltage	24 VDC (Range: 18 ... 36 VDC); VOP 28030: 85 ... 264 VAC, 47 ... 63 Hz
Protection class	All sides: IP65, NEMA 4X
Operating temperature	-20 °C ... 60 °C

Order Numbers

Design	Material Number
VOP 28000 display and operating unit, front-of-panel unit, plastic front frame, 24 VDC	V078510.B01
VOP 28030 display and operating unit, front-of-panel unit, plastic front frame, 85 ... 264 VAC	V078513.B01
VOP 28010 display and operating unit, hand-held unit (mobile version), plastic housing, 24 VDC	V078511.B01
VOP 28040 display and operating unit, desktop or wall-mounted, incl. wall bracket, stainless steel housing, 85 ... 264 VAC	V078514.B01
VOP 28040-3D display and operating unit, ATEX category 3D (Zone 22), desktop or wall-mounted, incl. wall bracket, stainless steel housing, 85 ... 264 VAC	V078529.B01
Keyboard VTT 28000	V081929.B01
VFG 28000 display and operating unit, field unit, stainless steel, incl. VOP 28000, VTT 28000 and 7 operating buttons	V577415.B01
VFG 28000 display and operating unit, field unit, stainless steel, incl. VOP 28030, VTT 28000 and 7 operating buttons	On request

VOP/VTT 28090 2GD display and operating unit for use in explosion-hazard areas, see data sheet BV-D2422.

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