

DISOMAT® B plus Weighing Terminal



- Fully equipped weighing terminal
- Clear operator prompting on graphics-capable, backlit LC display
- Industrial fieldbus connectivity
- Integrated legal-for-trade memory (optional)
- Separate α/n strikekey keyboard (optional)
- Modularly extensible I/O
- Also available with two measuring channels
- Six typical weighing applications preconfigured in device
- Replacement of all system components with no need for recalibration or reverification
- Optional variant for use in potentially explosive atmospheres (ATEX 2D/3G)

Application

The DISOMAT B plus compact weighing terminal is ideally suited for use in the many and varied weighing applications, no matter whether the focus is on scale control, data processing, process control or communication with user systems.

For typical applications, six predefined configurations are stored in the device and can be called up easily:

These "Fixed Wirings" for

- Cargo Scale
- Crane Scale
- Filling Scale
- Discharge Scale
- Receiving/Load-Out Scale
- Self-Acting Filling Scale

offer the user a proven functionality tailored to the particular application. The user retains flexibility: the logical function block configuration can be changed at any time to suit almost any weighing task.

In its optional variant as two-channel measuring system, DISOMAT B plus can also operate as scale with changeover possibility from single to group mode, or as dual-trolley crane scale with separate overload message, or monitor the fill levels of two hoppers simultaneously.

Equipment

The backlit, graphics-capable display continuously reads the weight, also while the operator enters data in the two-line dialog

field or when status information is output.

This can be e.g. information on the progress of a running feed operation (bar graph), input/output position of help texts on system operation. A special "telephone alphabet" mode enables characters to be keyed in. For convenient input, particularly for frequent text entries, a separate strikekey keyboard is available as option.

A second autonomous control station can be set up at any time with the use of a further DISOMAT B plus without measuring circuit equipped with software VLB 20400 ('mirror').

For control tasks 4 binary inputs and 6 binary outputs are available designed for direct control of the scale with DISOMAT B plus. All inputs and outputs can process 24V signals, but also 230VAC direct.

With the use of the function block linkages, the input/output functionality can widely be adapted to the specific application requirements. Two serial interfaces enable the connection of peripherals, e.g. printer and remote display, as well as the data exchange with an EDP or PLC system. If necessary, the system can be equipped with two more serial interfaces.

For coupling to the most frequent industrial fieldbus systems (Profibus), a number of interface modules is available for retrofit. The additional legal-for-trade memory saves the user from printing and storing legal-for-trade records on paper.

The high resolution and measuring speed of the DISOMAT B plus measuring system offers reserves even for difficult weighing applications, e.g. scales with low load cell utilization, scales with load cells mounted in the hazardous area, and fast filling processes.

Scale characteristics including calibration data are stored in the load cell cable connector (dongle). In case of fault, every system component can be replaced with no need for recalibration or reverification. The system immediately continues operating legal-for-trade with the requisite accuracy.

Together with the modular system design, this helps to considerably reduce downtimes and repair costs.

The eligible housing variants

- Desk-top housing
- Front-of-panel mounting housing
- Stainless steel housing
- Field housing
- 19" rack

- Local unit with a high degree of protection, without display and keyboard

offer the right enclosure for almost any environment

With the VKG 20400-E variant, a system is available specially designed for use in potentially explosive atmospheres of categories 2D/3G (ATEX Zones 2/22/21). For category 2G (Zone1) variant, see Spec Sheet BVD 2208.

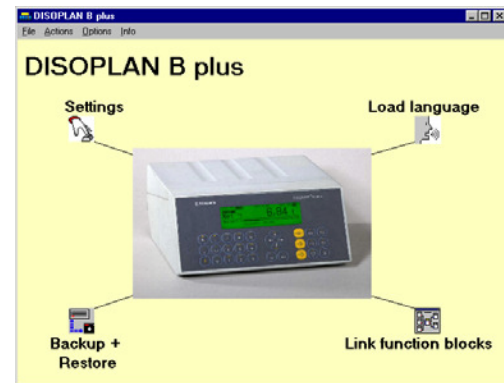
Operation and Setting

On standard, the DISOMAT interactive dialog is available in German and English.

With the use of the DISOPLAN PC-assisted parametrisation and configuration tool (WINDOWS program), other languages can easily be downloaded into the system. At present, you can select Italian, Spanish, French, Polish, Czech, Hungarian and Russian. Other languages can be made available upon request.

In addition, **DISOPLAN B plus** allows for

- Graphical function block configuration
- Setting of all system parameters
- System calibration
- Readout of complete system configuration (backup)
- Restore of saved data into DISOMAT B plus enables a replacement unit to be prepared in no time. Combined with the dongle concept, this ensures shortest downtimes in case of fault and minimal stock keeping.



All parameter and calibration data are stored fail-safe in the system. Process parameters and data are buffered for at least 7 days, and the real-time clock continues running for this period.

Printing

The variable print pattern formatting gives you the freedom to design your own weigh slip. In addition to weight values, the following data can be printed:

- Date and time
- Consecutive number
- Cumulative totals
- Number of accumulated weighing operations
- 5 strings, up to 25 digits
- 3 stored texts, 26 digits each

The arrangement of the print elements is defined by a print pattern. 6 different print patterns can be stored.

**For every environment the right “packing”
The available DISOMAT B plus housing variants**



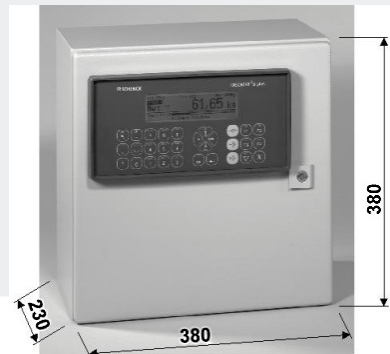
Desk-top housing VTG 20400
Protected to IP54, plastic
10 cable in let with power and load cell cables
Weight: 3.7 kg



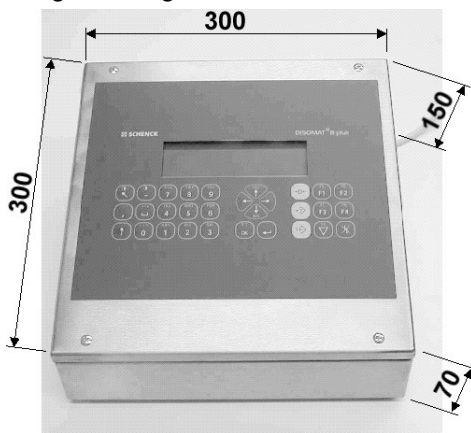
Front-of-panel-mounting unit VEG 20400
Front protected to IP 54,
residual unit to IP 20, plastic
Panel cut-out: 138.5 x 282 mm
Weight: 3.5 kg



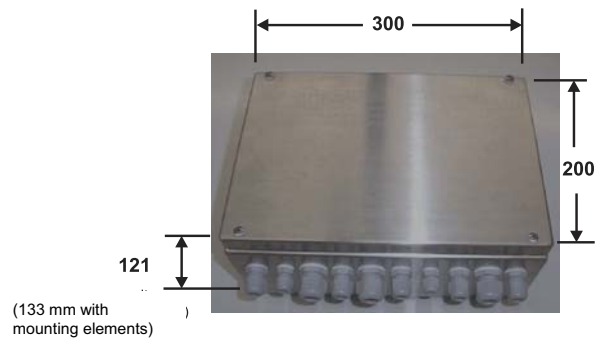
19“rack VNG 20400
With panel-mounting unit VEG 20400
Depth 195 mm for connecting cable
Front protected to IP 54, residual unit to IP20
Weight: 7.5 kg



Crane / field housing VFG 20400
with panel-mounting unit VEG 20400,
Sheet steel
Protected to IP 54
Weight: 11 kg



Stainless steel housing VKG 20400 (E)
Protected to IP 65, desk-top unit
Weight: 5 kg
VKG 20400 (E) can also be mounted to the wall using the holders supplied (cable outlets at the bottom).



Local unit VVG 20400
Wall-mounting unit
Stainless steel, protected to IP 65
Weight: 5 kg

Technical Data:

Display	Graphics capable LCD, 240 x 64 pixels, 127 x 34 mm Weight display 14mm digit height, 1 status line and 2 dialog lines, 4mm digit height each
Keyboard	Flexible membrane keyboard with 30 multi-function keys, 8 keys reserved for individual assignment
Power supply	230VAC, -10% +15%, 47 – 63 Hz 115VAC, -10% +15%, 47 – 63 Hz 24 VDC (18 – 36 VDC)
Power consumption	20 VA max.
Temperature range	Service temperature: -10 to +50 °C (legal-for-trade up to +40 °C) Storage temperature: -20 to +60 °C
Input signal	0 to 35mV
Sensitivity	0.5 µV/d
Measuring rate	132 measurements/second (two-channel variant: 2 x 66 / second)
Increment value	1, 2, 5, etc. settable from 0.01 to 5000
Unit	kg, g, t, lb, N, kN
Number of increments	Certified applications: max. 6000d Multi-range scale: 3 x 4000d Multi-divisional scale: 3 x 4000d Resolution unlimited in non-certified applications
Taring	Up to 100% of full scale
Zero setting function	Max. 20% settable Automatic zero tracking 0.5d/sec, deselectable
Filter	Suppression of mains synchronous interference signals 100dB , Common mode rejection 110dB Software filter, filter time 0 – 10sec.
Accuracy	Linearity: 0.003% Zero point stability 0.05µV/K Span stability 2ppm/K
Date/time	Real time clock (RTC), Backup min. 7 days
Load cell impedance	Min. 43 Ω (corresponding to 8 x 350 Ω L/Cs, or > 20 RT load cells of 4000 Ω each) Also applicable as min. total impedance for two-channel variants (e.g. 2 x 4 x 350 Ω)
Load cell supply	12V AC voltage supply
Binary inputs	4 inputs, galvanically isolated, safely separated, 18 – 36VDC, 90 – 250 VAC (47 – 63 Hz), > 10mA. 24V auxiliary voltage for input control available (max. 100mA).
Binary outputs	6 outputs, galvanically isolated, safely separated (relay), passive. Load 24VDC/VAC max. 500mA, 90 – 250 VAC max. 300mA. Outputs refresh rate in "Fast Comparator" function 132 x / second
Serial interfaces	2 interfaces for secondary display, convertable for RS 232 RS 422/485, 4-wire RS 485, 2-wire Selection is via software (no plug-in jumpers) Max. baud rate: 19200

EDP protocols	Siemens 3964R S5 (RK512) Modbus Schenck standard protocol DDP8 672 Schenck poll protocol DDP8 785
Secondary display protocols	DTA DDP 8861 DDP 8850

Options

Second measuring channel	e.g. for scales with single unit / group mode changeover
Separate PC keyboard VTT20410 for convenient data input. Also available in version VTT20411 as flexible membrane keyboard to IP65	
Data input via barcode scanner	
Legal-for-trade memory VMM20402 for weigh data (replacing the redundant printer)	8 MB memory capacity for typ. 200,000 weighing operations
Analog output VEA 20400	0(4) – 20mA, max. 500Ω load Resolution: 10,000 increments Refresh rate: 10/sec Linearity < 0.15 %o Zero point stability < 0.25%o/10K Span stability < 0.25%o/10K%o/10K
Interface expansion VSS20400	2 serial interfaces RS 232
Profibus interface module VPB20100	Profibus DP 12Mbaud max. baud rate
DeviceNet module VCB 010	
Ethernet interface module VET 010	MODBUS-TCP protocol 10Mbaud max. baud rate
Radio data transmission	For printed data or EDP connection
I/O expansion modules	- Binary inputs/outputs (max. 16 additional inputs, or outputs) - Additional analog output - Analog input
Appropriate barrier modules for connection of intrinsically safe weighing platforms and control units of ATEX category 2G (Zone 1)	
External control station DT (A) 204xx	For control of DISOMAT B plus, e.g. mounted in hazardous area
DISOMAT B plus systems without measuring circuit for use as secondary control station (mirror unit) for a scale	
Further options and application-specific adaptations available on request	