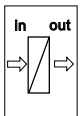
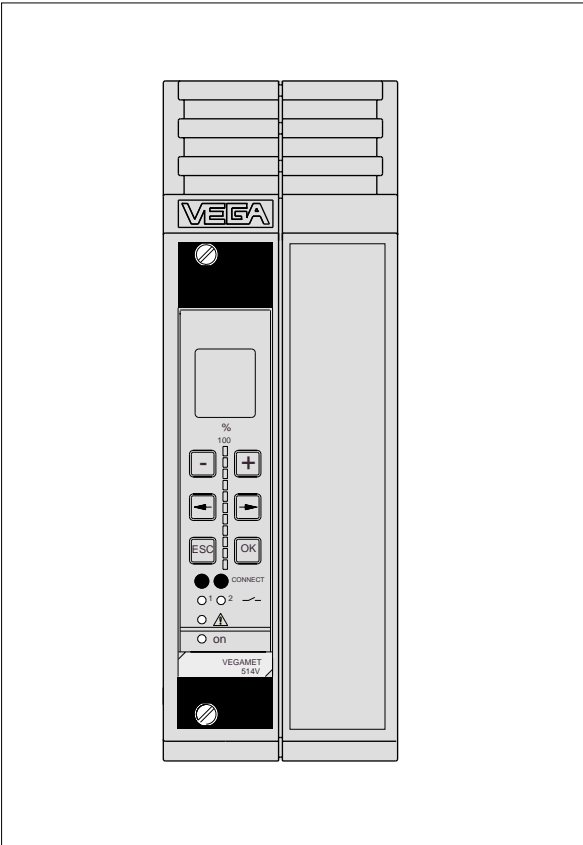


Operating Instructions

Housing type 505



Contents

Safety information	2
Note Ex-area	2

1 Product description

1.1 Function and configuration	3
1.2 Types and versions	4
1.3 Technical data	4
1.4 Dimensions	5

2 Mounting

2.1 General	6
2.2 Coding with Ex-instruments	6
2.3 Transparent cover	6
2.4 Retrofitting of the housing with a power supply unit	6

3 Electrical connection

3.1 Terminal coordination on VEGAMET	9
3.2 Terminal coordination on VEGATOR	10
3.3 Terminal coordination on VEGASEL	11
3.4 Terminal coordination on VEGACOM 557	12

Safety information

The described module must only be installed and operated as described in these operating instructions. Please note that other action can cause damage for which VEGA does not take responsibility.

Note Ex-area

Please note the approval documents attached (yellow binder), and especially the included safety data sheet.

1 Product description

1.1 Function and configuration

The housing type 505 is used for single mounting of a series 500 (width 5 TE = 25,4 mm) signal conditioning instrument.

The housing can be either screwed directly on to the mounting plate or mounted on to a carrier rail (35 x 15 acc. to EN 50 022).

The housing generally consists of three components:

- Socket with terminals
The connection terminals for the sensors are located at the bottom and the ones for the outputs and the power supply on top of the socket. The necessary separation between intrinsically safe and not-intrinsically safe circuits in Ex-applications is thereby ensured. An appropriate adapter is integrated in the socket for carrier rail mounting.
- Upper part of the housing with guide rails and ventilation slots. A sufficient ventilation is also ensured when connecting several housings in series. No external ventilation is necessary.
- The bag attached includes blue Ex-labels and coded pins.

The module instruments of the new series 500

- VEGATOR...
- VEGAMET...
- VEGASEL... and
- VEGACOM 557

are generally provided for a power supply of 20 ... 53 V AC or 20 ... 72 V DC.

If you already have a power supply of 20 ... 53 V AC or 20 ... 72 V DC available, you can use the housing without power supply unit.

If you only have other supply voltages available, use a housing with integrated power supply unit.

The power supply unit is suitable for a voltage range of 90 ... 250 V AC and DC and can power the module units.

A later retrofitting of the housing with a power supply unit is possible.

Note:

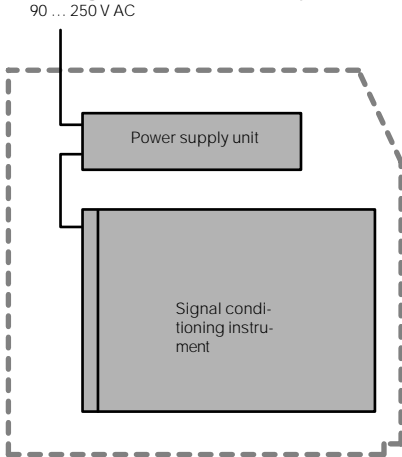
The housing type 505 is only designed for series 500 instruments:

- VEGAMET 513(V) ... 515(V)
- VEGASEL 543 ... 547
- VEGATOR 521 ... 527, 532, 535 ... 537
- VEGACOM 557

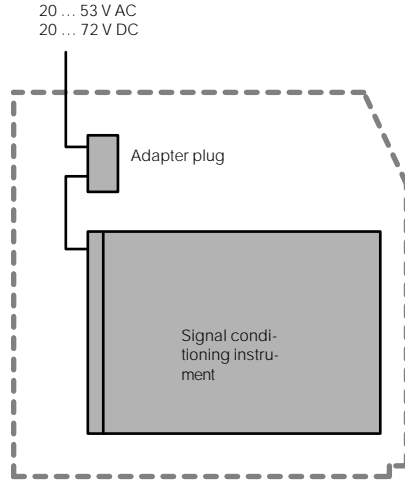
The power supply unit of the housing provides no galvanic isolation from the supply voltage. Series 500 instruments realise the galvanic isolation in the signal conditioning instrument.

1.2 Types and versions

Housing with power supply unit



Housing without power supply unit



1.3 Technical data

Power supply

Supply voltage	20 ... 72 V DC 20 ... 53 V AC
Supply voltage with integral power supply unit	90 ... 250 V AC galvanically not isolated (18 W; 50 VA)

Material

Terminal socket	PPE (Noryl) black, self-extinguishing
Upper part of housing	PPE (Noryl) grey (RAL 7036), self-extinguishing

Multipoint connectors

Number	1
Version	acc. to DIN 41 612, series F, 48-pole, 3 rows, d, b, z (partly equipped)

Strip terminal

Cross-section area of conductor	max. 2,5 mm ²
---------------------------------	--------------------------

Protection classes

Protection	IP 20
Protection class	II
Overvoltage categories	II

Mounting

Carrier rail	35 x 15 acc. to EN 50 022
Mounting plate	3 holes with 4,5 mm ø
	3 screws M4 x 12 mm

Mechanical data

Dimensions	W x H x D = 62 x 180 x 198 mm
Weight	approx. 650 g

Ambient conditions

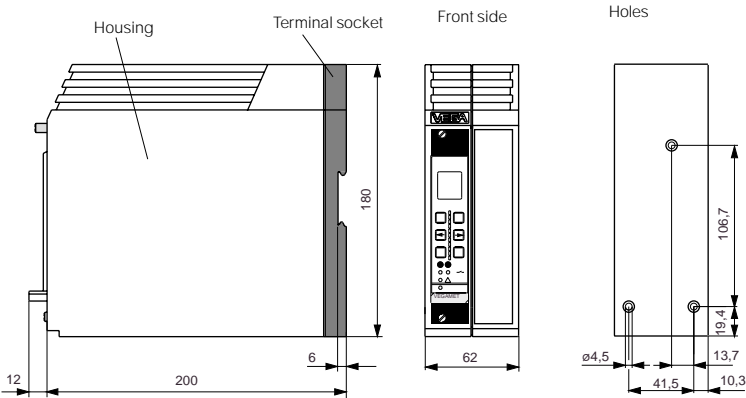
Permissible ambient temperature	-20°C ... +60°C
Storage and transport temperature	-40°C ... +80°C

CE-conformity

Housing type 505 is manufactured according to the European standard and meets the protective regulations of EMVG (89/336/EWG) and NSR (73/23/EWG). The conformity has been judged acc. to the following standards:

EMVG	Emission	EN 50 081 - 1: 1992
	Susceptibility	EN 50 082 - 2: 1995
NSR		EN 61 010 - 1: 1993

1.4 Dimensions

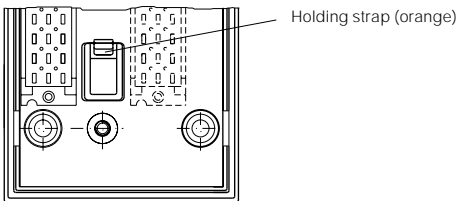


2 Mounting

2.1 General

Housing type 505 can be screwed directly on to a mounting plate (see „Dimensions, holes“) or placed on a carrier rail (35 x 15 acc. to EN 50 022). To do this, it is necessary to loosen the two screws on the front of the housing and to remove the upper part of the housing from the socket.

For placing on carrier rail or loosening from the carrier rail, unlock the holding strap with a screwdriver in the lower rectangular opening of the socket.



Wire the terminals acc. to the connection plan (see "3 Electrical connection" or the operating instructions of the signal conditioning instrument to be installed).

The designations of the terminals correspond to those on the multipoint connector on the rear of the signal conditioning instrument.

In case of Ex-applications, mark the sensor connection terminals (bottom) on the housing with the supplied blue Ex-labels (contents of the supplied bag).

2.2 Coding with Ex-instruments

The multipoint connector of the housing type 505 must be provided with a coded pin (contents of the supplied bag) to avoid interchanging between not-Ex and Ex-module units.

In case of Ex-instruments, equip the multipoint connector on position c23 with this coded pin.

2.3 Transparent cover

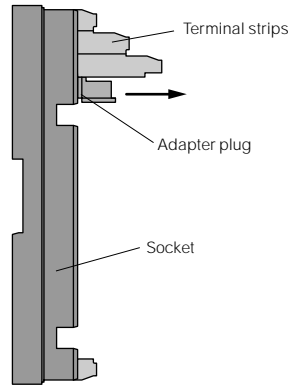
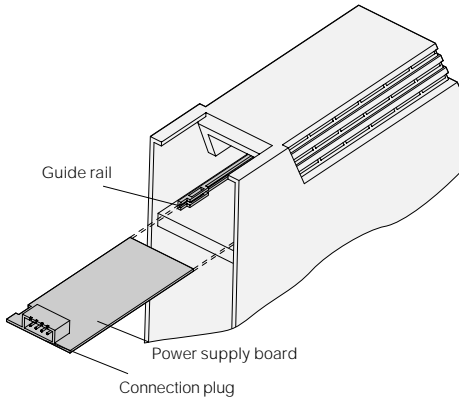
The module units can be provided with a lockable transparent cover to avoid unauthorised adjustment.

The transparent covers are supplied along with the module units.

2.4 Retrofitting of the housing with a power supply unit

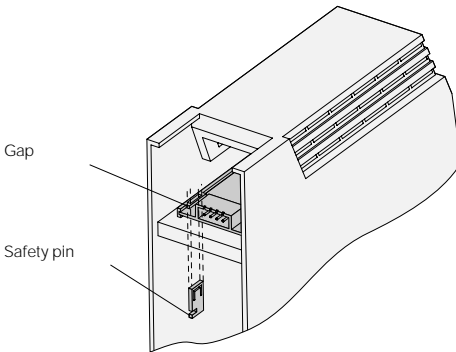
Proceed as follows to retrofit a power supply unit:

- First of all make sure that the supply voltage is disconnected on the terminal strips of the socket!
- Loosen the two hold screws on the front of the housing and remove the upper part of the housing (the hold screws are only accessible when there is no module card in the housing).
- Shift the power supply board into the guide rails of the upper part of the housing. Note the position of the connection plug.



- Insert the red safety pin through the gaps of the power supply board and the guide rail. This fastens the power supply board.

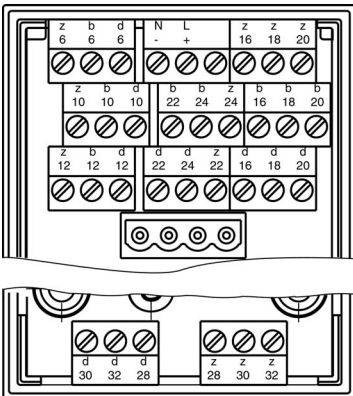
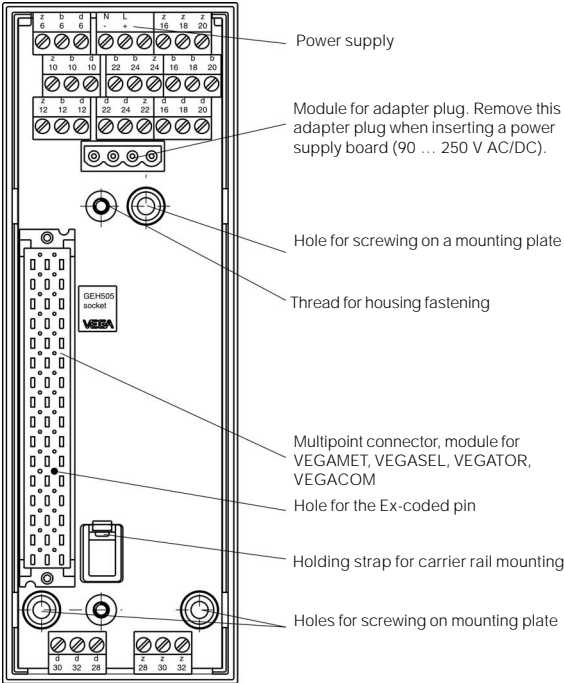
- Insert the upper part of the housing into the socket again, tighten the two screws on the housing front.
- Now you can connect the supply voltage for the power supply unit (90 ... 250 V AC) on the terminal strips of the socket.



- Remove the adapter plug from the housing socket.

3 Electrical connection




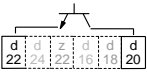
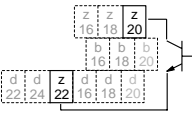



The designations of the terminals are identical to those on the multiple plug of the signal conditioning instruments.



3.1 Terminal coordination on VEGAMET

	VEGAMET	513	514	514V	515	515V	514D	514VD
	Fail safe relay	•	•	•	•	•	•	•
	Level relay 1		•	•	•	•	•	•
	Level relay 2		•	•	•	•	•	•
	Correction signal input 4		•	•	•	•	•	•
	Correction signal input 5				•	•		
	DISBUS-output	•	•	•	•	•	•	•
	Current output 1	•	•	•	•	•	•	•
	Current output 2			•	•	•	•	•
	Current output 3				•	•	•	•
	Voltage output 1	•	•	•	•	•	•	•
	Voltage output 2			•	•	•	•	•
	Voltage output 3				•	•	•	•
	Sensor 1	•	•	•	•	•	•	•
	Sensor 2				•	•		

3.2 Terminal coordination on VEGATOR

VEGATOR	521, 522	523	527
	•	•	•
	•	•	•
	•	•	•
	•	•	•
		•	•
	•	•	•
	•	•	•
			•

3.3 Terminal coordination on VEGASEL

VEGASEL	543	544	545	546	547
	•	•	•	•	•
		•	•	•	
			•	•	•
				•	
	•	•	•	•	•
		•	•	•	
			•	•	•
				•	
	•	•	•	•	•
	•	•	•	•	•

3.4 Terminal coordination on VEGACOM 557

Interface	RS 485	RS 422	RS 232	TTY	2 x RS 422	--
Protocol/ Bus system	Modbus Profibus procedure 3964 (R) ASCII	Modbus procedure 3964 (R) ASCII	Modus procedure 3964 (R) ASCII	Modbus procedure 3964 (R) ASCII	Interbus S	PC/ Modem- Interface
Terminal						
d 16	GND	GND	GND	GND	IBS (out) GND	
d 18			TxD	T +	IBS (out) DI	
z 18			RxD	R +	IBS (out) DO	
d 20				R -	IBS (out) /DI	
z 20				T -	IBS (out) /DO	
z 22	DISBUS +	DISBUS +	DISBUS +	DISBUS +	DISBUS +	DISBUS +
z 24	DISBUS -	DISBUS -	DISBUS -	DISBUS -	DISBUS -	DISBUS -
d 28	C/C'; DGND	GND 1	GND	GND	IBS (in) GND	
d 30	B; RxD/ TxD-P	RX			IBS (in) DO	
z 30		TX			IBS (in) DI	
d 32	A; RxD/ TxD-N	/RX			IBS (in) /DI	
z 28	+5 V					
z 32		/TX			IBS (in) /DI	

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The statements on types, application, use and operating conditions of the sensors and processing systems correspond to the actual knowledge at the date of printing.

Technical data subject to alteration.