Operating Instruction
Carrier BGT 596, 596 Ex.M
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Safety information

The described module must only be inserted and operated as described in this operating instruction. Please note that other action can cause damage for which VEGA does not take responsibility.
1 Product description

1.1 Function and configuration

The carrier BGT 596 or BGT 596 Ex.M is provided for signal conditioning instruments and electronics units of series 500 which are designed in 19“-technology (European size DIN 41 494).

It is designed for installation into a 19“-rack or into a switching cabinet with 19“-frame.

Configuration

The supporting elements of the carrier are made of eloxated Aluminium. The side walls are closed and consist together with the front flange of a common profile.

The carrier is provided with 84 module positions. Position 1 … 4 is covered with a blind cover so that 80 module positions or a width of 80 TE are available for the module cards.

Module cards of series 500 have a width of
- 5 TE, i.e. 5 x 5,08 = 25,4 mm
- 10 TE, i.e. 10 x 5,08 = 50,8 mm.

Hence
- max. 16 module cards with 5 TE or
- max. 8 module cards with 10 TE or
- a mixture of both can be installed up to a total width of 80 TE.

With part load blind covers are available for empty spaces (5 TE = 25,4 mm, article no. 2.9513 or 10 TE = 50,8 mm, article no. 2.9341 each with fixing screws).

Dependent on the type of the signal conditioning instrument (type of module card) to be installed into the carrier different connection technologies can be selected for the respective multipoint connectors (see “1.3 Technical data” on the following pages).

1.2 Types and versions

BGT 596
The carrier BGT 596 is designed for installation of not-Ex-module cards.

BGT 596 Ex.M
The carrier BGT 596 Ex together with Ex-modules is certified for installation of Ex-module cards. It is marked BGT 596 Ex.M (included in the conformity certificate PTB-no. Ex-95.D.2073 X).

This carrier is in addition approved for the use on ships. It has a type approval of German Lloyd (no. 89914-94 HH).
1.3 Technical data

BGT 596

Mechanical data

- Dimensions: \( W \times H \times D = 482.6 (19\text{")} \times 132.5 \times 254 \)
- Module positions: choice out of 84 positions
- Connection of protector: tongue 2 x 6,3 x 0,8
- Blind cover: 4 TE (4 x 5,08 = 20,32 mm)

Protective measures

- Wiring side: IP 00
- Upper and lower side: IP 00
- Front side (completely equipped): IP 30
  - IP 40 (with series 500 new)

Module (consisting of)

- Guide rails: 2 pcs.
- Instrument coded key: 2 pcs.
- Fixing screw: 2 pcs. M2,5
- Multipoint connector:
  - type: DIN 41 612, series F, 32-/33-pole, d, b, z
  - connection: see following list
  - Wire-Wrap 1,0 x 1,0 mm: Article no. Module-33 A 32 A
  - Plug 2,8 x 0,8 mm: 33 B 32 B
  - Termi-Point 1,6 x 0,8 mm: 33 C 32 C
  - Soldering connection: 33 D 32 D
  - Screw connection: 33 E —

Connection for signal conditioning instruments

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1) (with earth terminal for screened cable)

VEGASTAB 593-60, 593 and 594 power supply units are offered completely, i.e. inclusive module as multipoint connector series H, 15-pole with plug 6,3 mm
BGT 596 Ex.M

Mechanical data

Dimensions
W x H x D = 482,6 (19") x 132,5 x 254
Module positions
choice out of 84 positions
Connection for protector
tongue 2-fold, 2 x 6,3 x 0,8
Blind cover
4 TE (4 x 5,08 = 20,32 mm)
Covers (top and bottom)
screwed with the basic carrier

Protective measures

Wiring side  IP 00
Upper and lower side  IP 20
Front side (completely equipped)  IP 30

Ex-module (consisting of)

Guide rails
2 pcs.
Instrument coded key
2 pcs.
Fixing screw
2 pcs. M2,5
Separating chamber
1 pce. with integral nut
Multipoint connector with Ex-coded key
1 pce.
- type
DIN 41 612, series F, 32-/33-pole, d, b, z
- connection
see the following list

Wire-Wrap 1,0 x 1,0 mm  Article no.
Module-  Ex-33 A  Ex-32 A  Ex-33 SA
Plug 2,8 x 0,8 mm  Ex-33 B —  Ex-33 SB
Termi-Point 1,6 x 0,8 mm  Ex-33 C Ex-32 C Ex-33 SC
Soldering connection  Ex-33 D Ex-32 D Ex-33 SD
Screw connection  Ex-33 E — —

Connection for signal conditioning instruments

VEGATOR 536 Ex 526 W Ex 534 Ex
VEGATOR 537 Ex 535 Ex

VEGATOR 521 Ex 522 Ex 523 Ex 527 Ex

VEGAMET 513 Ex 514 Ex 514 D Ex 515 Ex

VEGATRENN 544 Ex 546 547 Ex 548 Ex

VEGASTAB 593-60, 593 and 594 see BGT 596
2 Mounting

2.1 Coding

A mechanical instrument coding by means of a pin in the multipoint connector and a hole in the multiple plug ensures that by interchanging the module card only the correct card type can be inserted again. The pin (attached) is supplied with the module and must be inserted into the hole of the card specific position when mounting the module.

An Ex-coding with fixed coded key ensures that not-Ex and Ex-module cards are not interchanged.

Instrument coding

Ex-coding

see instrument specific operating instruction

2.2 Module position

The guide rails of the first module cards should be mounted to module position 05 (on the right of the blind cover) and the appropriate multipoint connector should be mounted to module position 06.

The module position of the following module card depends on its TE-width, i.e.
- module card with 5 TE guide rails on module position 10 multipoint connector to module position 11
- module card with 10 TE guide rails to module position 15 multipoint connector to module position 16
- etc. for all other module cards
2.3 Mounting

**BGT 596**
Except this operating instruction (BA) the BAs of the installed module cards have to be observed.
The mounting of the module cards must start directly after the blind cover mounted on the left (4 TE = air gap to the side wall of the carrier of ≥ 10 mm).

**BGT 596 Ex.M**
The instructions and mounting steps described in the following are part of the explosion protection and must be maintained exactly.
- Ex-module cards must only be operated via Ex-modules in the carrier.
- The intrinsically safe circuits can be separated by means of the supplied separating chambers.
- The protection IP 20 requested for Ex-applications must be ensured by a total equipment (module cards and/or blind covers).
- The following installation regulations must be observed for mixed load.

**Examples:**

![Mounting steps](image)

**Step 1**
Snap-in the guide rails into the respective module of the carrier (e.g. module position 5).

**Step 2**
Mount the multipoint connector from the inner side of the carrier to the rear board.

The max. voltage on the circuits must not exceed 250 V_{eff}. 
Step 3

Relating to BGT 596
Connect the lines

Relating to BGT 596 Ex

Loop the lines of the intrinsically safe circuit through the separating chamber and connect to the appropriate position of the multipoint connector (for modules used for installation into carrier VEGATRENN 547 and 548 a broad separating chamber must be used).

Step 4

Shift the separating chamber up to the multipoint connector and fasten with the integral nut on the penetrating fixing screw of the multipoint connector.

When using a multipoint connector with screw connection, module Ex-33 E, the above marked section must be removed on the separating chamber.