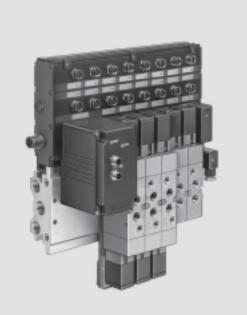
- Flexible and robust design
- Tried and trusted Tiger valves
- Wide choice of variants: Multi-pin, fieldbus or integrated PLC
- Valve/sensor terminal with electrical inputs and two additional electrical outputs
- Relay outputs, upon request

Valve terminal type 02 VIMP/IIMP-02, Tiger 2000 Features

FESTO



Valve/sensor terminal type 02 with Tiger valves

Reliable, flexible and sturdy:

For many years now the Tiger valve terminal type 02 has been the emblem for the world-wide success of intelligent pneumatics. The invention of valve terminals began with the Tiger series valves and they are still a success.

The success factors are a relatively flexible and sturdy design with many useful detail solutions and an unbeatable range of control variants. The valve terminals are supplied fully checked and only need to be attached with 4 bolts – ready to go.

- Valve terminals with 4 to 16 valve positions, equipped according to
- customer requirements.Connection sizes:
 - G¹/8
 - 64
- G¹/₄Valve/sensor terminal: Valve
- terminal with two sensor inputs per valve position and two additional universal inputs and two outputs per terminal (24 V/0.5 A).

- Protection class IP 65
- Fully assembled and 100 % tested before shipment.
- Sturdy Tiger valves, proven reliability.
- Long service life, even in aggressive environments.
- LED display and integrated protective circuit for each solenoid



Technical data on fieldbusses and control blocks can be found under Modular electrical peripherals type 03/04.

➔ Internet: type 03

Features

General features

Separate voltage supply for electronics and outputs. Outputs can be switched off separately.

There is an option for using relay plates, blanking plates for spare positions and sealing plugs for two different pressure zones.

The manifold contains common lines for compressed air supply, exhaust

Multi-pin plug connection Valve terminal VIMP-02-...



and pilot exhaust for all valves. The common lines can be connected on both sides.

Manual override, LED for status display per valve and sensor input, integrated self-test function and diagnosis messages (with fieldbus nodes) allow for simple, fast start-up and convenient diagnostics. Valve equipment: Valves with or without pilot air supply

Multiple valve functions

- Single solenoid 5/2-way valves,
- 5/2-way double solenoid valves
- 5/3-way valves.

Valves with mechanical spring or pneumatic spring.

Valve/sensor terminal IIMP-02-...

Instead of a valve, a relay with 2 floating contacts can be chosen.

The manual overrides of the valves are either pushing or detenting, and can be secured against unauthorised activation.

- 4 to 16 valve positions
 - Connection via Harting plug
 - 24 V DC
 - 4 to 16 solenoid coils G¹/8, G¹/4

Can be connected to all control systems



- 4 to 16 valve positions
- Equipped like a valve terminal, but:
- Two additional sensor connections per valve position
 Two additional electrical inputs
- 24 V and two outputs 24 V/0.5 A

Can be connected to all control systems

Fieldbus connection Valve terminal VIFB-02-...



• 4 to 16 valve positions

- Connection to 24 V DC and fieldbus via special fieldbus plug
- 4 to 16 solenoid coils G¹/8, G¹/4

Can be connected to all major fieldbus systems

Valve/sensor terminal IIFB-02-...

- 4 to 14 valve positions
- Equipped like a valve terminal, but:
 - Two additional sensor
 - connections per valve position
 - Two additional electrical inputs
 24 V and two outputs 24 V/0.5 A

Can be connected to all major fieldbus systems

Programmable with integrated PLC

Valve/sensor terminal IIFB-02-...-SB...-



• 4 to 16 valve positions

- Connection 24 V DC
- 4 to 16 solenoid coils G¹/8, G¹/4
- Two additional sensor connections per valve position
- Two additional electrical inputs 24 V and two outputs 24 V/0.5 A

Autonomous on-site control with integrated Festo PLC and Festo fieldbus connection



ESTO

Features

Fieldbus variants



Moeller



Of the more than 20 different fieldbus systems (protocols) available in the market, some have emerged as the most important variants. Festo supports these by means of various fieldbus nodes (FBxx) on its valve terminals.

Fieldbus systems require a powerful, central PLC and a master interface adapted to that particular fieldbus. Fieldbus systems are generally used when several devices with many inputs/outputs, complex functions or high communication levels must be controlled. In this case, the advantages of simple cabling, easy diagnosis and maintenance outweigh the extra outlay for a fieldbus master interface and the necessary knowhow.

DeviceNet



Festo fieldbus:

A fieldbus developed by Festo with simple prompting, supported by the control systems in the FPC, SF and IPC series (Festo FB5).

A maximum of 98 bus stations can be connected to the Festo fieldbus. The bus can operate with 4 different baud rates. 31.25; 62.5; 187.75 and 375 kbps.

Interbus:

An open fieldbus standard, originally developed by Phoenix Contact and now in world-wide use. Important installation accessories such as bus plugs must be obtained from Phoenix or its partners (Festo FB6).

ABB



Profibus-DP:

An open fieldbus standard, originally developed by Siemens and in worldwide use. (Festo FB13 for 12 MBd).

DeviceNet:

An open fieldbus system based on CAN technology originally developed for the automotive sector. DeviceNet was originally sold by Rockwell (Allen-Bradley). Other CAN derivatives are available as well (Festo FB11).

Moeller SUCONET K:

A maximum of 98 bus stations can be connected to the SUCONET K fieldbus. The bus operates with a baud rate of 187.5 or 375 kbps, depending on the design, bus length, etc. The bus interface is based on RS 485 with a master/slave structure (Festo FB5).



ABB CS31:

The fieldbus from ABB connects a maximum of 63 fieldbus stations to the fieldbus master. The data is transferred at a constant baud rate of 187.5 kbps. The protocol is suitable for use in all areas of automation technology (Festo FB5).

Integrated Festo PLC

A powerful mini controller from Festo was integrated into the SF3 valve terminal node. This enables stand alone control of up to 34 inputs and 34 outputs on site with protection class IP65 - no need for a control cabinet. With the Festo fieldbus. additional I/Os and expanded functions can be installed and

controlled - this creates a programmable valve/sensor terminal.

The SF3 control block can be operated as required as a stand-alone, fieldbus master or fieldbus slave. 31 slaves with up to 1,048 inputs and outputs can be controlled via the fieldbus in the master operation mode.

The SF3 node can be used as an intelligent slave within the fieldbus in the slave operation mode. This enables stand alone on site preprocessing or a partial startup.

Start/stop signals to synchronise with other processes or controllers via the

additional electrical inputs and outputs.

The SF3 valve terminal can be programmed with FST 200 or a display and control device can be directly connected on-site via an RS 232 programming interface.

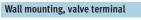
Valve terminal type 02 VIMP/IIMP-02, Tiger 2000 Key features – Pneumatics

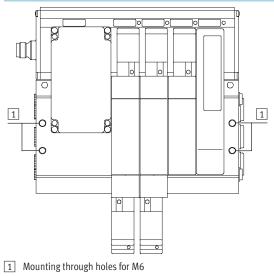
| Valve fun | ction | | | |
|-----------|--|---------|------|--|
| Code | Circuit symbols | Connect | | Description |
| | | G1⁄8 | G1⁄4 | |
| М | | - | - | 5/2-way valve |
| V | | - | • | 5/2-way valve with pilot air supply |
| L | | - | • | 5/2-way valve with pneumatic spring |
| Р | | - | • | 5/2-way solenoid valve with pneumatic spring return and pilot air supply |
| J | | - | • | 5/2-way double solenoid valve |
| К | | • | • | 5/2way valve with pilot air supply |
| G | | - | • | 5/3-way valve Mid-position closed |
| 0 | | - | - | 5/3-way valve Mid-position closed with pilot air supply |
| E | | • | • | 5/3-way valve Mid-position exhausted |
| F | | • | • | 5/3-way valve Mid-position exhausted with pilot air supply |
| В | $\begin{array}{c c} & & & & \\ & & & & \\ 14 & & & & \\ \hline p & & & \\ 82 & & & \\ \hline & & & & \\ \end{array}$ | | • | 5/3-way valve Mid-position pressurised |
| С | | • | • | 5/3-way valve Mid-position pressurised with pilot air supply |

-- Note

For vacuum operation valves require a filter. This is to avoid that foreign matter is drawn into the valve (e.g. when using a suction cup).

Valve terminal type 02 VIMP/IIMP-02, Tiger 2000 Key features – Mounting





There are 4 through holes positioned on the right and left edges (1) of the connection block to facilitate attachment of the valve/sensor terminal.

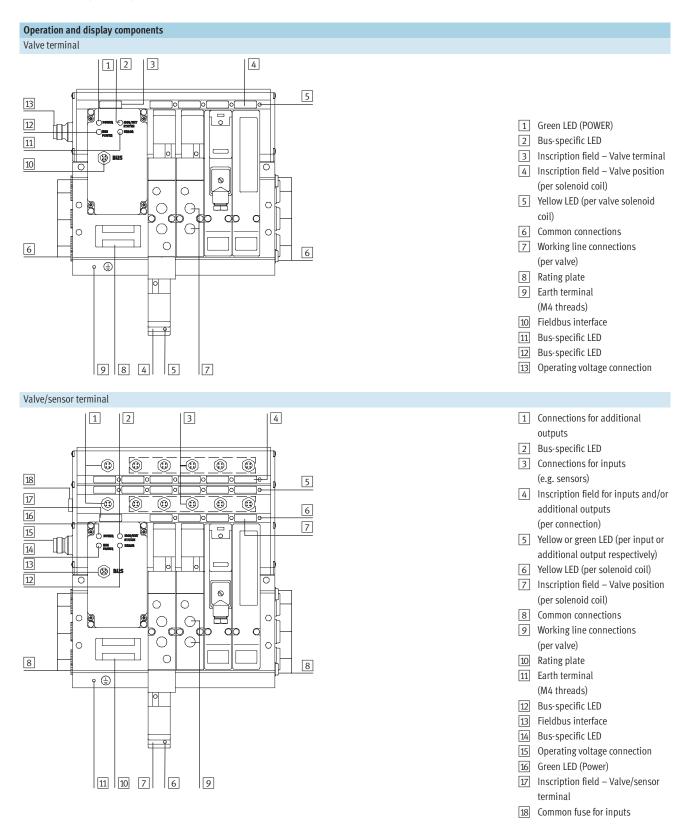
• Make four through holes on the mounting surface.

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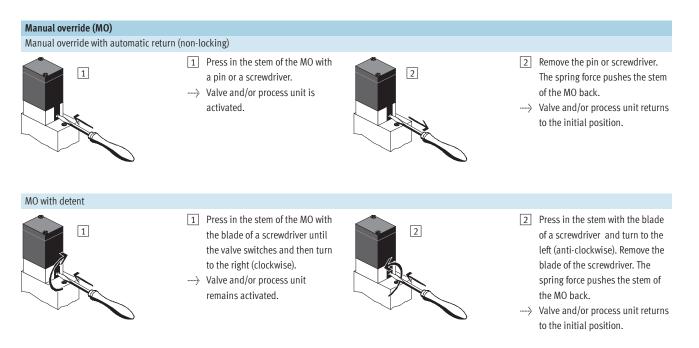
• Attach the valve/sensor terminal to the mounting surface using M6x60 screws.

hexagonal-head bolts

Key features – Display and operation



Key features – Display and operation



FESTO

Key features – Electrics

Sockets (PNP) type 02

Pin allocation

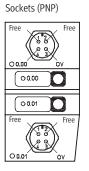
Sensor inputs PNP (input and/or sensor connection)

24V Fused 10.00 10.00 OV 10.00 OV 10.01 OV

Two inputs (e.g. 10.00 and 10.01) are available on the lower plug, this

- reduces cable requirements (e.g. using DUO cable)
- Enables connection of changeover switch or selector switch If you use the lower plug for two inputs, the upper socket must remain unused.

Additional outputs



Power supply (only with fieldbus nodes and control blocks)

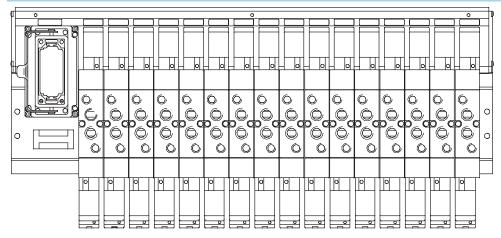


Pin1: 24 V supply Electronics + sensors Tolerance: ±25% Pin2: 24 V supply Outputs Tolerance: ±10% Pin3: 0 V Pin4: Earth terminal

2008/06 - Subject to change

Valve terminal type 02 VIMP/IIMP-02, Tiger 2000 Key features - Electrics

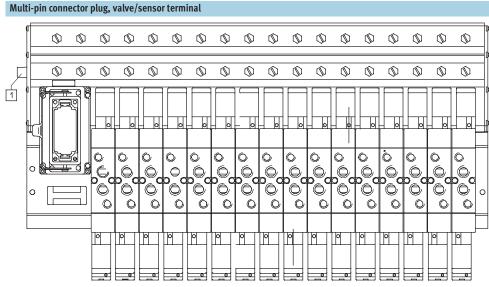
Multi-pin connector plug - Valve terminal



| Connector view (top view) | | terminal A | В | C | D | Remarks |
|-----------------------------|---------------------------------|--|--|--|--|--|
| Aulti-pin connector, 25-pin | | | 5 | c . | 5 | |
| АВС | 1 | 0.00 | | 1.00 | | Max. 12 valve positions |
| | 2 | 0.01 | 0.09 | 1.01 | | 25-pin multi connector plug to DIN 43 652 |
| | 3 | 0.02 | 0.10 | 1.02 | | Connecting cable |
| | 4 | 0.03 | 0.11 | 1.03 | | 12 x 0.75 mm ² (4) |
| | 5 | 0.04 | 0.12 | 1.04 | | 15 x 0.75 mm ² (6) |
| | 6 | 0.05 | 0.13 | 1.05 | | 18 x 0.75 mm ² (8) 25 x 0.75 mm ² (10/12) |
| | 7 | 0.06 | 0.14 | 1.06 | | 25 X 0.75 mm² (10/12) |
| 000 | 8 | 0.07 | 0.15 | 1.07 | | |
| | 9 | 0.08 | | 1) | | |
| el <u>t</u> e | Output (so | lenoid valve positio | on) | | | |
| | | | | | | |
| lulti-pin connector, 40-pin | | | | | | |
| ,, pm | | | | | | |
| A B C D | 1 | 0.00 | 0.10 | 1.04 | 1.14 | 14 to 16 valve positions |
| | 1 2 | 0.00 | 0.10 | 1.04 | 1.14 | 40-pin multi connector plug |
| | | | | | | 40-pin multi connector plug to DIN 43 652 |
| | 2 | 0.01 | 0.11 | 1.05 | 1.15 | 40-pin multi connector plug |
| | 2 3 | 0.01 | 0.11 | 1.05 | 1.15 | 40-pin multi connector plug to DIN 43 652 |
| | 2 3 4 | 0.01 0.02 0.03 | 0.11 0.12 0.13 | 1.05 1.06 1.07 | 1.15 - - | 40-pin multi connector plug to DIN 43 652 |
| | 2 3 4 5 | 0.01 0.02 0.03 0.04 | 0.11 0.12 0.13 0.14 | 1.05 1.06 1.07 1.08 | 1.15 - - - - | 40-pin multi connector plug to DIN 43 652 |
| | 2 3 4 5 6 | 0.01 0.02 0.03 0.04 0.05 | 0.11 0.12 0.13 0.14 0.15 | 1.05 1.06 1.07 1.08 1.09 | 1.15 - - - - - | 40-pin multi connector plug to DIN 43 652 |
| | 2 3 4 5 6 7 | 0.01 0.02 0.03 0.04 0.05 0.06 | 0.11 0.12 0.13 0.14 0.15 1.00 | 1.05 1.06 1.07 1.08 1.09 1.10 | 1.15 - | 40-pin multi connector plug to DIN 43 652 |
| | 2 3 4 5 6 7 8 | 0.01 0.02 0.03 0.04 0.05 0.06 0.07 | 0.11 0.12 0.13 0.14 0.15 1.00 1.01 | 1.05 1.06 1.07 1.08 1.09 1.10 1.11 | 1.15 - | 40-pin multi connector plug to DIN 43 652 |

1) Return line (output)

Valve terminal type 02 VIMP/IIMP-02, Tiger 2000 Key features - Electrics



1 Protection T3A/250 V

| nnector view (top view) | | A | В | С | D | Remarks |
|---------------------------|----------------------------|--|--|---|---|---|
| lti-pin connector, 25-pin | ľ | · | | | | |
| АВС | 1 | 00.00 | | 10.06 | | Max. 4 valve positions |
| | 2 | 00.01 | 00.09 | 10.07 | | 25-pin multi connector plug |
| | 3 | 00.02 | 10.10 | 10.08 | | to DIN 43 652 Connecting cable 24 x 0.75 mm ² |
| | 4 | 00.03 | 10.11 | 10.09 | | Connecting capte 24 x 0.75 mm |
| | 5 | 00.04 | 10.12 | - | | |
| | 6 | 00.05 | 10.13 | - | | |
| | 7 | 00.06 | 10.14 | 24 V | | |
| | 8 | 00.07 | 10.15 | 0 V | | |
| ŏŏŏ <u>,</u> | 9 | 00.08 | | 1) | | |
| | Output | | Input | • | | |
| | (solenoid va | lve position) | | | | |
| | • | | | | L. | |
| lti-pin connector, 40-pin | i | | t - | | | |
| АВСД | 1 | 00.00 | 00.10 | 10.00 | 10.10 | |
| | | | | | | 6 to 8 valve positions |
| | 2 | 00.01 | 00.11 | 10.01 | 10.10 | 40 pin multi connector plug |
| | 2 3 | 00.01 | 00.11 00.12 | l0.01 l0.02 | | 40 pin multi connector plug |
| | | | | | 10.11 | 40 pin multi connector plug |
| | 3 | 00.02 | 00.12 | 10.02 | l0.11 l0.12 | 40 pin multi connector plug |
| | 3 4 | 00.02 | 00.12 | l0.02 l0.03 | l0.11 l0.12 l0.13 | 40 pin multi connector plug |
| | 3 4 5 | 00.02 00.03 00.04 | 00.12 00.13 00.14 | 10.02 10.03 10.04 | I0.11 I0.12 I0.13 I0.14 | 40 pin multi connector plug |
| | 3 4 5 6 | 00.02 00.03 00.04 00.05 | 00.12 00.13 00.14 00.15 | 10.02 10.03 10.04 10.05 | I0.11 I0.12 I0.13 I0.14 I0.15 | 40 pin multi connector plug |
| | 3 4 5 6 7 | 00.02 00.03 00.04 00.05 00.06 | 00.12 00.13 00.14 00.15 01.00 | 10.02 10.03 10.04 10.05 10.06 | I0.11 I0.12 I0.13 I0.14 I0.15 I1.00 | |
| | 3 4 5 6 7 8 | 00.02 00.03 00.04 00.05 00.06 00.07 | 00.12 00.13 00.14 00.15 01.00 01.01 | 10.02 10.03 10.04 10.05 10.06 10.07 | I0.11 I0.12 I0.13 I0.14 I0.15 I1.00 I1.01 | 40 pin multi connector plug |

1) Return line (output)

24 V, 0 V supply (input, protection T 3.15 A)

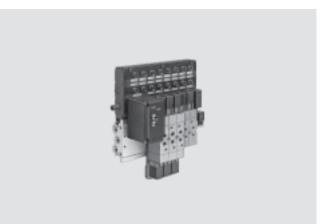
Valve terminal type 02 VIMP/IIMP-02, Tiger 2000 Key features – Electrics

| Pin allocation – Multi-pin connector | plug - Valve/ | sensor term | inal | | | | | |
|--------------------------------------|---------------|----------------|-------|-------|-------|----------|-------|--|
| Connector view (top view) | | 1-12 | 13-24 | 25-36 | 37-48 | 49-60 | 61-72 | Remarks |
| Multi-pin connector, 72-pin | | | | | | | | |
| 1 61 | 1 | 00.00 | 00.12 | 01.08 | 10.00 | 10.12 | 11.08 | 10 to 16 valve positions |
| | 2 | 00.01 | 00.13 | 01.09 | 10.01 | 10.13 | 11.09 | 72 pin multi connector plug |
| | 3 | 00.02 | 00.14 | 01.10 | 10.02 | 10.14 | 11.10 | Connecting cable 50 x 0.75 mm ² (10) |
| | 4 | 00.03 | 00.15 | 01.11 | 10.03 | l0.15 | 1.11 | $65 \times 0.75 \text{ mm}^2 (12/14)$ |
| 000000 | 5 | 00.04 | 01.00 | 01.12 | 10.04 | 11.00 | 11.12 | 80 x 0.75 mm ² (16) |
| | 6 | 00.05 | 01.01 | 01.13 | 10.05 | 11.01 | 11.13 | |
| | 7 | 00.06 | 01.02 | 01.14 | 10.06 | 11.02 | 11.14 | |
| | 8 | 00.07 | 01.03 | 01.15 | 10.07 | 11.013.0 | 11.15 | |
| | 9 | 00.08 | 01.04 | 02.00 | 10.08 | 11.04 | 12.00 | |
| | 10 | 00.09 | 01.05 | 02.01 | 10.09 | 11.05 | 12.01 | |
| | 11 | 00.10 | 01.06 | 1) | 10.10 | 11.06 | 24 V | |
| | 12 | 00.11 | 01.07 | 1) | 10.11 | 11.07 | 0 V | 1 |
| | Output | | | | Input | | | 1 |
| 12 72 | (solenoid va | alve position) | | | | | | |

1) Return line (output) 24 V, 0 V supply (input, protection T 3.15 A)

- **L** - Voltage 24 V DC

- N - Flow rate up to G1⁄8: 750 l/min 1,000 l/min G1⁄4 1,300 l/min 1600 l/min - **[]** - Valve width G¹/8 26 mm G1⁄4 32 mm



| Valve terminal | | Connection size G1⁄8 | Connection size G1⁄4 |
|------------------------------|-------|--|--|
| Design | | Poppet valve (5/2-way valves MVH and MVH-S), all others pis | ton spool valves |
| Width | [mm] | 26 | 32 |
| Lubrication | | Poppet valve: Lubricated for life, PWIS free (free of paint we | etting impairment substances) |
| | | • Piston spool valve: Lubricated for life, PWIS critical (critica | l for paint wetting impairment substances) |
| Type of mounting | | Through-holes on manifold | |
| Fitting position | | Any | |
| Manual override | | Non-detenting, detenting | |
| | | | |
| Pneumatic connections | | | |
| Work air connection | 1 | G3⁄8 | G ¹ /2 |
| Exhaust connection | 3/5 | G3⁄8 | G ¹ /2 |
| Working lines | 2/4 | G1⁄8 | G1⁄4 |
| Pilot air supply connection | 12/14 | G1/8 | G1⁄8 |
| Pilot exhaust air connection | 82/84 | G1/8 | G1⁄8 |

| Nominal size [mm] | | | | | | | | |
|----------------------|-----|-------|-------|---------|------|--------|---------|-----------|
| Valves | MVH | MVH-S | MVH-L | MVH-L-S | JMVH | JMVH-S | MVH-5/3 | MVH-5/3-S |
| Connection size G1/8 | 5 | | 8 | | | | | |
| | | | | | | | | |

| Operating pressure [bar] | | | | | | | | |
|--------------------------|------|-------|-------|----------|------|----------|---------|-----------|
| Valves | MVH | MVH-S | MVH-L | MVH-L-S | JMVH | JMVH-S | MVH-5/3 | MVH-5/3-S |
| | 2 10 | 0 10 | 3 10 | -0.9 +10 | 2 10 | -0.9 +10 | 3 10 | -0.9 +10 |

| Pilot pressure [bar] | | | | | | | | |
|---|-----|--------|-------|---------|------|--------|---------|-----------|
| Valves | MVH | MVH-S | MVH-L | MVH-L-S | JMVH | JMVH-S | MVH-5/3 | MVH-5/3-S |
| Connection size G1/8 | - | 2 10 | - | 3 10 | - | 2 10 | - | 3 10 |
| Connection size G ¹ ⁄ ₄ | - | 1.5 10 | - | 3 10 | - | 2 10 | - | 3 10 |

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| Valve response times [ms | 5] | | | | | | | | |
|--------------------------|---------|-----|-------|-------|---------|------|--------|---------|-----------|
| Valves | | MVH | MVH-S | MVH-L | MVH-L-S | JMVH | JMVH-S | MVH-5/3 | MVH-5/3-S |
| Response times (G1⁄8) | On | 20 | 20 | 31 | 31 | - | - | 30 | 30 |
| | Off | 36 | 36 | 18 | 18 | - | - | 26 | 26 |
| | Change- | - | - | - | - | 18 | 18 | - | - |
| | over | | | | | | | | |
| Response times (G1⁄4) | On | 15 | 15 | 28 | 28 | - | - | 32 | 32 |
| | Off | 36 | 36 | 37 | 37 | - | - | 28 | 28 |
| | Change- | - | - | - | - | 16 | 16 | - | - |
| | over | | | | | | | | |

Operating and environmental conditions

| Valves | | MVH | MVH-S | MVH-L | MVH-L-S | JMVH | JMVH-S | MVH-5/3 | MVH-5/3-S |
|---------------------|------|-----------------|-------------------|------------------|---------|------|--------|---------|-----------|
| Operating medium | | filtered compre | essed air, lubric | ated or unlubric | ated | | | | |
| Grade of filtration | [µm] | 40 | | | | | | | |
| Ambient temperature | [°C] | -5 +50 | | | | | | | |

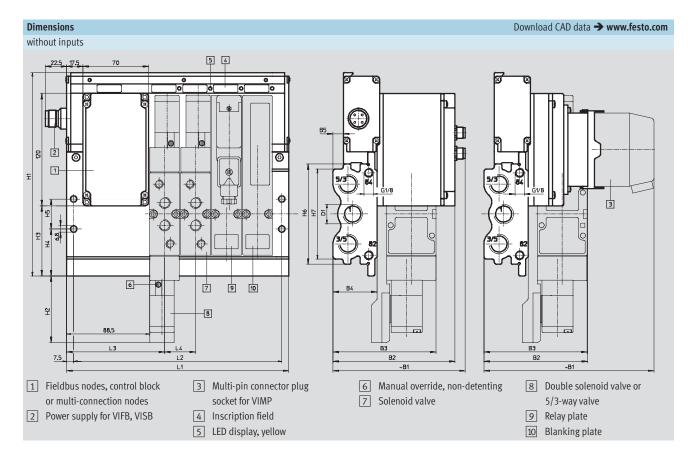
| Electrical data | | | | | | | | | |
|--------------------------------------|-------|-----------------|-------------------|-----------------|------------------|---------------|--------------|---------|-----------|
| Valves | | MVH | MVH-S | MVH-L | MVH-L-S | JMVH | JMVH-S | MVH-5/3 | MVH-5/3-S |
| Electromagnetic compatibility of th | е | Interference e | mission tested | to EN 61 000-6 | -4, "Interferen | ce emission i | n industry" | | |
| valve terminal | | Interference ir | nmunity tested | to EN 61 000-6 | 6-2, "Interferer | ice immunity | in industry" | | |
| Protection against electric shock | | Through PELV | power supply u | init | | | | | |
| (protection against direct and indir | rect | | | | | | | | |
| contact to EN 60204-1/IEC 204) | | | | | | | | | |
| Operating voltage | [V] | 24 DC (±10%) | | | | | | | |
| Residual ripple | [Vss] | 4 | | | | | | | |
| Electrical power | [W] | 2.9 | | | | | | | |
| consumption per valve | | | | | | | | | |
| solenoid | | | | | | | | | |
| Duty cycle | | 100% | | | | | | | |
| Protection class to EN 60 529 | | IP65 (when fit | ted) | | | | | | |
| Sensor inputs and auxiliary inputs | | 0 30 V DC, | positive logic (F | PNP), ON: 12.5 | V, OFF: 7 V | | | | |
| | | Delay time: ty | o. 5 ms, curren | t consumption | typ. 9 mA | | | | |
| Additional outputs | | 24 V DC, 0.5 A | A, positive logic | : (PNP) | | | | | |
| | | , | | urrent max. 1 A | A, response tim | e max. 1 ms | | | |
| Vibration resistance | | Tested to DIN/ | IEC 68/EN 60 0 | 68, Parts 2-6 | | | | | |
| | | | | at 60 150 Hz | | | | | |
| Resistance to shocks | | Tested to DIN/ | IEC 68/EN 60 0 | 68, Parts 2-27 | | | | | |
| | | +/-30 g at 11 | | | | | | | |
| Endurance resistance to shock | | | - | 68, Parts 2-29 | | | | | |
| | | +/-15 g at 6 m | ns, 1000 cycles | | | | | | |



| Electrical data, relay plate | | | | | | | | |
|---|----------------------------|------------------------------|----------------|--------------------|--------------|---------------------|-------------|-----------|
| Relay plate IRP1-02/IRP2-02 | NO contac | t | | | Relay is co | ontrolled like a va | alve | |
| • Max. switching voltage | 250 V AC/ | 125 V AC | | | | | | |
| Max. switching/carrier current | 2 A | | | | | | | |
| • Min. permissible load | 5 V DC, 10 | mA | | | | | | |
| Permissible electrical load | Resistive lo | oad ($\cos \varphi = 1$, L | /R = 0 ms) | | Inductive | load (cosφ= 0.4, | L/R = 7 ms) | |
| Nominal load | 250 V AC, | 2 A | | | 250 V AC, | 1 A | | |
| | 30 V DC, 2 | A | | | 30 V DC, 1 | A | | |
| Max. switching capacity | 500 VA, 60 | W C | | | 250 VA, 3 | 0 W | | |
| | | | | | | | | |
| Valves | MVH | MVH-S | MVH-L | MVH-L-S | JMVH | JMVH-S | MVH-5/3 | MVH-5/3-S |
| Valves Housing, cover | Die-cast al | uminium | MVH-L | MVH-L-S | JMVH | JMVH-S | MVH-5/3 | MVH-5/3-S |
| Valves Housing, cover | Die-cast al | | MVH-L | MVH-L-S | JMVH | JMVH-S | MVH-5/3 | MVH-5/3-S |
| Valves Housing, cover | Die-cast al | uminium | MVH-L | MVH-L-S | JMVH | JMVH-S | MVH-5/3 | MVH-5/3-S |
| Valves Housing, cover Seals | Die-cast al | uminium | MVH-L | MVH-L-S | JMVH | JMVH-S | MVH-5/3 | MVH-5/3-S |
| Valves Housing, cover Seals Nominal flow rate [l/min] | Die-cast al | uminium | MVH-L MVH-L | MVH-L-S MVH-L-S | JMVH JMVH | JMVH-S JMVH-S | MVH-5/3 | MVH-5/3-S |
| Materials Valves Housing, cover Seals Nominal flow rate [l/min] Valves Connection size G1/8 | Die-cast al PU, nitrile | luminium rubber (NBR) | | | | | | |

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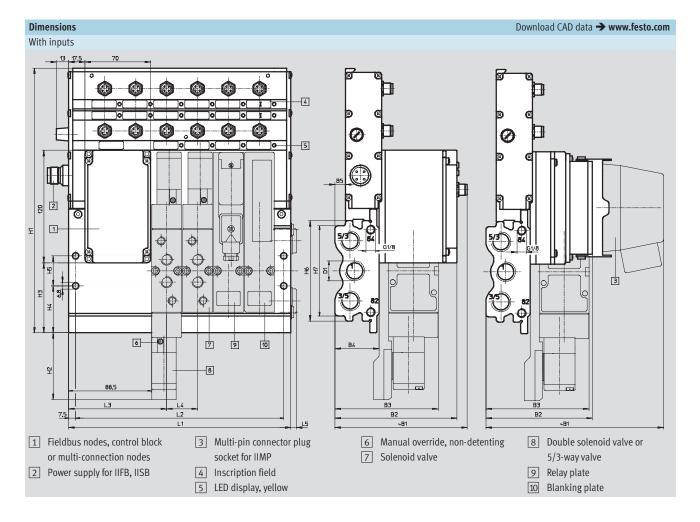
Technical data



| Туре | B1~ | B2 | B3 | B4 | B5 | D1 | H1 | H2 | H3 | H4 | H5 | H6 | H7 | L1 | L2 | L3 | L4 | L5 |
|----------------|-----|-------|-------|------|------|------|-----|------|------|------|------|-----|----|-----|-----|-------|----|----|
| VIFB-02-1/8-4 | 140 | 128.8 | 102.5 | 45.5 | 8.4 | G3⁄8 | 205 | 70.5 | 62.6 | 46.2 | 27.5 | 95 | 75 | 213 | 198 | 101.5 | 27 | 5 |
| VIMP-02-1/8-4 | 180 | 109.2 | | | | | | | | | | | | | | | | |
| VIFB-02-1/8-6 | 140 | 128.5 | | | | | | | | | | | | 267 | 252 | | | |
| VIMP-02-1/8-6 | 180 | 109.2 | | | | | | | | | | | | | | | | |
| VIFB-02-1/8-8 | 140 | 128.5 | | | | | | | | | | | | 321 | 306 | | | |
| VIMP-02-1/8-8 | 180 | 109.2 | | | | | | | | | | | | | | | | |
| VIFB-02-1/8-10 | 140 | 128.5 | | | | | | | | | | | | 375 | 360 | | | |
| VIMP-02-1/8-10 | 180 | 109.2 | | | | | | | | | | | | | | | | |
| VIFB-02-1/8-12 | 140 | 128.5 | | | | | | | | | | | | 429 | 414 | | | |
| VIMP-02-1/8-12 | 180 | 109.2 | | | | | | | | | | | | | | | | |
| VIFB-02-1/8-14 | 140 | 128.5 | | | | | | | | | | | | 483 | 468 | | | |
| VIMP-02-1/8-14 | 180 | 109.2 | | | | | | | | | | | | | | | | |
| VIFB-02-1/8-16 | 140 | 128.5 | | | | | | | | | | | | 537 | 522 | | | |
| VIMP-02-1/8-16 | 180 | 109.2 | | | | | | | | | | | | | | | | |
| VIFB-02-1/4-4 | 141 | 130 | 110 | 47 | 11.1 | G1⁄2 | 217 | 71 | 75 | 50 | 32 | 107 | 96 | 237 | 222 | 104.5 | 33 | 6 |
| VIMP-02-1/4-4 | 182 | 110.7 | | | | | | | | | | | | | | | | |
| VIFB-02-1/4-6 | 141 | 130 | | | | | | | | | | | | 303 | 288 | | | |
| VIMP-02-1/4-6 | 182 | 110.7 | | | | | | | | | | | | | | | | |
| VIFB-02-1/4-8 | 141 | 130 | | | | | | | | | | | | 369 | 354 | | | |
| VIMP-02-1/4-8 | 182 | 110.7 | | | | | | | | | | | | | | | | |
| VIFB-02-1/4-10 | 141 | 130 | | | | | | | | | | | | 435 | 420 | | | |
| VIMP-02-1/4-10 | 182 | 110.7 | | | | | | | | | | | | | | | | |
| VIFB-02-1/4-12 | 141 | 130 | | | | | | | | | | | | 501 | 486 | | | |
| VIMP-02-1/4-12 | 182 | 110.7 | | | | | | | | | | | | | | | | |
| VIFB-02-1/4-14 | 141 | 130 | | | | | | | | | | | | 567 | 552 | | | |
| VIMP-02-1/4-14 | 182 | 110.7 | | | | | | | | | | | | | | | | |
| VIFB-02-1/4-16 | 141 | 130 | | | | | | | | | | | | 633 | 618 | | | |
| VIMP-02-1/4-16 | 182 | 110.7 | | | | | | | | | | | | | | | | |

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Technical data



| Туре | B1~ | B2 | B3 | B4 | B5 | D1 | H1 | H2 | H3 | H4 | H5 | H6 | H7 | L1 | L2 | L3 | L4 | L5 |
|------------------------------|-----|-------|-------|------|------|------|-------|------|------|------|------|-----|----|-----|-----|-------|----|----|
| IIFB-02-1/8-4 | 140 | 128.8 | 102.5 | 45.5 | 8.4 | G3⁄8 | 270.5 | 70.5 | 62.6 | 46.2 | 27.5 | 95 | 75 | 213 | 198 | 101.5 | 27 | 5 |
| IIMP-02-1/8-4 | 188 | 112 | 1 | | | | | | | | | | | | | | | |
| IIFB-02-1/8-6 | 140 | 128.5 | 1 | | | | | | | | | | | 267 | 252 |] | | |
| IIMP-02-1/8-6 | 188 | 112 | | | | | | | | | | | | | | | | |
| IIFB-02-1/8-8 | 140 | 128.5 |] | | | | | | | | | | | 321 | 306 | | | |
| IIMP-02-1/8-8 | 188 | 112 | | | | | | | | | | | | | | | | |
| IIFB-02-1/8-10 | 140 | 128.5 |] | | | | | | | | | | | 375 | 360 | | | |
| IIMP-02-1/8-10 | 188 | 112 |] | | | | | | | | | | | | | | | |
| IIFB-02-1/8-12 | 140 | 128.5 | | | | | | | | | | | | 429 | 414 | | | |
| IIMP-02-1/8-12 | 188 | 112 | | | | | | | | | | | | | | | | |
| IIFB-02-1/8-14 | 140 | 128.5 | | | | | | | | | | | | 483 | 468 | | | |
| IIMP-02-1/8-14 | 188 | 112 | | | | | | | | | | | | | | | | |
| IIFB-02-1/8-16 | 140 | 128.5 | | | | | | | | | | | | 537 | 522 | | | |
| IIMP-02-1/8-16 | 188 | 112 | | | | | | | | | | | | | | | | |
| IIFB-02-1/4-4 | 141 | 130 | 110 | 47 | 11.1 | G1⁄2 | 282.5 | 71 | 75 | 50 | 32 | 107 | 96 | 237 | 222 | 104.5 | 33 | 6 |
| IIMP-02-1/4-4 | 190 | 113.5 | | | | | | | | | | | | | | | | |
| IIFB-02-1/4-6 | 141 | 130 | | | | | | | | | | | | 303 | 288 | | | |
| IIMP-02-1/4-6 | 190 | 113.5 | | | | | | | | | | | | | | | | |
| IIFB-02-1/4-8 | 141 | 130 | | | | | | | | | | | | 369 | 354 | | | |
| IIMP-02-1/4-8 | 190 | 113.5 | | | | | | | | | | | | | | | | |
| IIFB-02-1/4-10 | 141 | 130 | | | | | | | | | | | | 435 | 420 | | | |
| IIMP-02-1/4-10 | 190 | 113.5 | | | | | | | | | | | | | | | | |
| IIFB-02-1/4-12 | 141 | 130 | | | | | | | | | | | | 501 | 486 | | | |
| IIMP-02-1/4-12 | 190 | 113.5 | | | | | | | | | | | | | | | | |
| IIFB-02-1/4-14 | 141 | 130 | | | | | | | | | | | | 567 | 552 | | | |
| IIMP-02-1/4-14 | 190 | 113.5 | | | | | | | | | | | | | | | | |
| IIFB-02-1/4-16 ¹⁾ | 141 | 130 | | | | | | | | | | | | 633 | 618 | | | |
| IIMP-02-1/4-16 | 190 | 113.5 | | | | | | | | | | | | | | | | |

1) 16 valve positions are not possible for the fieldbus connection, but are possible for control block SB-.....

Ordering information

Ordering system information

Basic entry

You can order a valve terminal type 02 via an order code (also called ident. code).

First, choose between a basic valve terminal (without sensor inputs) or a valve/sensor terminal with sensor inputs (VI or II).

Then select the required connection types on the valve terminal nodes (MP, FB or SB).

Select the required valve connection size $(G^{1/8} \text{ or } G^{1/4})$

This information provides you with the precise basic data for the order code of the valve terminal, i. e.:

- VIMP-02-1/8-...
- VIFB-02-1/4-...
- IIFB-02-1⁄4-...
- IISB-02-1/4-...

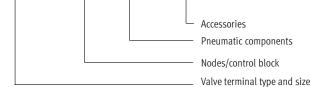
Accessories

These code letters are followed by entries for any required accessories such as

- Separating plugs for two separate pressure zones
- Plugs for sensors
- Special DUO cable for two sensors on one plug
- Sockets for operating voltage connection, fieldbus connection, control block programming interface or auxiliary outputs.

Complete order examples:

VIMP-02-1⁄8-6-MP1-JJMMMA-C VIFB-02-1⁄4-FB6-10-JJMMMAQQQQ-CMB IIFB-02-1⁄4-16-SF3-JJJJMMMMMMQQQQ-M4S16J



Then determine how many valve positions you need.

 A valve terminal type 02 consists of at least 4 valve positions and can be expanded two by two. Vacant positions may also be included to allow for expansion at a later point in time, which can be closed off with inexpensive blanking plates.

Please ensure:

"SSSS".

That you order the correct plug acces-

The following applies to accessories:

Several identical components can be

prefixed number, i.e. "4S" instead of

grouped and ordered by using a

sories for the fieldbus connections

and for the control blocks.

Select the nodes you want to equip your valve terminal with. There are various types available, in particular for fieldbuses and control blocks.

With this data, the order code for the example expands as follows:

- VIMP-02-1/8-6-MP1-...
- VIFB-02-1/4-10-FB6-...
- IIFB-02-1/4-16-SF3-...
- IISB-02-1⁄4-...

Decide which valve (relay/blanking plate) should be assembled on which valve position.

Note that each valve terminal can be fitted with up to 16 valve positions, however a valve/sensor terminal with sensor inputs combined with a fieldbus connection only has 14 valve positions.

Enter the code letters accordingly.

Each valve terminal is generally supplied with a comprehensive, user-friendly manual.

If you already have the relevant manuals, you can specify this in the order code (add code "B"). It is also possible to order additionally required manuals, even in other languages if required. Other languages on request. Individual parts can be ordered via their part numbers for retrofitting and expansion independent of the order code. Use the depicted overview list in addition to the explanations for the ident. code order.

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| | Code | Description | Connection | Туре | Part No. |
|--|----------|--|-------------------|---------------------|----------|
| Valves | | | | | |
| <u> </u> | Μ | 5/2-way valve | G1/8 | MVH-5-1/8-B-VI-X | 164 564 |
| | | . , | G1⁄4 | MVH-5-1/4-B-VI-X | 164 566 |
| | V | 5/2-way valve with pilot air supply | G1⁄8 | MVH-5-1/8-S-B-VI | 116 001 |
| | | | G1⁄4 | MVH-5-1/4-S-B-VI | 116 003 |
| | L | 5/2-way valve with pneumatic spring | G1⁄8 | MVH-5-1/8-L-B-VI | 117 424 |
| | | | G1⁄4 | MVH-5-1/4-L-B-VI | 117 428 |
| | Р | 5/2-way valve with pneumatic spring and pilot air supply | G1⁄8 | MVH-5-1/8-L-S-B-VI | 117 420 |
| | | | G1⁄4 | MVH-5-1/4-L-S-B-VI | 117 430 |
| | J | 5/2-way double solenoid valve | G1⁄8 | JMVH-5-1/8-B-VI-X | 164 56 |
| | | | G1⁄4 | JMVH-5-1/4-B-VI-X | 164 567 |
| | К | 5/2-way double valve with pilot air supply | G1⁄8 | JMVH-5-1/8-S-B-VI | 116 00 |
| | | | G1⁄4 | JMVH-5-1/4-S-B-VI | 116 007 |
| | G | 5/3-way valve | G1⁄8 | MVH-5/3G-1/8-B-VI-X | 164 568 |
| | | Mid-position closed | G1⁄4 | MVH-5/3G-1/4-B-VI-X | 164 57 |
| | 0 | 5/3-way valve | G1⁄8 | MVH-5/3G-1/8-S-B-VI | 118 800 |
| | | Mid-position closed with pilot air supply | G1⁄4 | MVH-5/3G-1/4-S-B-VI | 118 80 |
| | E | 5/3-way valve | G1⁄8 | MVH-5/3E-1/8-B-VI-X | 164 570 |
| | | Mid-position exhausted | G1⁄4 | MVH-5/3E-1/4-B-VI-X | 164 57 |
| | F | 5/3-way valve | G1⁄8 | MVH-5/3E-1/8-S-B-VI | 118 804 |
| | | Mid-position exhausted with pilot air supply | G1⁄4 | MVH-5/3E-1/4-S-B-V | 118 810 |
| | В | 5/3-way valve | G1⁄8 | MVH-5/3B-1/8-B-VI-X | 164 56 |
| | | Mid-position pressurised | G1⁄4 | MVH-5/3B-1/4-B-VI-X | 164 572 |
| | С | 5/3-way valve | G1⁄8 | MVH-5/3B-1/8-S-B-VI | 118 802 |
| | | Mid-position pressurised with pilot air supply | G1⁄4 | MVH-5/3B-1/4-S-B-VI | 118 808 |
| Accessories - G | ieneral | | | | |
| | R | Relay plate, x1 | G1⁄8 | IRP1-02-1/8 | 158 476 |
| Ð | | | G1⁄4 | IRP1-02-1/4 | 158 47 |
| ES - | Q | Relay plate, x2 | G1⁄8 | IRP2-02-1/8 | 152 838 |
| S | | | G1⁄4 | IRP2-02-1/4 | 152 83 |
| | A | Blanking plate | G1⁄8 | IAP-02-1/8 | 18 067 |
| S. | | | G1⁄4 | IAP-02-1/4 | 18 068 |
| 4 | | Inscription label holder for I/O modules, type 02 | | IBT-02-E/A | 158 96 |
| and the second s | | Inscription labels (pack of 20) | | IBS-9x20 | 18 182 |
| Pneumatic acc | accoriac | | | | |
| | D | Sealing plug | G1⁄8 | PRSV-1/8 | 160 997 |
| I | Ĩ | | G ¹ /4 | PRSV-1/4 | 160 996 |

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| Ordering data | | | | | <u>.</u> |
|---------------|--------|---|----------------------------|-------------------|----------|
| | Code | Description | Connection | Туре | Part No. |
| Fieldbus conn | ection | | | | |
| | V | Plug, sub-D connection | 9-pin | FBS-Sub-9-GS-DP-B | 532 216 |
| | | Bus connection, M12 adapter plug, Reversekey ProfiBus DP | 2x5-pin, M12 | FBA-2-M12-5POL-RK | 533 118 |
| | Z | Socket, fieldbus, straight, Pg7 | 4-pin, M12 | FBSD-GD-7 | 18 497 |
| | Т | Socket, fieldbus, straight, Pg9 | 4-pin, M12 | FBSD-GD-9 | 18 495 |
| | U | Socket, fieldbus, straight, Pg13.5 | 4-pin, M12 | FBSD-GD-13,5 | 18 496 |
| | E | Socket, fieldbus, angled, Pg7 | 4-pin, M12 | FBSD-WD-7 | 18 524 |
| | F | Socket, fieldbus, angled, Pg9 | 4-pin, M12 | FBSD-WD-9 | 18 525 |
| | | Tadapter | 4-pin, M12 | FB-TA | 18 498 |
| | | | 4-pin, M12 | FB-TA-1 | 18 499 |
| | | | 5-pin, M12, Devi- ceNet | FB-TA-M12-5POL | 171 175 |
| | | Plug pin adapter | 4-pin, M12 | SIE-GA | 18780 |
| Power supply | | | | | |
| | N | Power supply socket, straight, for 1.5 mm ² , Pg9 | 4-pin, M18 | NTSD-GD-9 | 18 493 |
| | Μ | Power supply socket, straight, for 2.5 mm ² , Pg13.5 | 4-pin, M18 | NTSD-GD-13,5 | 18 526 |
| | I | Power supply socket, angled, for 1.5 mm ² , Pg9 | 4-pin, M18 | NTSD-WD-9 | 18 527 |
| | | Power supply socket, angled, for 2.5 mm ² , Pg11 | 4-pin, M18 | NTSD-WD-11 | 533 119 |
| Sensor connec | rtion | | | | |
| | S | Plug, for inputs/outputs, straight, Pg7 | 4-pin, M12 | SEA-GS-7 | 18 666 |
| | J | DUO cable, 2xstraight socket | 4-pin, M12, 2xM8 | KM12-DUO-M8-GDGD | 18 685 |
| | K | DUO cable, straight/angled sockets | 4-pin, M12, 2xM8 | KM12-DUO-M8-GDWD | 18 688 |
| N 1 | L | DUO cable, 2xangled socket | 4-pin, M12, 2xM8 | KM12-DUO-M8-WDWD | 18 687 |
| | Р | Connection cable, straight plug / straight socket, 2.5 m | 4-pin, M12 | KM12-M12-GSGD-2,5 | 18 684 |
| | Q | Connection cable, straight plug / straight socket, 5.0 m | 4-pin, M12 | KM12-M12-GSGD-5 | 18 686 |

| Ordering data | | | | | |
|-----------------|------|--|------------------|------------------|----------|
| | Code | Description | Connection | Туре | Part No. |
| Cables and plug | gs | | | | |
| | Y | Multi-pin plug socket (contacts 1.5 mm ²) | 25-pin | IMP1-SD-25 | 18 317 |
| | | | 40-pin | IMP1-SD-40 | 18 318 |
| | | | 72-pin | IMP1-SD-72 | 18 319 |
| | W | Multi-pin plug socket (contacts 0.75 mm ²) | 25-pin | IMP1-SD-25-0,75 | 18 321 |
| | | | 40-pin | IMP1-SD-40-0,75 | 18 322 |
| | | | 72-pin | IMP1-SD-72-0,75 | 18 323 |
| | | Prefabricated cable with plug socket, 5 m | 46 valves | KMP1-02-VI-6-5 | 175 585 |
| R | | | 812 valves | KMP1-02-VI-12-5 | 175 587 |
| - | | | 1416 valves | KMP1-02-VI-16-5 | 175 589 |
| | | Prefabricated cable with plug socket, 10 m | 46 valves | KMP1-02-VI-6-10 | 175 586 |
| | | | 812 valves | KMP1-02-VI-12-10 | 175 588 |
| | | | 1416 valves | KMP1-02-VI-16-10 | 175 590 |
| | | Prefabricated cable with plug socket, for valve/sensor terminal, 5 m | 4 valves/inputs | KMP1-02-II-4-5 | 175 654 |
| | | | 8 valves/inputs | KMP1-02-II-8-5 | 175 656 |
| | | | 10 valves/inputs | KMP1-02-II-10-5 | 175 658 |
| | | | 14 valves/inputs | KMP1-02-II-14-5 | 175 660 |
| | | | 16 valves/inputs | KMP1-02-II-16-5 | 175 662 |
| | | Prefabricated cable with plug socket, for valve/sensor terminal, | 4 valves/inputs | KMP1-02-II-4-10 | 175 655 |
| | | 10 m | 8 valves/inputs | KMP1-02-II-8-10 | 175 657 |
| | | | 10 valves/inputs | KMP1-02-II-10-10 | 175 659 |
| | | | 14 valves/inputs | KMP1-02-II-14-10 | 175 661 |
| | | | 16 valves/inputs | KMP1-02-II-16-10 | 175 663 |

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| Ordering data | | | | | |
|----------------|--|----------------|----------|------------------------|----------|
| | Description | Valve terminal | Language | Туре | Part No. |
| User documenta | tion | | | | |
| | User documentation for type 02 valve terminals | FB5 | German | P.BE-VIFB5-02-DE | 18 417 |
| | | | English | P.BE-VIFB5-02-EN | 18 483 |
| | | FB6 | German | P.BE-VIFB6-02-DE | 18 418 |
| \sim | | | English | P.BE-VIFB6-02-EN | 18 484 |
| | | FB8 | German | P.BE-VIFB8-02-DE | 151 762 |
| | | | English | P.BE-VIFB8-02-EN | 151 763 |
| | | FB11 | German | P.BE-VIFB11-02-DE | 164 585 |
| | | | English | P.BE-VIFB11-02-EN | 164 590 |
| | | FB13 | German | P.BE-VIFB13-02-DE | 164 587 |
| | | | English | P.BE-VIFB13-02-EN | 164 592 |
| | | SF3 | German | P.BE-VISF3-02-DE | 165 480 |
| | | | English | P.BE-VISF3-02-EN | 165 485 |
| | User documentation for programmable valve | Programming | German | P.BE-FST200-AWL/KOP-DE | 165 484 |
| | terminals | software SF3 | English | P.BE-FST200-AWL/KOP-EN | 165 489 |
| | · | • | · | · | • |
| Software | | | | | |
| | CD-ROM | Utilities | | P.CD-VI-UTILITIES-2 | 533 500 |