

## *Solenoid Valves*



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Table of Content

	Page
Safety instructions .....	2
Application .....	3
Examples of application .....	3
Erection and Installation .....	4
Operating instructions .....	4
Type identification .....	5
Troubleshooting .....	5
Technical Data .....	5
Dimensions .....	6

Safety Instructions

Use in conformity with the intended application

- The solenoid valves are exclusively intended for use in centralized lubrication systems and centralized lubricant supply systems.
- The maximum ratings specified in the "Technical Data", particularly the maximum operating pressure, must not be exceeded on no account.
- Any other use is not conform to the intended application.
- The manufacturer is not liable for damage resulting from any other use.

Maintenance and Repairs

- Before maintenance or repair work is carried out on the solenoid valves, observe the content of the Owner's Manual and the Safety Instructions.
- The Owner's Manual must be available on the site where the solenoid valves are in operation.
- Alterations or modifications of the solenoid valves are only authorized if approved by the manufacturer.
- For repairs, use only original spare parts.
- If other parts are used, the manufacturer may be released from its liability for the resulting damage.

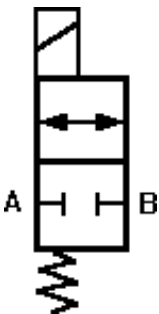
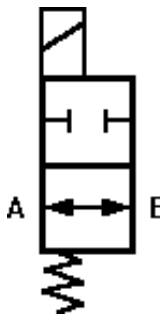
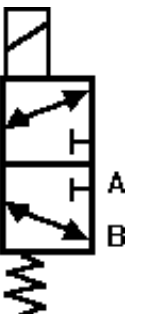
Operation of the Solenoid Valves

- Use the solenoid valves only if they are in good technical condition.
- Defects and faults which impair the safety must be eliminated immediately.
- The function of the solenoid valves is only guaranteed if they are used with clean lubricant.
- If you need more information than is given in this Owner's Manual, please contact our company (refer to the address in the footer).

Structure

- The solenoid valves are ball seat valves equipped with a dry armature solenoid.
- In the 2/2-way design, the passage B - A may be closed or opened, in the 3/2-way design the inlet is connected to either outlet.
- The basic position (solenoid not actuated) is obtained automatically via a return spring, the operating position is maintained as long as voltage is applied to the solenoid.
- The solenoid valves are switchable and can be pressure-loaded in both flow directions.

Available Versions:

2/2 - way-valve NC	2/2 - way - valve NO	3/2 -way - valve
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## Examples of Application

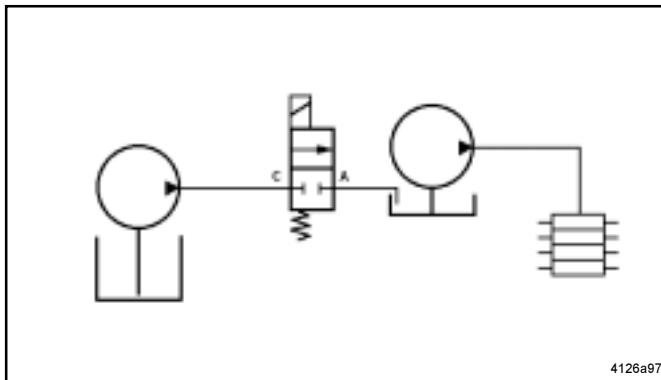


Fig. 1 - 2/2 - way - valve used as a shut-off valve in a filling line

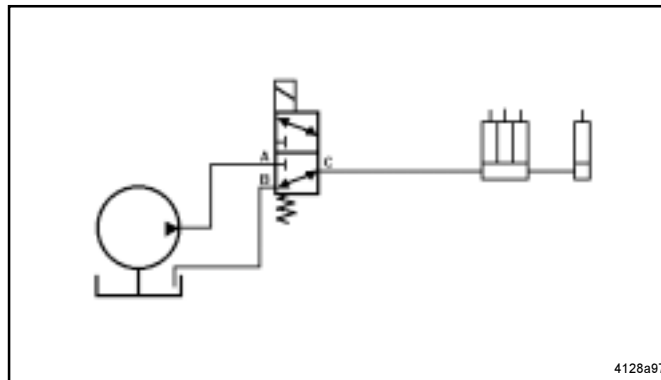


Fig. 3 - 3/2-way valve used as a relief valve in a single-line system

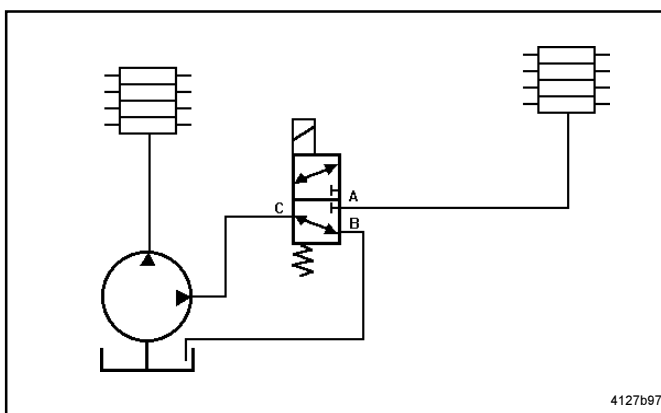


Fig. 2 - 3/2 - way valve for the connection or disconnection of a progressive metering device

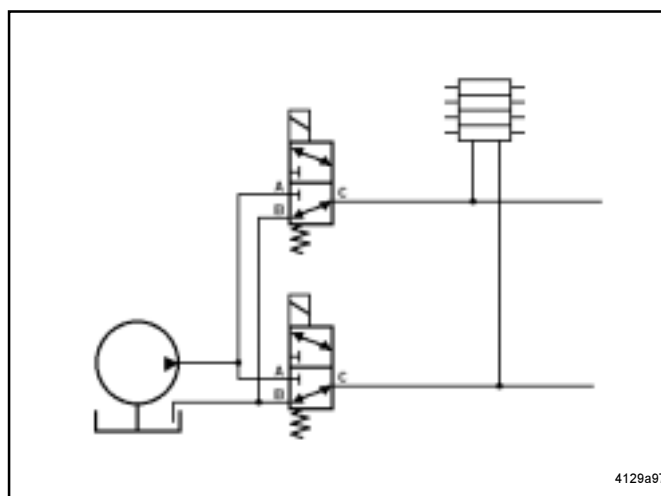


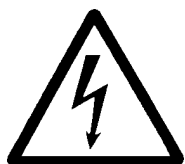
Fig. 4 - 3/2-way valve used as a 2-pole shut-off valve in a two-line system

## Erection and Installation

### Requirements on the installation site:

- even, stable and vibration-free installation site
- protected from dust and dirt
- safe from atmospheric influences
- Installation position : any

### Electrical Connection



- Before the device is connected, disconnect the system.
- The installation of electrical devices should be carried out only by an electrician!
- The relevant rules of technology and the respective industrial safety laws (instructions, standards) must be observed.
- Electrical connection of the solenoid valve in accordance with the wiring diagram

**CAUTION**

The supply voltage and solenoid voltage must be identical.

## Operating Instructions

### Starting up

- After the connection of the tube lines and electrical system, the solenoid valve is ready for operation.

### Maintenance and Repair

- Any repair will be limited to a replacement of the complete solenoid valve, since special knowledge is required for the repair of the inner workings.



**Before any replacement of parts of the solenoid valve observe the following:**

- \* Disconnect the system and secure it against inadvertent restarting.
- \* Reduce the system pressure down to zero.
- \* Danger due to splashing lubricant

## Type Identification

- The various versions of the solenoid valves can be ordered according to the table below.

Ordering examples:

WV - M - W 2 O - 1/2 - 24 DC  
WV - M - W 2 G - 1/2 - 110 AC  
WV - M - W 3 G - 3/8 - 230 AC

**Basic type:**

### Directional control valve

**Actuation:**

electromagnetical

**Function:**

W 2 = 2/2 - way valve

W 3 = 3/2 - way valve

**Off position (de-energized):**

$G = \text{closed}$

O = open

**Threaded connection: (G)**

**Operating voltages:**

DC = Direct voltage

AC = Alternating voltage 50/60 Hz

**Standard valves are available with the following part numbers:**

Type	Type designation	Part - no.
2/2 - way valve, NC	WV - M - W 2 G - 1/2 - 24 VDC WV - M - W 2 G - 1/2 - 110 VAC WV - M - W 2 G - 1/2 - 230 VAC	525-32080-1 525-32081-1 525-32082-1
2/2 - way valve, NO	WV - M - W 2 O - 1/2 - 24 VDC WV - M - W 2 O - 1/2 - 110 VAC WV - M - W 2 O - 1/2 - 230 VAC	525-32083-1 525-32098-1 525-32084-1
3/2 - way valve	WV - M - W 3 - 3/8 - 24 VDC WV - M - W 3 - 3/8 - 110 VAC WV - M - W 3 - 3/8 - 230 VAC	525-32085-1 525-32086-1 525-32087-1

**Spare coils for all types of connections (W2G, W2O, W3):**

		<u>Part-no.</u>
24VDC	for 24 VDC-valves	235-13159-5
98 VCD	for 110 VAC-valves	235-13159-9
205 VDC	for 230 VAC-valves	235-13159-8

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## Troubleshooting

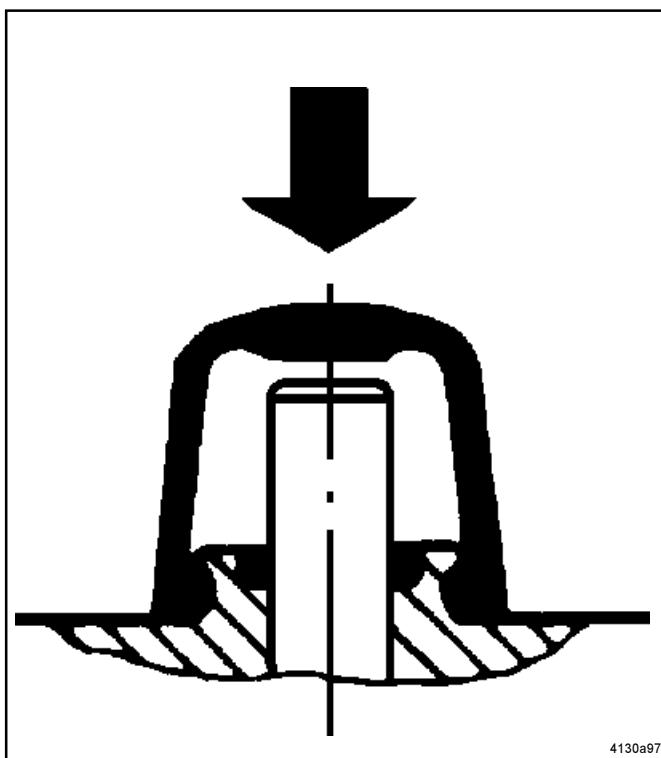


Fig. 5 - Manual Emergency button: Press on the Magnetic pin

## Troubleshooting

- \* For all faults, first check the electrical voltage supply.
- \* If no fault is found, replace the complete valve.
- \* Manual emergency button: For checking the valve, press on the magnetic pin (standing out under the rubber cap, see fig. 5). This will release a manual impulsion.

## Technical Datas

Valve model:	2/2 - way valve	3/2 - way valve
Threaded connection:	G 1/2"	G 3/8"
Pressure range:	0 - 400 bar	0 - 400 bar
Max flow rate.:	2,4 dm <sup>3</sup> /min	2,4 dm <sup>3</sup> /min
Weight:	1,7 kg	1,2 kg
Mounting position:	any	any
Flow direction:	any	any
Temperature range:	- 20° C bis 60° C	- 20° C bis 60° C

## Electrical Datas

Supply voltage:	24 VDC	110 VAC 50/60 Hz	230 VAC 50/60 Hz
Solenoid voltage:	24 VDC	98 VDC	205 VDC
Current consumption (max.):	0.83 A	0.2 A	0.1 A
Nominal power (approx.):	20 W	20 W	20 W
Operations/h, (approx.):	2000	2000	2000
Isulation class:	F	F	F
Type of protection:	IP 54	IP 54	IP 54
Operating time:	100 %	100 %	100 %
Included in scope of supply:			
Socket	Part no. 236-13868-1	P. no. 236-13868-3 with rectifier	P. no. 236-13868-3 with rectifier

**Attention:** Screw the socket on the central connector only with a torque of max. 0.7 Nm

## Dimensions

### 2/2 - way valve

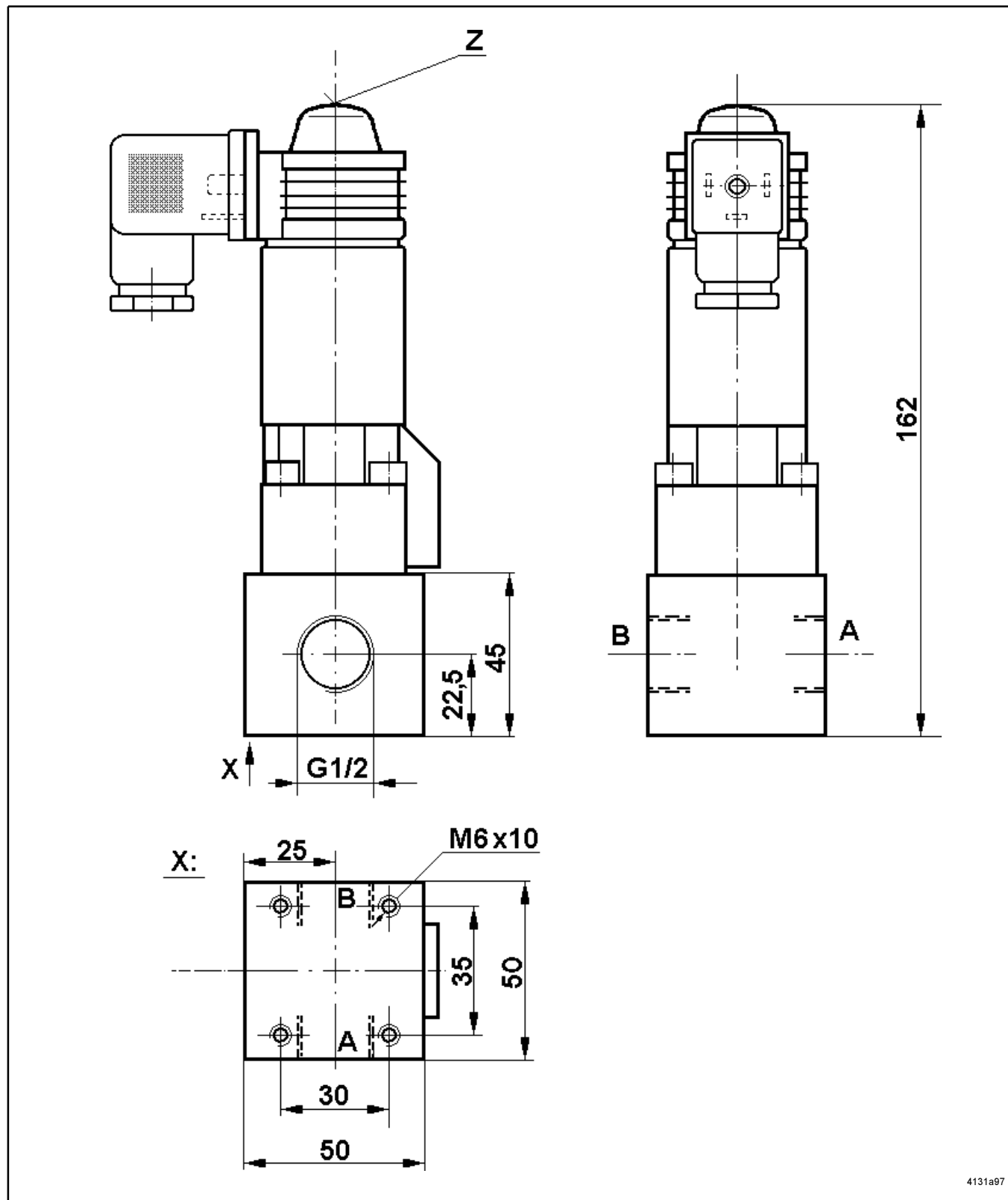


Fig. 6 - Dimensioned drawing of 2/2 way valves (connection G 1/2)

A, B - Connectors

Z - Manual emergency button

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3/2 - way valve

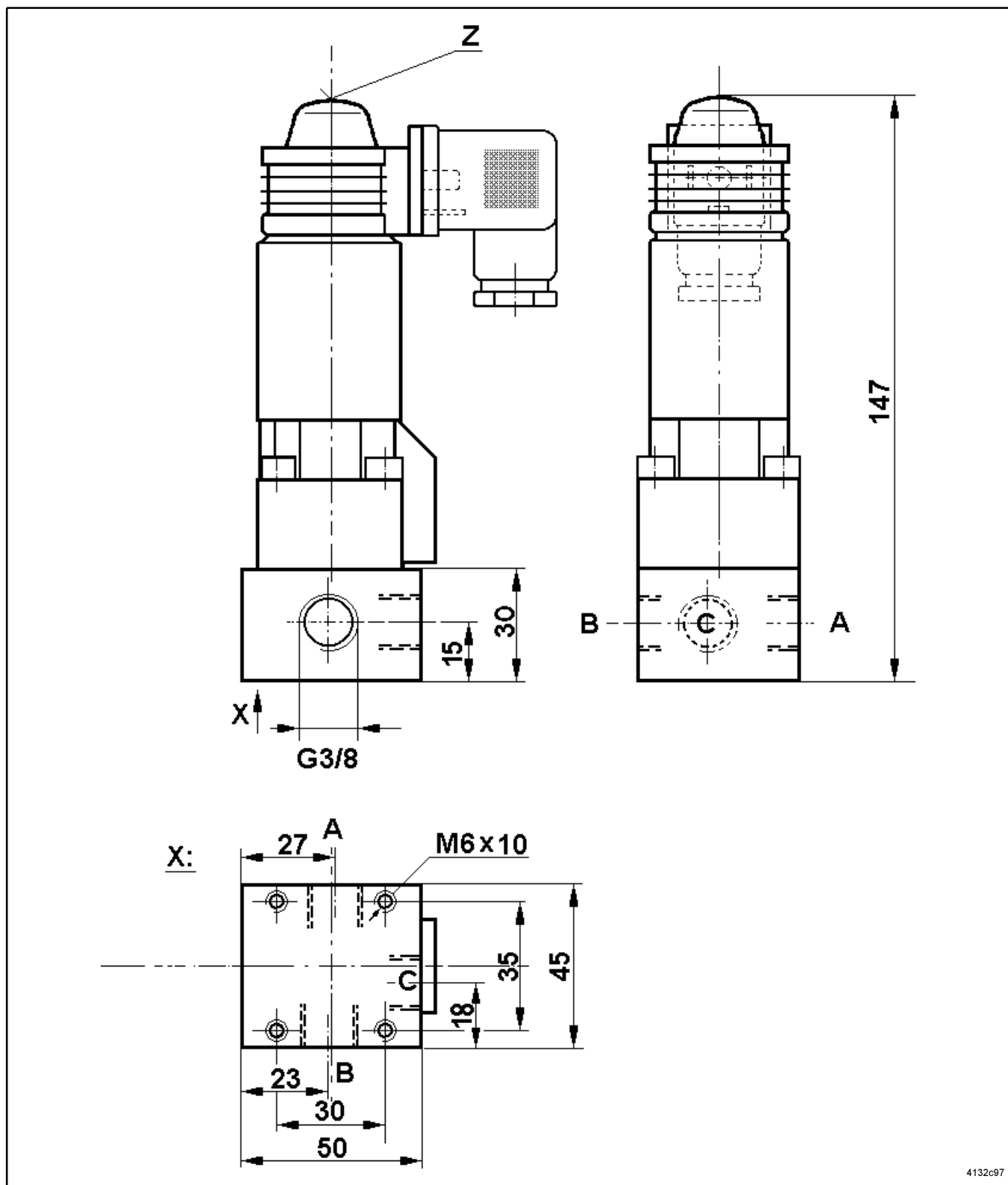


Fig. 7 -Dimensioned drawing of 3/2-way valves (connection G 3/8)

A, B - Connectors  
Z - Manual emergency button

*Note: The plug connection of the solenoid plug can be turned by 180° by removing the two screws*