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rexroth
A Bosch Company

Service case with test device for servo valves without integrated electronics

Type VT-SVTSY-1


H6100

- Component series 1X

Features

- Service case
  - Test device with power supply unit and connection cable (see ordering code)
- Test device
  - suitable for commissioning and service works at hydraulic systems with servo valves without integrated electronics
  - In case of faulty machine behavior, allows for functional check and error location without disassembly of the servo valve
  - Voltage supply by means of 9V block battery or 12V power supply unit

Contents

Ordering code

01	02	03	04	05	06	07	08
VT-SVTSY-1	**–**	**1X**	**/**	**1**	**–**		**–**		**–**		**–**		**/**	*****

01	Service case with test device for servo valves without integrated electronics	**VT-SVTSY-1**
02	Component series 10 ... 19 (10 to 19: unchanged technical data and pin assignment)	**1X**
03	Test device type VT-SVT-1-1X	**1**

Connection cable for valves with electrical connection "K31"

04	Without connection cable	**0**
	With connection cable type VT-SVTK-1-1X	**1**

Connection cable for valves with electrical connection "K17"

05	Without connection cable	**0**
	With connection cable type VT-SVTK-2-1X	**1**

Connection cable for valves with electrical connection "K8"

06	Without connection cable	**0**
	With connection cable type VT-SVTK-3-1X	**1**

Power supply unit

07	Without power supply unit	**0**
	With power supply unit type VT-SVTNT-2-2X/G12	**1**

08	Further details in the plain text	*****

Test device type VT-SVT-1-1X

The test device is suitable for the control and functional testing of servo valves without integrated electronics. The voltage for the test device is supplied by a 9V block battery (not included in the scope of delivery) or optionally by a 12V power supply unit type VT-SVTNT-2-2X/G12.

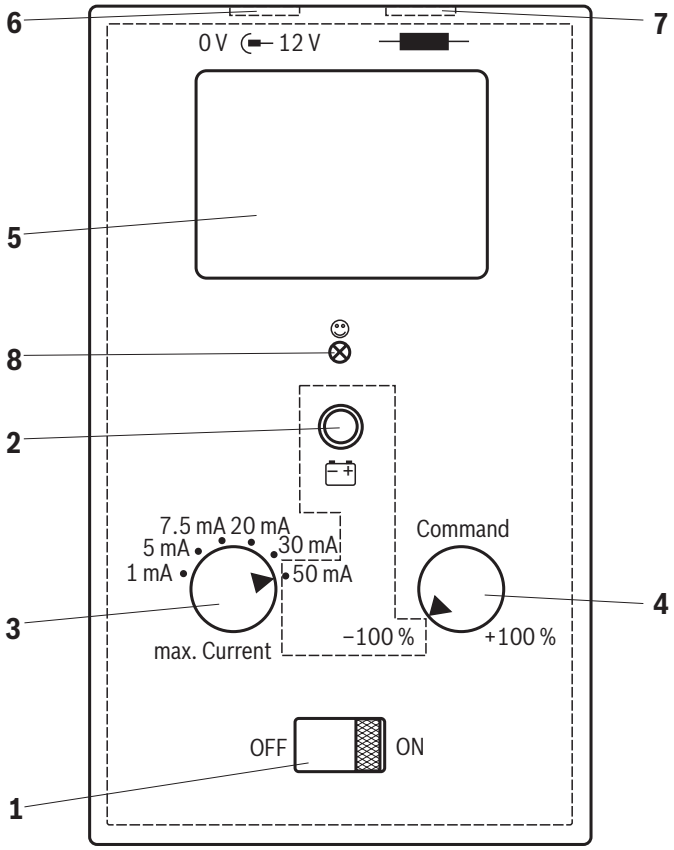
☞ **Notice:**
The test device may only be used by persons who are familiar with the device, the valve and the hydraulic system. With corresponding setting, it will ignore the control signals coming from the system. If safety precautions have been taken on the control side, they are invalidated.
For damage caused by the incorrect operation, no liability is accepted.

Function, operating instructions

Valve test

- Connect the connection cable of the power supply unit at socket (6) of the test device or insert the battery.
- Set the functional switch (1) to "ON" → "Power" LED (8) lights up.
- In case of battery operation, carry out the battery test:
  - Set the selector switch (3) to "50 mA"
  - Set the command value potentiometer (4) to "–100%"
  - Press the push-button (2) for battery test
  - The test device indicator shows the battery charge in %
- Select the coil type of the valve with selector switch (3) at the test device.
- Bring the command value potentiometer (4) into the central position.
- Use a suitable valve connection cable (see ordering code) to connect test device (socket (7)) and servo valve. (The valve connection cables are wired so that both coils of the servo valve are switched in series.)
- Slowly rotate the command value potentiometer (4) to the left or right; observe the movement of the motor or the cylinder while doing so.
- With the servo valve working smoothly, this allows for the sensitive movement of the controlled motor or cylinder into the desired direction or to the desired position.

1 Functional switch
2 Push-button for battery test
3 Selector switch for coil type
4 Command value potentiometer
5 Coil current indication (in %)
6 Socket for power supply unit cable
7 Socket for valve connection cable
8 "Power" LED display



Assignment of coils / valve types

5 mA / 500 Ω per coil	4WS2E.10-4X [1]
7.5 mA / 200 Ω per coil	
20 mA / 80 Ω per coil	4WS2E.10A-4X [1]
30 mA / 40 Ω per coil	4DS1EO2-1X [1]
50 mA / 28 Ω per coil	3DS2EH10-2X [1]
30 mA / 85 Ω per coil	4WS2EM6-2X/...
	4WS2EM10-5X/...
30 mA / 100 Ω per coil	4WS2EM6-1X
50 mA / 80 Ω per coil	
50 mA / 85 Ω per coil	4WS2EM6-2X

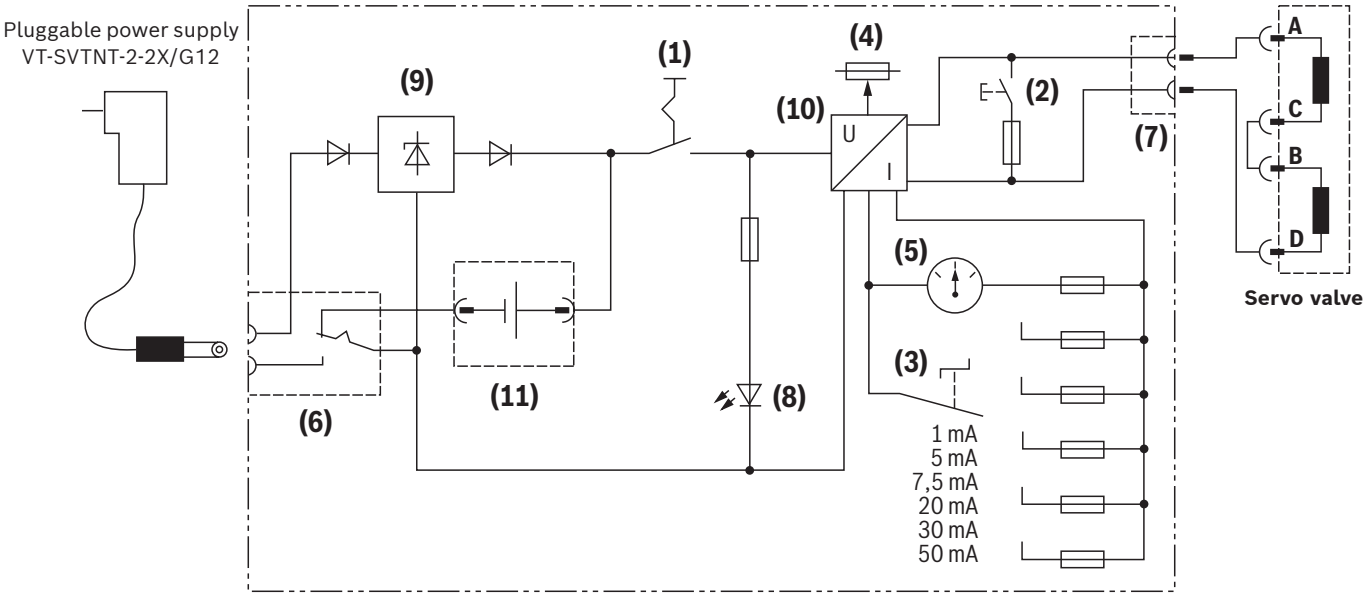
[1] Not for new applications

Technical data

(For applications outside these values, please consult us!)

Operating voltages		
Battery operation	V	9 (E block, not included in the scope of delivery)
Power supply unit operation	VDC	12 ±5%
Current consumption of the test device	mA	20 (additional valve current)
Ambient temperature range	°C	0 ... +50
Protection class according to EN 60529		IP20
Dimensions (W x H x D)	mm	95 x 158 x 45
Weight	g	0.34
Conformity		▶ CE according to EMC directive 2014/30/EU, tested according to EN 61326-2-1 and EN 61000326-1 ▶ RoHS directive 2011/65/EU

Block diagram / pin assignment



1 Functional switch
2 Push-button for battery test
3 Selector switch for coil type
4 Command value potentiometer
5 Coil current indication
6 Socket for power supply unit cable (with change-over switch)
7 Socket for valve connection cable
8 "Power" LED
9 Voltage regulator
10 Output stage
11 9V block battery

Servo valves suitable for testing

Valve type	Electrical connection	Connection cable type
4WS2EM6-1X	K17	VT-SVTK-2-1X
4WS2EM6-2X	K17	VT-SVTK-2-1X
4WS2EM10-5X	K31	VT-SVTK-1-1X
4WS2EM10-4X [1)]	K8	VT-SVTK-3-1X
4WS2EB10-4X [1)]	K8	VT-SVTK-3-1X
4WS2EM10A-4X [1)]	K8	VT-SVTK-3-1X
4WS2EB10A-4X [1)]	K8	VT-SVTK-3-1X
4WS2EM16-2X	K8	VT-SVTK-3-1X
4DS1E02-1X [1)]	K8	VT-SVTK-3-1X
3DS2EH10-2X [1)]	K8	VT-SVTK-3-1X

[1)] Not for new applications

Accessories

Power supply unit type VT-SVTNT-2-2X/G12

Pluggable power supply 100 ... 240 VAC; 12 VDC, 1.0 A
The mains connector of the power supply unit is suitable for sockets in Germany and many European countries.

(Actual product may differ)

Technical data (For applications outside these parameters, please consult us!)		
Operating voltage	VAC	100 ... 240 (50 ... 60 Hz)
Current consumption	A	0.19 ... 0.32
Output voltage	VDC	12 (1.0 A)
Length of the connection cable to the test device	m	approx. 1.5
Dimensions (W x H x D)	mm	80 x 46 x 40.5
Weight	kg	0.12

Accessories

Connection cable type VT-SVTK-1-1X

Connection cable between test device VT-SVT-1 and servo valves without integrated electronics (valves with ordering code "K31" for the electrical connection).
The servo valve coils are switched in series (serial connection).

Technical data (For applications outside these parameters, please consult us!)		
Valve port		Mating connector according to DIN 43563-BF6-3/Pg11 (serial connection)
Test device port		Mono jack 2.5 mm
Cable length	m	3
Weight	kg	0.16

Connection cable type VT-SVTK-2-1X

Connection cable between test device VT-SVT-1 and servo valves without integrated electronics (valves with ordering code "K17" for the electrical connection).
The servo valve coils are switched in series (serial connection).

Technical data (For applications outside these parameters, please consult us!)		
Valve port		Mating connector VG 95328 (serial connection)
Test device port		Mono jack 2.5 mm
Cable length	m	3
Weight	kg	0.13

Connection cable type VT-SVTK-3-1X

Connection cable between test device VT-SVT-1 and servo valves without integrated electronics (valves with ordering code "K8" for the electrical connection).
The servo valve coils are switched in series (serial connection).

Technical data (For applications outside these parameters, please consult us!)		
Valve port		Mating connector 14S-2P (serial connection)
Test device port		Mono jack 2.5 mm
Cable length	m	3
Weight	kg	0.16