

## Control blocks for two-hand start ZSB

**FESTO**



## Key features

### Function

The pneumatic control block for two-hand start ZSB is used where the operator is exposed to a risk of accident during manual operation, e.g. when triggering compressed air cylinders or equipment where both hands must be out of the danger zone during start-up.

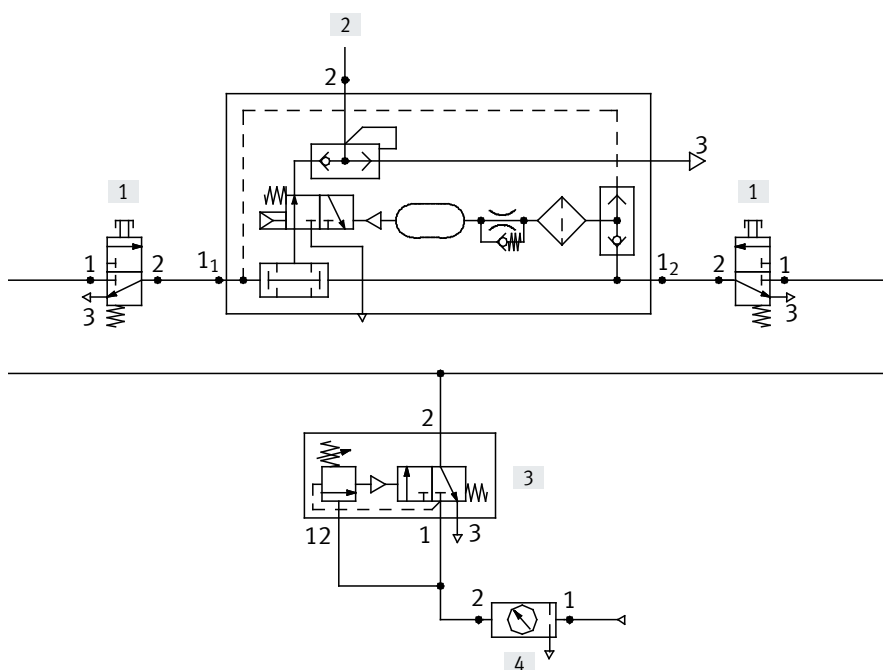
The ZSB only switches when both inputs  $1_1$  and  $1_2$  of the ZSB are supplied simultaneously, i.e. within max. 0.5 seconds, by two external 3/2-way pushbutton valves. There is an output signal at connection 2.

If both pushbutton valves are activated, outlet 2 is pressurised.

If one or both pushbutton valves are released, the flow is immediately interrupted and outlet 2 is no longer pressurised. The system exhausts from 2 to 3.

The pneumatic control block for two-hand start is a safety device as defined in the EU Machinery Directive. It conforms to category 1, PL "c" in accordance with EN ISO 13849-1 and to Type III A in accordance with EN 574.

### Sample circuit

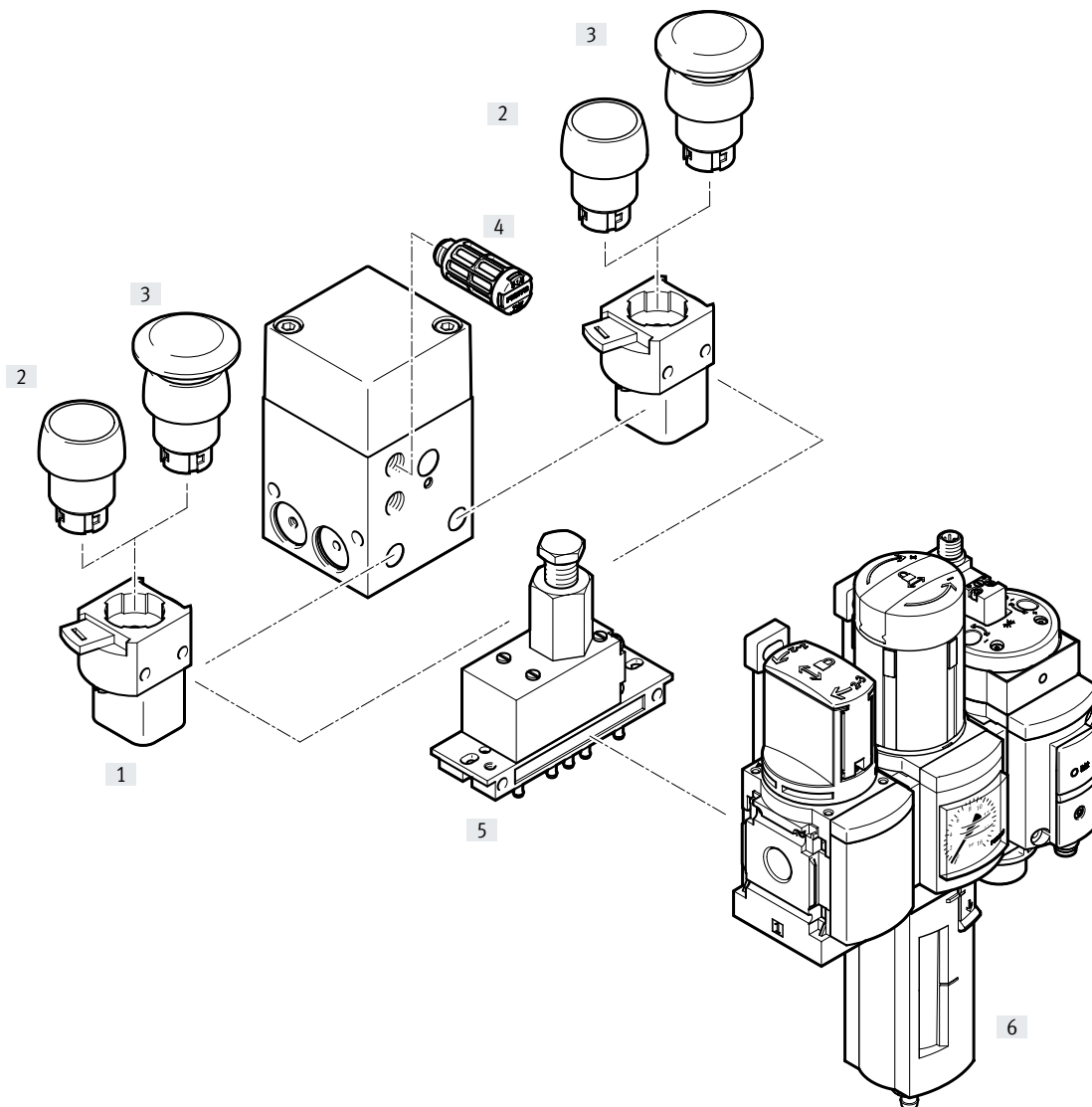


### Note

When installing the two manual pushbuttons for actuating the control block for two-hand start, make sure that the protective effect cannot easily be overridden, e.g. through actuation with a hand and elbow etc. If necessary, attach an additional guard plate to the manual pushbuttons!

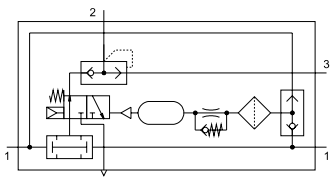
- [1] Front panel valve with pushbutton actuator, e.g. SV-3, T-30
- [2] Control chain
- [3] Pressure sequence valve, e.g. VD-3-PK-3
- [4] Service unit components, e.g. MS or D series




## Peripherals overview



Accessories		Brief description	→ Page/Internet
[1]	Front panel valve SV	Poppet valve with quick snap-in coupling for actuator attachments	6
[2]	Pushbutton actuator T	Actuator attachment for front panel valve SV	6
[3]	Mushroom pushbutton P	Actuator attachment for front panel valve SV	6
[4]	Silencer U	For noise reduction at the exhaust port	6
[5]	Pressure sequence valve VD	For securing the minimum pressure of 4 bar required for operation	6
[6]	Service unit combination • D series • MS series	For compressed air preparation	lfr*k* msb

## Datasheet



-  - Flow rate  
up to 50 l/min
-  - Temperature range  
0 ... +60°C
-  - Operating pressure  
0.4 ... 0.8 MPa



### Safety data

Safety function	Two-hand control in accordance with EN ISO 12100
Performance Level (PL)	Two-hand control: category 1, PL c in accordance with EN ISO 13849-1
Tried-and-tested component	Yes
Standard approval	Type III A according to EN574
Certificate-issuing authority	IFA 1201046
CE marking (see declaration of conformity)	To EU Machinery Directive
Shock resistance	Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27

### General technical data

Pneumatic connection	G1/8
Nominal width [mm]	4
Actuation type	Pneumatic
Design	Poppet valve with spring return
Type of mounting	Via through-hole Via female thread
Mounting position	Any
Standard nominal flow rate [l/min]	50
Product weight [g]	420

### Operating and environmental conditions

Operating pressure	[MPa]	0.4 ... 0.8
	[bar]	4 ... 8
	[psi]	58 ... 116
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]	
Note on the operating/pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)	
Ambient temperature [°C]	0 ... +60	
Corrosion resistance class CRC <sup>1)</sup>	1	
CE marking (see declaration of conformity) <sup>2)</sup>	To EU Machinery Directive	
UKCA marking (see declaration of conformity) <sup>2)</sup>	To UK regulations for machines	
Certificate-issuing authority	IFA 1201046 Intertek UK-MCR-0080	

1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

2) More information: [www.festo.com/catalogue/zsb](http://www.festo.com/catalogue/zsb) → Support/Downloads.

### Materials

Housing	Anodised wrought aluminium alloy
Cover	Die-cast aluminium
Seals	NBR
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B1/B2-L

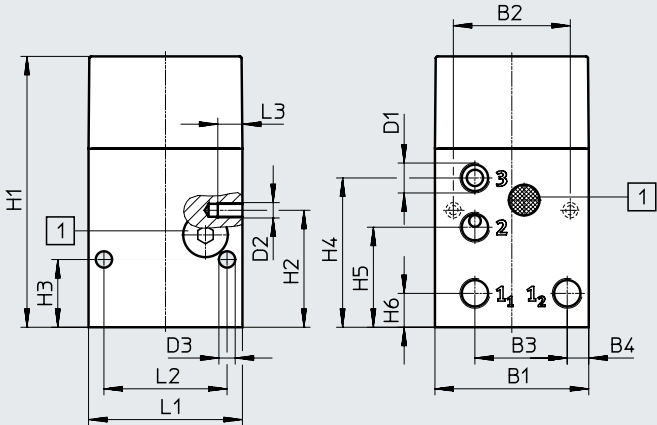
Datasheet

Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

[1] Filter

- 1<sub>1</sub>, 1<sub>2</sub> = Inputs
- 2 = Output
- 3 = Exhaust

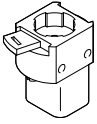


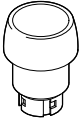
Type	B1	B2	B3	B4	D1	D2	D3 ∅	H1	H2	H3	H4	H5	H6	L1	L2	L3
ZSB	50	38	30.1	7	G1/8	M5	5.3	88	38	22	48.5	32.5	11	50	40	8

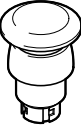
Ordering data

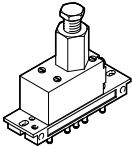
	Part no.	Type
Control block for two-hand start	576656	ZSB-1/8-B


## Accessories

Ordering data – Front panel valve SV				Datasheets → Internet: sv	
	Pneumatic connection	Valve function	Operating pressure [bar]	Part no.	Type
	M5	3/2-way valve, closed, monostable	-0.95 ... 8	<b>6817</b>	<b>SV-3-M5</b>

Ordering data – Pushbutton actuator T			Datasheets → Internet: t	
	Colour	Installation diameter [mm]	Part no.	Type
	Black	22.5	<b>9289</b>	<b>T-22-SW</b>
		30.5	<b>9291</b>	<b>T-30-SW</b>

Ordering data – Mushroom pushbutton P			Datasheets → Internet: p	
	Colour	Installation diameter [mm]	Part no.	Type
	Black	22.5	<b>9293</b>	<b>P-22-SW</b>
		30.5	<b>9295</b>	<b>P-30-SW</b>

Ordering data – Pressure sequence valve VD				Datasheets → Internet: vd	
	Pneumatic connection	Valve function	Operating pressure [bar]	Part no.	Type
	PK-3	3/2-way valve, normally closed, adjustable switching pressure	1.8 ... 8	<b>9270</b>	<b>VD-3-PK-3</b>

Ordering data – Silencer U			Datasheets → Internet: u	
	Pneumatic connection	Material	Part no.	Type
	G1/8	PE	<b>2307</b>	<b>U-1/8</b>
		Die-cast aluminium	<b>6841</b>	<b>U-1/8-B</b>