

## Control Head for the integrated mounting on process valves



Type 8695 can be combined with...



**Type 2101**

Globe valve  
actuator ø 50 mm



**Type 2100**

Angle-seat valve  
actuator ø 50 mm

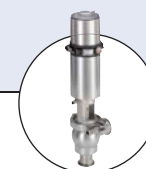


**Type 2103**

Diaphragm valve  
actuator ø 50 mm



**Type 2000**



Hygienic process  
valves

- Compact stainless steel design
- Integrated analog valve position registration (Teach function)
- Coloured illuminated status display
- Internal control air routing
- Fieldbus interface AS-Interface / DeviceNet (option)
- With ATEX II cat. 3G/D approval

The control head Type 8695 is optimised for integrated mounting on the 21XX process valve series with smaller actuator sizes.

The registration of the valve position is done through a contact-free analog position sensor, which automatically recognises and saves the valve end position through the Teach function when starting up. The integrated pilot valve controls single or double-acting actuators.

The design of the control unit and the actuator is specially designed for the requirements of a hygienic process environment and enables an internal control air channel without external tubings.

Besides the electrical position feedback signal the status of the device is shown directly on the control head itself through coloured LEDs showing a clear visible valve position status.

As an option a fieldbus interface, AS-Interface or DeviceNet can be chosen.

The housing is easy to clean and features proven electrical IP protection and chemically resistant materials for use in hygienic processing in food, beverage and pharmaceutical industries. Combined with Bürkert ELEMENT actuators the unique pilot valve system enables a compressed air recycling that avoids actuator chambers contamination from the environment.

### Technical data

<b>Material</b>	
Body	PPS, stainless steel
Cover	PC
Sealing	EPDM
<b>Control medium</b>	neutral gases, air DIN ISO 8573-1
Dust concentration	Class 5 (<40 µm particle size)
Particle density	Class 5 (<10 mg/m <sup>3</sup> )
Pressure condensation point	Class 3 (<-20 °C)
Oil concentration	Class 5 (<25 mg/m <sup>3</sup> )
<b>Supply pressure</b>	0 to 7 bar <sup>1)</sup>
<b>Actuator system</b>	for single or double-acting actuators
Actuator series 21XX	actuator ø 50 mm
<b>Pilot air ports</b>	Threaded ports G1/8 stainless steel or push-in connector (tube Ø 6mm / 1/4")
<b>Position feedback</b>	Analog position sensor (contact-free) with autotune switchpoint (PNP) (NPN on request)
<b>Stroke range valve spindle</b>	2,5 to 32 mm
<b>Ambient temperature</b>	
with pilot valve	-10 to +55 °C
Without pilot valve	-20 to +60 °C
<b>Installation</b>	as required, preferably with actuator in upright position
<b>Protection type</b>	IP 65/67 according to EN 60529, Type 4X
<b>Protection class</b>	3 according to VDE 0580
<b>Approvals</b>	ATEX II cat. 3G/D cULus Cert. No. 238179
<b>Ignition protection</b>	II 3D Ex tc IIIC T135 °C Dc II 3G Ex nA IIC T4 Gc
<b>Fieldbus communication (option)</b>	AS-Interface / DeviceNet
<b>Conformity</b>	according to CE in compliance with EMV2004/108/EG

<sup>1)</sup> The supply pressure has to be 0,5 - 1 bar above the minimum required pilot pressure for the valve actuator.

## Technical data, continued

### Without fieldbus communication

Technical data	
<b>Power supply</b>	24 VDC $\pm$ 10% UL: NEC Class 2
<b>Residual ripple with DC</b>	10%
<b>Power consumption</b>	< 2W
<b>Electrical connection</b> Multipole	M12, 8-pole
<b>Output</b>	max. 100 mA per output

### With fieldbus communication; AS-Interface

Technical data	
<b>Profile</b>	S-B.A.E. (A/B slave, max. 62 slaves/master) Certificate No. 87301 acc. to version 3.0
<b>Power supply</b> through bus line separated from bus signal	29.5 to 31.6 VDC, UL: NEC Class 2 according to specification on request
<b>Power consumption</b> <b>Units without external power supply</b> Max. power consumption Power consumption in normal operation (after current reduction; Valve + 1 end position achieved)	120 mA 90 mA
<b>Output</b> Contact rating Watch-dog function	$\leq$ 1W over AS-Interface integrated
<b>Electrical connection</b>	M12 4-pins
<b>Programming data</b>	see operating instructions

### With fieldbus communication; DeviceNet

Technical data	
<b>Profile</b>	Group 2 Only Slave Device; MAC-ID and transfer rate adjustable through DIP-switch
<b>Power supply</b>	11 to 25 VDC UL: NEC Class 2
<b>Power consumption</b>	$\leq$ 80 mA
<b>Output</b> Inrush current Hold current	$\leq$ 50 mA $\leq$ 30 mA
<b>Input</b> "0" "1"	0 to 1.5 V $\geq$ 8 V
<b>Electrical connection</b>	M12-Micro Style - flange connector 5-pins (configuration according DeviceNet-specification)

**Ordering information for process valve system with integrated control head**

A complete process valve system consists of a Control Head Type 8695 and a process valve Type 21xx.  
The following information is necessary for the selection of a complete system:

- Item no. of the desired control head **Type 8695** (see ordering chart on p. 4)
- Item no. of the desired process valve **Type 21xx**  
(see separate datasheet e.g. Type 2100, 2101, 2103)

You order two components and receive a complete assembled and certified valve.

When you click on the orange box "More info." below, you will come to our website for the resp. product where you can download the datasheet.

**Example for process valve systems**

**Control Head  
Type 8695**



**Desired process valve, example**



More info.

2101  
Globe valve  
actuator  
ø 50 mm



More info.

2100  
Angle-seat  
valve  
actuator  
ø 50 mm



More info.

2103  
Diaphragm  
valve  
actuator  
ø 50 mm



More info.

Third party  
hygienic  
process  
valves

**Complete process  
valve system**



**Valve system  
On/Off ELEMENT  
Type 8801-GC-M  
2101 + 8695**



**Valve system  
On/Off ELEMENT  
Type 8801-YE-M  
2100 + 8695**



**Valve system  
On/Off ELEMENT  
Type 8801-DF-M  
2103 + 8695**



**Customised  
attachment to  
third party  
actuators\***

\*: please see datasheet 8681/  
ELEMENT installation kits to  
third party process valves or  
contact your sales office for  
related drawings or individual  
engineering support]

## Ordering chart Control Head Type 8695 (other versions on request)

Electrical connection	Kommunikation	Control function	Pilot air ports threaded ports	Item no.		
<b>Actuator series ELEMENT Type 21xx process valves</b>				<b>Standard</b>	<b>ATEX II cat. 3G/D</b>	
M12 multipole	AS-Interface S-B.A.E	single-acting	G1/8	227 444	265 075	
		double-acting	G1/8	227 440	265 069	
	DeviceNet	single-acting	G1/8	238 724	265 076	
		double-acting	G1/8	265 081	265 070	
			single-acting	G1/8	227 446	265 077
			double-acting	G1/8	227 442	265 071
				G1/8	234 246	265 067
<b>Actuator series CLASSIC Type 20xx Prozessventile</b>						
M12 multipole	AS-Interface S-B.A.E	single-acting	G1/8	223 896	265 078	
		double-acting	G1/8	223 906	265 072	
	DeviceNet	single-acting	G1/8	238 726	265 079	
		double-acting	G1/8	238 727	265 073	
			single-acting	G1/8	223 895	265 080
			double-acting	G1/8	223 905	265 074
					265 938	265 068

**Note:** All non-ATEX versions are UL approved.

### Further versions on request



**Approvals**  
FM



**Additional**  
push-in pilot air ports (tube Ø 6mm / 1/4")  
NEMA4X

## Ordering chart adapter kit (has to be ordered separately)

Description	Actuator size	Control function	Item no.
Adapter kit ELEMENT types 21xx	Ø50 mm	universal	679 918
Adapter kit CLASSIC types 20xx	Ø40 mm	universal	683 057
Adapter kit CLASSIC types 20xx Globe and angle seat valves 2012/2000 Diaphragm valve 2030/2031	Ø50 mm	universal	683 058
			683 059
Adapter kit CLASSIC types 20xx	Ø63 mm <sup>1)</sup>	universal	683 060

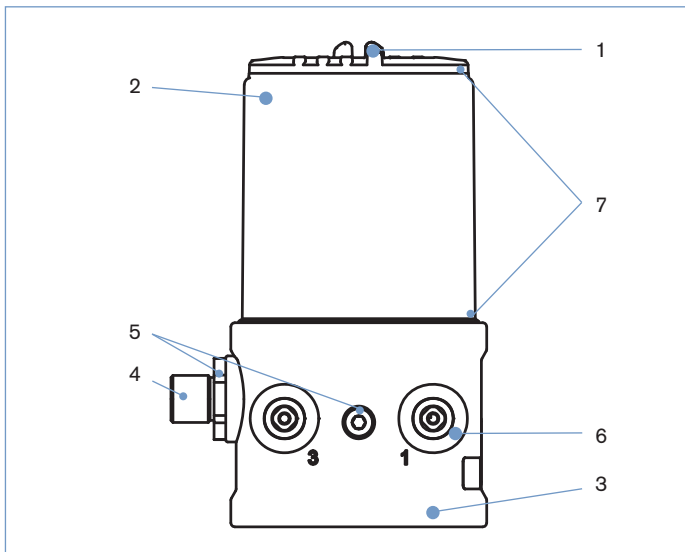
For installation kits to 3rd party process valves please see datasheet installation kits for hygienic process valves or contact your sales office for related drawings or individual engineering support

<sup>1)</sup> When combining actuator size Ø 63 mm with 8695 CLASSIC reduced switching dynamics should be expected. Please choose Type 8691 for shorter response times.

## Ordering chart accessories

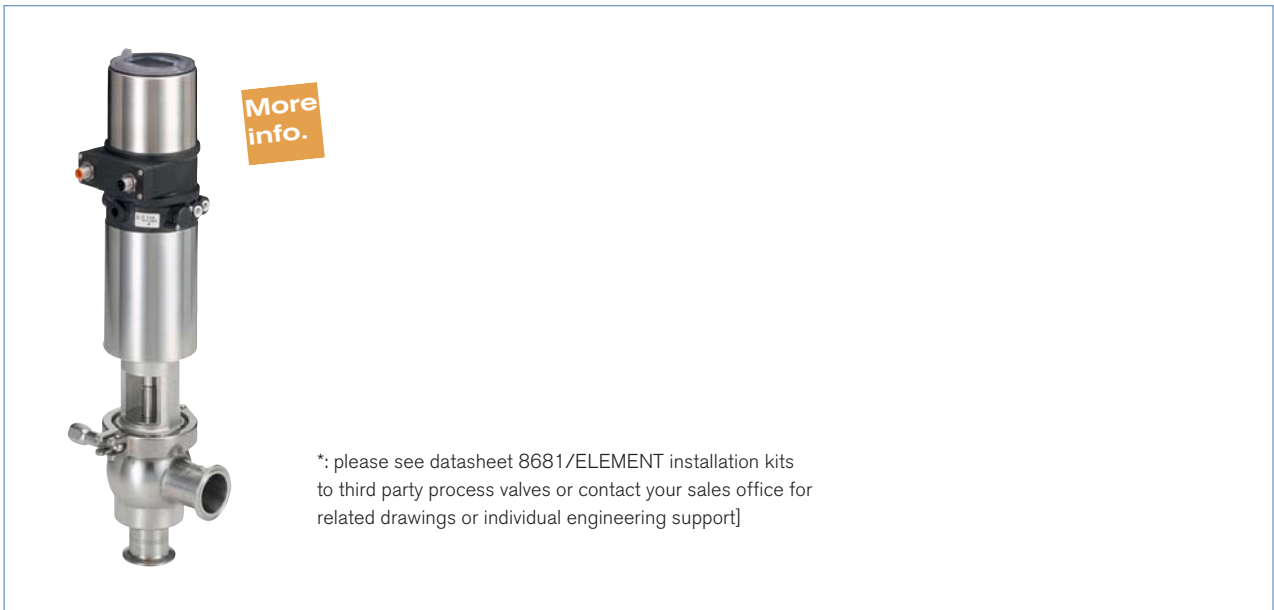
Description	Item no.
M12 socket, 8-pins, 5m assembled cable	919 267
M12 socket, 4-pins, 5m assembled cable	918 038
M12 socket, 5-pins, 5m assembled cable	264 606
Silencer G1/8	780 779
Silencer, push-in connector	902 662
Sensor puck (spare part)	677 245

## Materials



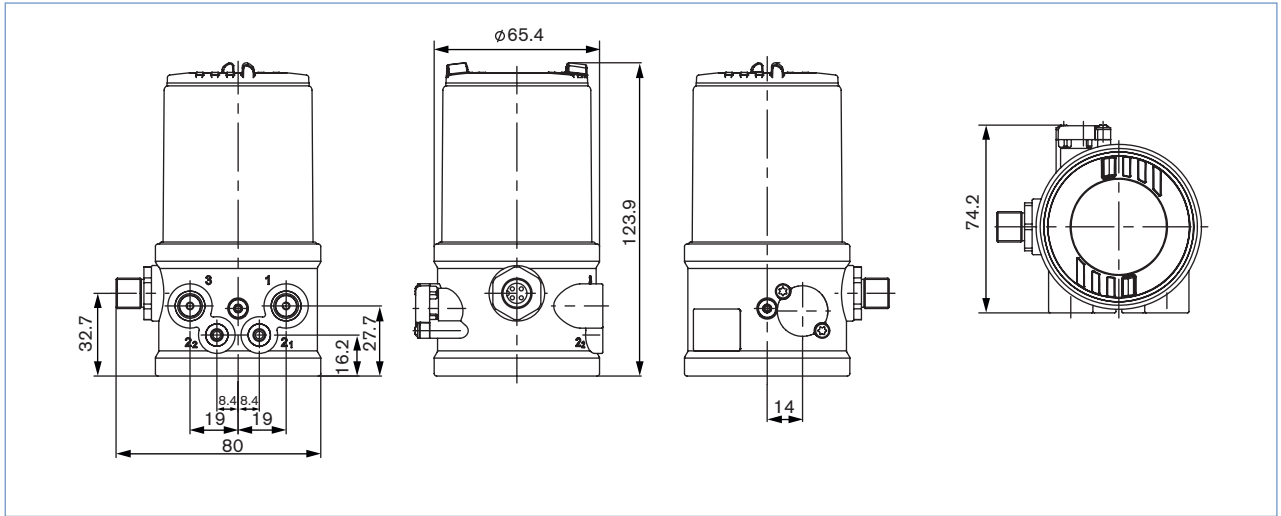
<b>1 Cover</b>	PC
<b>2 Body casing</b>	Stainless steel
<b>3 Basic body</b>	PPS
<b>4 Plug M12</b>	Stainless steel
<b>5 Screws</b>	Stainless steel
<b>6 Push-in connector</b>	POM/stainless steel
<b>Threaded ports G1/8</b>	Stainless steel
<b>7 Sealing</b>	EPDM

## Mounting on third party hygienic process valves

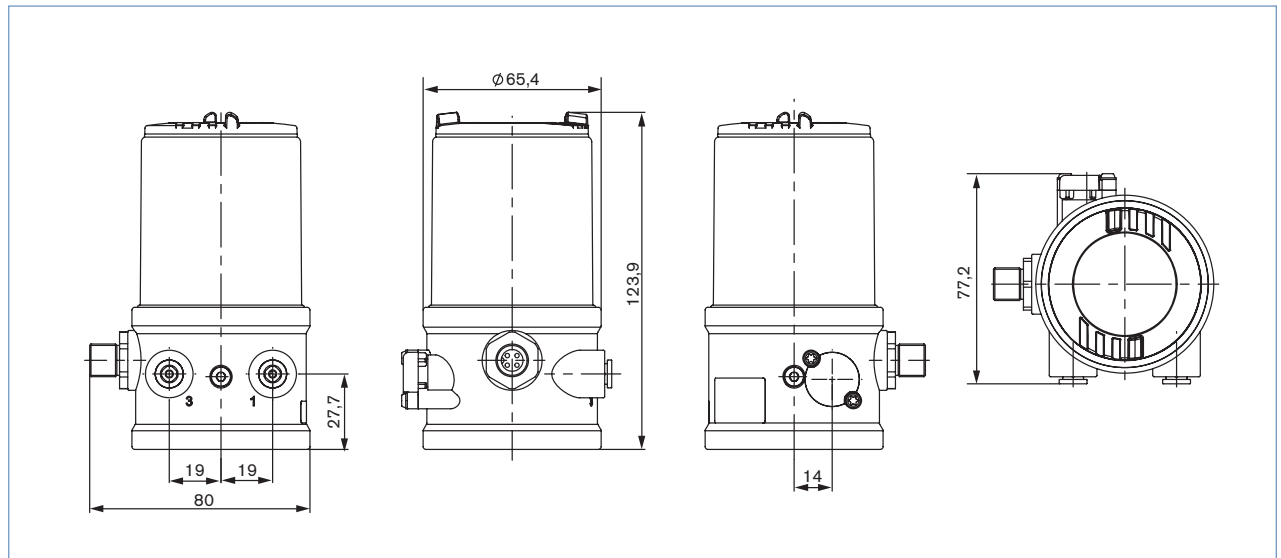


## Dimensions [mm]

## Mounting on process valve CLASSIC types 20xx



## Mounting on process valve ELEMENT types 21xx

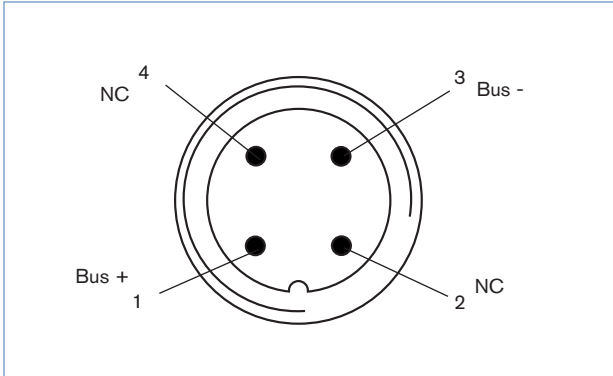


**Electrical installation**

**AS-Interface**

**Multipole connection AS-Interface**

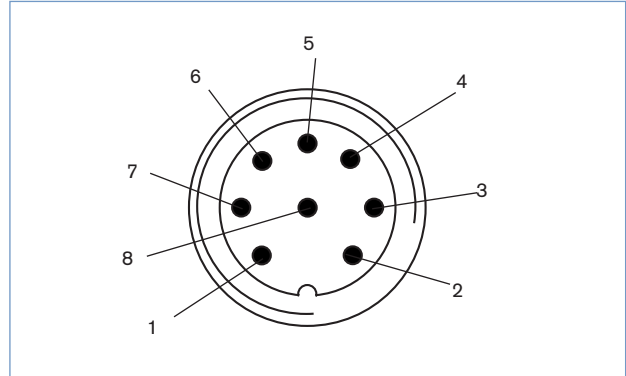
**Bus connection (M12-circular connector, 4-pins, male)**



Pin	Description	Configuration
1	Bus +	bus line AS-Interface +
2	NC	not assigned
3	Bus -	bus line AS-Interface -
4	NC	not assigned

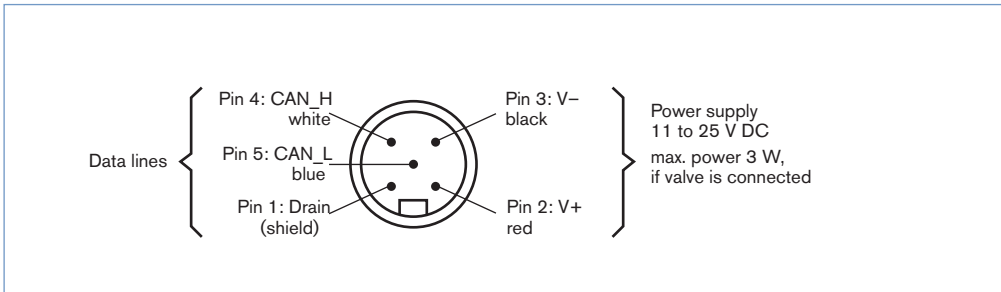
**24 V DC**

**Multipole connection M12, 8-pins**



Pin	Description	Configuration
1	Limit switch 1	IN 1 / TOP
2	Limit switch 2	IN 2 / BOTTOM
3	Power supply	GND
4	Operating voltage +	24 V DC
5	Valve control +	Valve +
6	Valve control -	Valve -
7	n.a.	not assigned
8	n.a.	not assigned

**With fieldbus communication DeviceNet**



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