Universal Process Controller eCONTROL

54 x 54 x 50 mm 1/16 DIN Cut out Compact Universal controller

- For flow, pressure, pH, conductivity, level and temperature
- Continuous control: 2-point, 3-point, On/Off, ratio control
- Easy connectable to pneumatically or electrically driven systems

Thanks to its compact design, the universal 8611 controller is specially designed for compact control system applications. It is compatible with a wide range of proportional control valves and connects with an electro-pneumatic servo-system for pneumatically actuated process control valves. The PI process controller is equipped with many additional functions. The actual process value can be supplied as one of three inputs; analogue 4-20 mA/0-10V, frequency or Pt100 signal directly to the universal controller. The process switching points can be set via a 4-20 mA/0-10V signal or with the keypad.

Technical Data

General data	
Materials	
Housing, cover	PC, +20% glass fibre
Front panel folio / Screws	Polyester / Stainless steel
Multipin	CuZn, nickel-plated
Wall-mounting holder	PVC
Display	Dual-line 8-digit LCD with backlight
Electrical connections	Multipin: M12-8pin, M8-3pin, Terminals Insert for direct connecting to electrical components acc. to DIN EN 175301-803
Voltage supply cable	0.5 mm² max. cross section, max. 100 m, shielded
Environment	
Ambient temperature	0°C to +70°C (operating and storage)
Relative humidity	≤ 80%, without condensation
Height above sea level	max. 2000 m
Standards and approvals	
Protection class	IP65
Standard	
EMC, CE	EN 61326
Approvals	
UL-Recognized for US and Canada	61010-1 + CAN/CSA-C22 No.61010-1

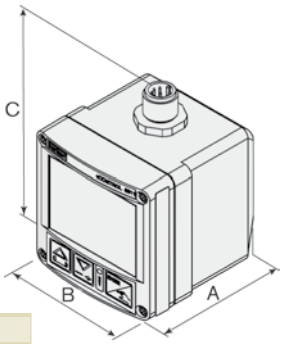
Options (see datasheet for details)

- Mounted on flow sensor fitting
- Mounted on rail or valve

Envelope Dimensions [mm] (see datasheet for details)

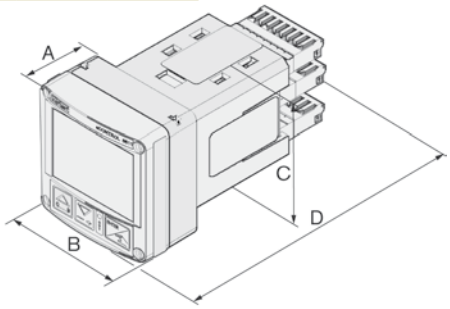
Valve-mounting

A	B	C
61	55	76

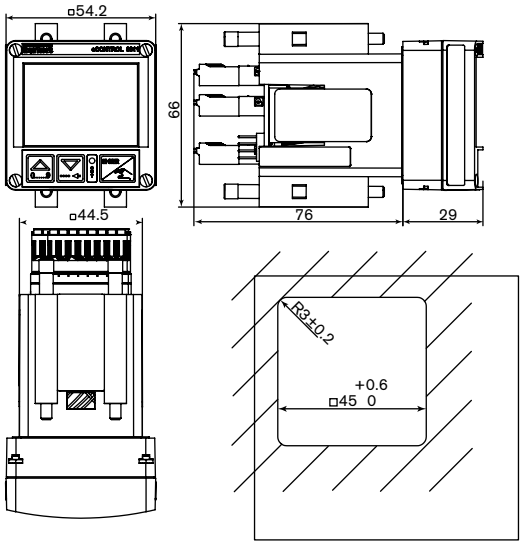


Panel-mounting

A	B	C	D
29	55	66	105



8611 eCONTROL Panel-mounting



Technical data (continued)

Electrical data	
Operating voltage	24 V DC ±10%, filtered and regulated
Power consumption	approx. 2 W (without valve-without sensor input)
Input	
Setpoint	
	Sourcing mode
Standard 4 - 20 mA	Max. input impedance: 70 Ω Resolution: 5.5 µA
Standard 0 - 10 V	Max. input impedance: 11.5 kΩ Resolution: 2.5 mV
Sensors	
	Sourcing mode
Standard 4 - 20 mA	Max. input impedance: 70 Ω Resolution: 5.5 µA
Standard 0 - 10 V	Max. input impedance: 11.5 kΩ Resolution: 2.5 mV
Frequency	
Input 1	External sensor min. 0.25 Hz / max. 1 kHz input impedance: >1 kΩ Signal type: Sinus, square, triangle pulse (> 3000 mVpp, max. 30 Vpp)
Input 2	Internal Hall sensor min. 0.25 Hz / max. 1 kHz (only with Bürkert Type S030 flow fitting)
Pt100 (2 wires)	Measuring range: 0°C to 200°C Measuring current: 1 mA Measuring error: < 0.5°C
Binary input	Input impedance: 10 kΩ Operating threshold: 3 V - 30 V Max. frequency: 1 kHz

Outputs	
Continuous signal	**Standard signal 4 - 20 mA** max. loop resistance: 680 Ω accuracy: 0.5% **Standard signal 0 - 10 V** max. current: 20 mA accuracy: 0.5%
Discontinuous signal	**2 transistor outputs for PWM*) or PTM*) signal** Control frequency 1.2 kHz - 20 Hz resolution max.: 16 Bit (depend from frequency) max. current load: 1.5 A switching voltage: 24 V DC
Binary output	**Transistor output (PNP) (configurable)** max. current load: 1.5 A switching voltage: 24 V DC
Power supply sensor/actuator	24 V DC, max. 1 A
Total load of all outputs	max. 1.5 A
Controller modes	PI-Control, 2 point and 3 point, cascaded Up to 2 Binary out with windows and hysteresis mode

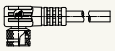
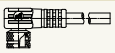
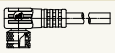
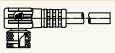
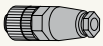
*) PWM = pulse width modulation
PTM = pulse time modulation

Ordering Chart

Mounting position	Sensor Input (external)	Controller outputs	Setpoint setting	Process value output	Binary In/Out	UL Recognition	Item no.
Proportional valve	Temperature (Pt100)	1 x PWM	4 - 20 mA 0 - 10 V	4 - 20 mA 0 - 10 V	1 x Bin In 1 x Bin Out	none	204 642
	Flow rate (Frequency - NPN)	1 x PWM	4 - 20 mA 0 - 10 V	4 - 20 mA 0 - 10 V	1 x Bin In 1 x Bin Out	none	204 639
	All sensors with standard signal (4 - 20 mA / 0 - 10 V)	1 x PWM	4 - 20 mA 0 - 10 V	4 - 20 mA (*) 0 - 10 V	1 x Bin In 1 x Bin Out	none	186 289
Panel	2 x Frequency (NPN/PNP) 1 x 4 - 20 mA / 0 - 10 V 1 x RTD	1 x PWM 2 x PTM 1 x 4 - 20 mA / 0 - 10 V	4 - 20 mA 0 - 10 V	4 - 20 mA 0 - 10 V	1 x Bin In 2 x Bin Out	none	210 206
						UL-Recognized	562 655

* Either PWM/PTM or 4-20 mA/0-10 V selectable as PI-control output. If 4-20 mA/0-10 V selected as PI-output, the process value isn't available.

Accessories (must be ordered separately)

	Description	Item no.
	Positioning system 8810 for pneumatic actuators with rail-mount adaptor	204 458
	4-pin M8 female right angle connector with self-locking threaded joint and 2 m molded cable (valve output)	918 718
	4-pin M8 female right angle connector with self-locking threaded joint and 5 m molded cable (valve output)	919 412
	3-pin M8 female right angle connector with self-locking threaded joint and 2 m molded cable (sensor input)	918 717
	3-pin M8 female right angle connector with self-locking threaded joint and 5 m molded cable (sensor input)	919 410
	4-pin M8 female connector, straight with snap-on connection and 2 m molded cable (valve output)	919 060
	3-pin M8 female connector, straight with snap-on connection and 2 m molded cable (sensor input)	918 039
	8-pin M12 female connector, straight with screw connection and 2 m molded cable (PUR) (Power supply)	919 061
	8-pin M12 female connector, straight with screw connection, to assemble (Power supply)	918 998
	2-pin female connector, straight with 3 m cable (for connection to Positioning system 8810)	133 486
	2-pin female connector,straight with 5 m cable (for connection to Positioning system 8810)	167 494
	2-pin female connector, straight with 0,3 m wire (for connection to Positioning system 8810)	644 068
	2-pin female connector, straight with 0,6 m wire (for connection to Positioning system 8810)	162 144

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