

baelz 6490 / 6590

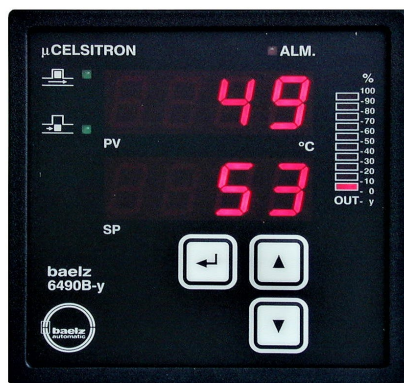
PID 3-POINT STEP CONTROLLER

Industrial controller with special PID stepper algorithm.

baelz 6X90 / 6X90B / 6X90B-y μ Celsitron microprocessor controllers are compact and reliable controllers suitable for many industrial control applications, e.g.: in dryers, reactors, autoclaves and heat exchangers.

ADVANTAGES AT A GLANCE

- PI/PID control response with three-point output
- Easy operation with 3 or 4 keys
- Auto tuning, self-adaptation of the control parameters
- Option: RS485 Modbus RTU for connection to master computer
- Control digital input for OPEN, CLOSE, STOP, SP2, REM./LOC.
- Setpoint ramp with selectable gradient
- Manual/automatic switchover
- Thermocouple with ext. converter baelz 6261-Thermo
- Two-point/three-point selectable
- Up to 2 alarms: fixed, sliding, tolerance band/range
- LED status display



baelz 6490B-y



baelz 6590

Technical specifications, baelz 6490/6590 (6X90 stands for both types)

	6490...	6590...
Controller type	PID three-point modulating controller (6X90B ... for temperature)	
Analog inputs	PT100, 2.4 = 0...300°C or 2.2 = 0...400°C (other measuring ranges on request) Connection in 3-core technology; 0/4 ... 20 mA, Re = 50 Ω ; 0/2 ... 10 V, Re = 100 k Ω	
Analog output for actual value	0...10V corresponds to 0...300°C (2.4) or 2.2 = 0...400°C (2.2) I _{max} = 2 mA	
Digital inputs	high active, Re = 1 k Ω ; open / 0 VDC = low, 12 ... 24 VDC = high	
Digital input and transducer supply voltage	24 VDC, I _{max} = 60 mA	
Interface	RS485 Modbus protocol in RTU mode 1200 to 19200 baud; 1 start bit, 8 data bits, 1 stop bit, no parity	
Display	2 LED displays for setpoint and actual value	
Mounting	Panel front installation	
Housing	plastic	
Dimensions WxHxD (mm)	96 x 96 x 135	48 x 96 x 140
Ingress protection rating	IP 65 (front)	
Power supply	230 V / (special voltages on request: 115 V / 24 V), -15% / + 10%, 50/60 Hz	
Weight, approx. (kg)	0.6	0.5
Ambient temperature (°C)	Operating: 0...50; Transport / Storage: -25...+ 65	

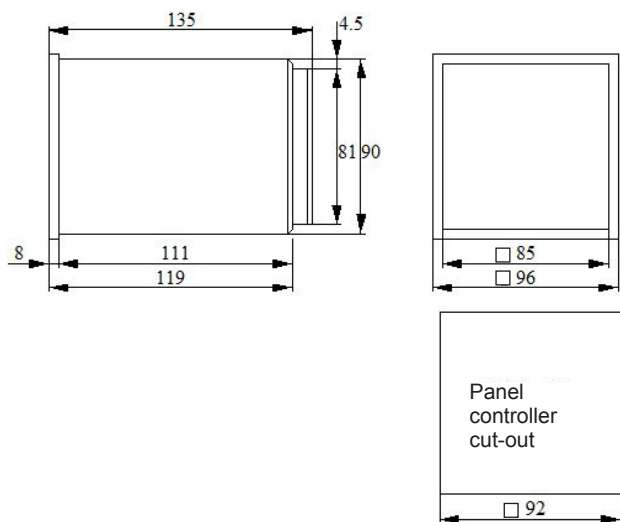
Options / Surcharges	Remarks
2 inputs 0/4 ... 20 mA	
2 inputs 0/2 ... 10 V	
Differential temperature 0...50 K	
Measuring range PT100: -30...+ 60°C	
Calibration of measuring input PT100	for connection to Zener barriers
RS 485 - preload S15	for connection to remote maintenance module baelz 5279-NB (only for devices with RS 485)

Note:

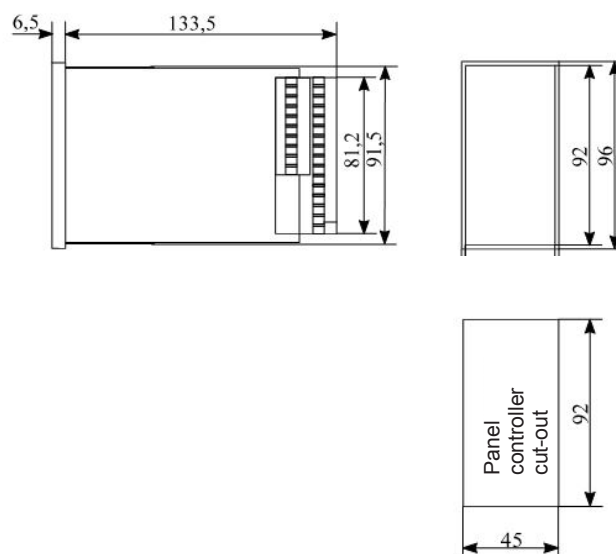
- Software for control technology, see baelz 4614
- Wall-mounted housing: Order No. 3570-001
- Adapter for rail mounting: Order No. 3506-004

Inputs and outputs, baelz 6490/6590 (6X90 stands for both types)							
Type	Measuring inputs	Controller output	Digital inputs	Actual value output 0...10 V (PT100)	Alarm relay with potential-free changeover contact 250 V AC / 3 A.	with RS485 interface Modbus RTU	with Y bar graph display
6X90/2	2 measuring inputs can be assigned either with the process variable or the external setpoint: PT100, 0/2...10 V or 0/4...20 mA	Three-point step / three-point / two-point selectable	5x (open, close, stop, external / internal and 2nd setpoint)	1x 0...10 V (PT100)	1x	No	No
6X90/3			3x (open, close, stop)	-	2x	Yes	No
6X90/4			3x (open, close, stop)	1x 0...10 V (PT100)	2x	Yes	No
6X90/5			1x for switching external / internal setpoint	1x 0...10 V (PT100)	2x	No	No
6X90B/0			-	-	1x	No	No
6X90B/4	1x PT100, to connect in three-wire circuit		1x (open, close, stop or 2nd setpoint)	-	1x	Yes	No
6X90B-y/3			-	-	1x	Yes	Yes

Housing dimensions baelz 6490



Housing dimensions baelz 6590



Equipment overview Type / Version baelz 6490 ... / 6590 ...

Equipment	.../0	.../2	.../3	.../4	.../5
PI (D) - three-point step output	✓	✓	✓	✓	✓
Alarm relay 1	✓	✓	✓	✓	✓
1 measuring input Pt100	✓	✓	✓	✓	✓
1 measuring input 0/4 ... 20 mA		✓	✓	✓	✓
1 measuring input 0/2 ... 10 V		✓	✓	✓	✓
Integrated transmitter supply voltage 24 V DC		✓	✓	✓	✓
1 digital input (external setpoint)					✓
4 digital inputs (open, close, stop, setpoint 2)			✓	✓	
5 digital inputs (open, close, stop, ext. setpoint, setpoint 2)		✓			
1 Pt100 actual value output 0...10 V		✓		✓	✓
1 bus interface RS 485 (Modbus RTU)			✓	✓	
Alarm relay 2			✓	✓	✓

Connection diagram baelz 6x90

