

with integrated process controller

Compact digital positioner for pneumatic valves with integrated process controller.

- Combination of positioner and process controller
- Compact solution for local control tasks
- Suitable for fast controlled systems
- Cycle time selectable between 25ms, 50ms, 100ms, 200ms and 500ms
- Internal or External setpoint specification
- Clearly legible display
- Sensor signal: Current interface and Pt100
- Can be configured as P-, PI-, PD- and PID-controller
- Integrated stroke feedback without exposed parts
- Big stroke range 3 - 28 / 3 - 50 mm
- Self learning adaption to valve actuator
- Configuration and diagnostic functions via PC software or directly on the display
- Not vulnerable to vibrations
- Protection class IP 65
- Also available for part turn actuators (single or double acting)



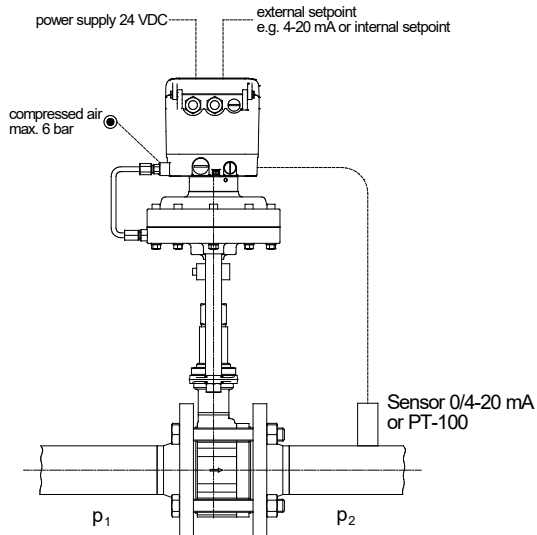
Technical Information

nominal stroke	0.12 - 1.10" / 0.12 - 1.97"
voltage of the working resistance	2,5 V (125Ω@20mA)
ambient temperature	+14 up to +165°F
Control variable (actual value)	0/4 - 20 mA, PT100 (2 or 3-wire)
Reference variable (set point)	via keyboard or 0/4 - 20 mA, 0/2 - 10 V
Control behaviour	P (with working point y0) PD (with working point y0) PI PID
Accuracy	≤ 0,5% of the end value
Alarm output	absolut direct/invers, relativ direct/invers, Band direct/invers
auxiliary energy, electric	24 VDC max. 10 W
adjustment of stroke and zero point	self-learning
configuration	Directly on the display or via PC software
auxiliary energy, pneumatic	max. 87 psi
unrestricted air capacity *	40 NI/min
stationary air consumption *	< 0,06 NI/min
Leakage	< 0,01 NI/min
air quality according ISO 8573-1: max. particle size and density oil content pressure dew point	Class 5 Class 4 Class 3 min. 20K (36°F) under ambient temperature
Actuation gas	compressed air or non flammable gases (nitrogen, CO ₂ ,...)
mounting to control valve	standardized mounting kits (also with optical position indicator)
pressure supply port	NPT 1/8"
Max. Connection cross-section	0,002
protection class acc. DIN 40050	IP 65

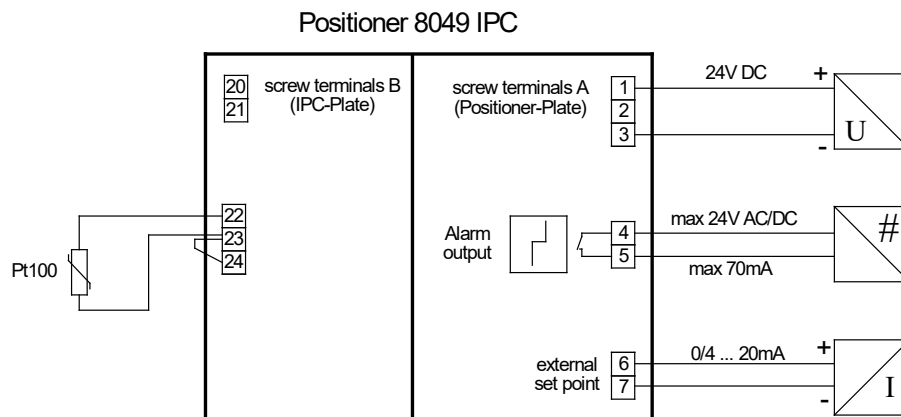
* at 73 psi pilot pressure

Functional description

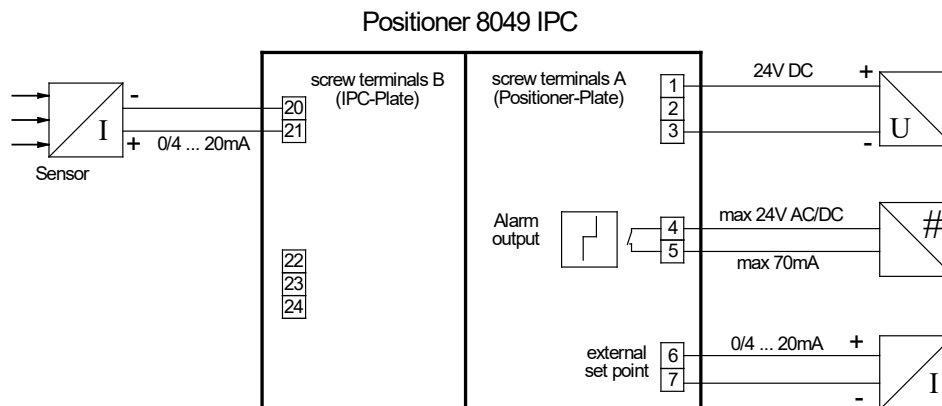
The 8049-IPC with integrated process controller offers a solution for demanding control tasks without higher-level process control systems. The basis of the 8049-IPC is the proven positioner 8049 in the 4-wire version. One additional IPC-module in the cover plate of the basic unit forms the complete unit of the 8049-IPC. The connection of a process sensor as reference variable, optionally as 0/4-20 mA sensor or PT-100 element, is made directly at the 8049-IPC. The setpoint can be specified either externally or directly on the controller display. Scaling of the 8049-IPC as a P, PI, PD or PID controller offers the optimum solution for every process, especially in combination with valve technology from Schubert & Salzer. The process-related control parameters can be set either directly on the 8049-IPC or via the software DeviceConfig. Based on the control parameters, the IPC module calculates the difference between the reference variable and the setpoint. In parallel, the process controller supplies the positioner within a variable cycle time with the control signal required for positioning. Thus, each control difference results in a change of the valve stroke.



Connection example Pt-100



Connection example mA-sensor

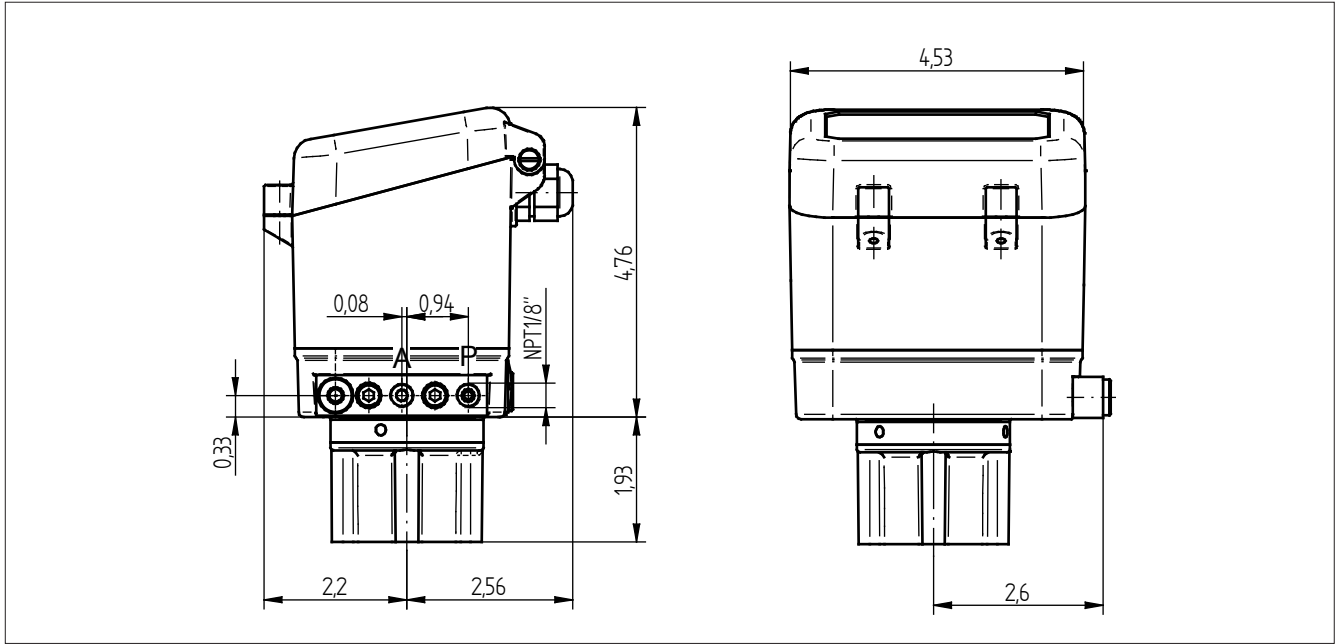


Ordering number system

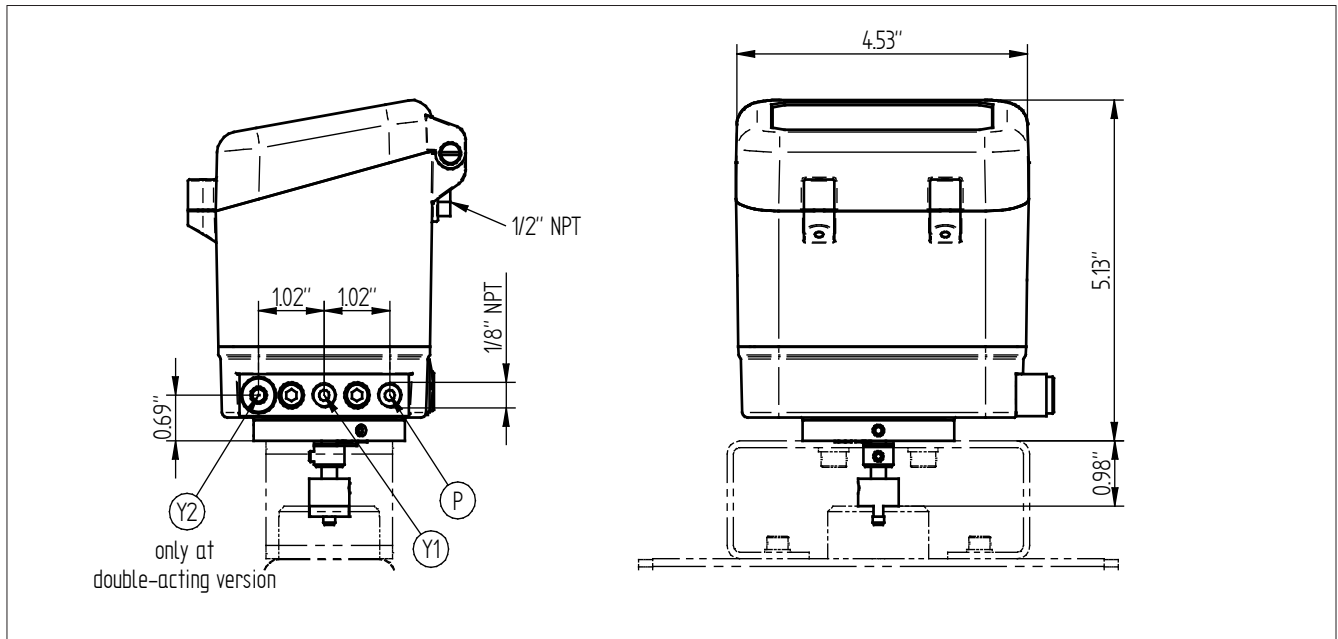
										quote only if required						
8049/		-										S		-		
Basic design																
dig. positioner 8049-4 (version 6)											4P6					
For actuator																
single acting											1					
double acting											2					
Air delivery																
standard											S					
high											H					
Body																
aluminium / plastic											0					
stainless steel ground plate											1					
body in stainless steel											2					
Electro-pneumatic connection																
cable bushing 2 x M16x1,5											0					
NPT-thread 1/2"											1					
plug connection M12x1, 5-pin											2					
Pneumatic connection																
Cable Bush 2 x M16x1,5 + 1 x M12x1,5											0					
NPT 1/8"											1					
Position measuring																
linear potentiometer without sensing pin											0					
linear potentiometer with standard sensing pin (L=3,92")											1					
linear potentiometer with curtaed sensing pin (L=3,72")											G					
rotary potentiometer for semi-rotary drive											2					
EMV-galvanic separating module for exterior path sensor											3					
Optical indicator																
without indicator											0					
indicator disc for sensing pin in PA											1					
indicator disc for sensing pin in metal											2					
rotation angle indicator											3					
Auxiliary module																
IPC-process controller											C					
Accessories																
without accessories											0					
gauge bloc single acting, scaling in bar and PSI											1					
optical position indicator for rotating actuators											2					
Further details																
special design (quote only if required)											S					
positioner montage (only for the manufacturer)											M					
Settings																
standard											-					
settings on customer request											1					
Special design																
without											-					
separated version incl. exterior path sensor for lift drive											1					

Dimensions

For linear actuators



For quarter-turn actuators



Configuration-Software „DeviceConfig“

Setup-Parameters

Adjustment of control parameters (input signal, stroke limitation, closing function, control hysteresis, valve function, etc.)

Geräteerkennung
Schubert & Salzer PS8049

Parameter der Stellkurve

Stellsignal
 steigendes Signal öffnet
 steigendes Signal schließt
inverse Funktion
 Feder schließt
 Feder öffnet

Stellkennlinie
 Sitzventil
 GS DN50 - DN80
 SPV
 GS DN15
 GS DN100 - DN125
 KSV
 GS DN20 - DN40
 GS DN150 - DN250
 variabel

Einstellen des "Steilasts" (Durchflussbereich)
 elektr.: 6,25% | 5,00mA | mech.: 16,00% | 1,32 mm

Einstellen der Dichtschliebfunktion
 aktiviert
 unten: 1,00% | 4,16mA | oben: 98,50% | 19,76mA

Einstellen der elektronischen Hubbegrenzung
 unten: 0,00% | 0,00 mm | oben: 100,00% | 8,25 mm

Einstellen der Regelhysterese
 0,2 %
 0,4 %
 0,6 %
 variabel | 0,40 %

Einstellen des Stellsignalsbereiches
 4 - 20 mA
 4 - 12 mA
 variabel
 unten: 4,0 mA | oben: 20,0 mA

Comport: COM8 USB V3.0

Stellkurve

Live-Monitor

The operating conditions of the positioner, can be viewed with the live monitor.

Simulation

0 - Schubert_Salzer PS8049

Set point value: 55,38 %

Actual value: 55,49 %

Deviation: 0,11

Temperature: 22,5 °C

Setpoint signal: 0,00 mA

p IN: 0 | p OUT: 0

Status - \ Error flags

Status	Setpoint assignment	Step function	Sinus signal
<input type="radio"/> Valve travel	<input type="radio"/> Mintemp too low	<input type="radio"/> Not Adapted	
<input type="radio"/> Setpoint signal error	<input type="radio"/> Maxtemp exceeded	<input type="radio"/> No parameters	
<input type="radio"/> EEPROM	<input type="radio"/> Max switch number inlet	<input type="radio"/> Current input is cal.	
<input type="radio"/> Control error	<input type="radio"/> Max switch number outlet	<input checked="" type="radio"/> Drag pulses	
<input type="radio"/> Seal error	<input type="radio"/> Voltage	<input type="radio"/> Binary input open	
<input type="radio"/> Valve error	<input type="radio"/> Binary input active		

Setpoint assignment:
 Digital [simulation /pinboard] | Analog (voltage- /current input)

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Configuration-Software „DeviceConfig“

Settings of the IPC-Modul parametrization of the IPC-module

IPC

Settings
Information
Monitor

IPC settings

ALAr - alarm-setpoint value:

HIST - alarm hysteresis: In physical unit

PASS - password: Negative value = complete lock

IPC: ON OFF

InPu - source of actual value:

Sub-menu-USER ->

Ctrl - control function: d - direct i - inverse

SEIP - source of setpoint value:

Internal setpoint value:

tALr - Type of alarm:

FILT - Filter: ON OFF

Sub-menu-PId ->

Mode: Automatic mode Manual mode

Sub-menu USER - scaling of input values

dEC - decimal points: 0..2

Lo - Lower setpoint value and actual value: In physical unit

Hi - Upper setpoint value and actual value: In physical unit

Sub-menu PId -controller parameter

bp -proportional range: 1,0 .. 99,99%

tn - integral time: 1 .. 4999 sek ; 5000 = OFF

td - derivative time: 1 .. 2999 sek ; 0 = OFF

y0 - operating point: 0 .. 100% (only if tn = OFF)

Only IPC extension

Generate IPC PDF
Load adjustments

Factory reset
Save adjustments

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Diagnostic data

Informations of valve stroke, running time, soft- and hardware-versions, achieved temperature- and stroke levels, error messages, number of cycles, operating hours...

Diagnosis

Base	Version information	Temperature- /way classes	Status / Error	Maintenance	Diagnosis																																	
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Text and pictures are not binding. We reserve the right, to alter the equipment.