Digital Positioner 8049

SCHUBERT & SALZER CONTROL SYSTEMS

Compact digital positioner for pneumatic control valves.

- Positioner can be integrated into valve actuator (no external moving parts for stroke feedback)
- Wide range of strokes 3 - 28 mm
- No steady-state air consumption
- Self-adapting to valve actuator
- Configuration by PC-software
- Not sensitive to vibrations
- Protection class IP65
- Available with AS-I control
- No instrumental air required (filtration to 20µm satisfy)
- Also available for the use in Ex-Zone 22

ATEX-Versions:

II 2G Ex ia IIC T3/T4 for Type 8049-Ex

II 1G Ex ia IIC T3/T4 for Type 8049-Ex-0

Technical Information, standard versions

Version	8049-4	8049-2	8049-AS-I
nominal stroke	3 - 28 mm	3 - 28 mm	3 - 28 mm
voltage of the working resistance	1,2 V	14 V (700 Ohm@20mA)	-
auxiliary energy, pneumatic	4 - 6 bar	4,5 - 6 bar	4 - 6 bar
air delivery* linear drive	50 Nl/min.	according the version	50 Nl/min.
ambient temperature	-20 up to +75°C	-10 up to +75°C	- 20 up to +75°C
control signal	0/4 - 20 mA	4 - 20 mA	Single Slave, Slave Profil S - 7.3.4
auxiliary energy, electric	24 VDC	none	supply with AS-I
adjustment of stroke and zero point	self-learning		
internal air consumption	none		
configuration	with PC-Software		
air quality	not oiled, dry industrial air, content of solid < 30µ, pressure dew point 20 K under the lowest ambient temperature		
Actuation gas	compressed air or non flammable gases (nitrogen, CO2,...)		
mounting to control valve	standardized mounting kits (also with optical position indicator)		
pressure supply port	G 1/8"		
protection class acc. DIN 40050	IP 65 (additional over pressure in the body with scavenging air)		

Bunsenstrasse 38 85053 Ingolstadt
Tel: (0841) 9654-0 Fax: (0841) 9654-590
www.schubert-salzer.com, info.cs@schubert-salzer.com

Digital Positioner 8049

Technical Information, ex-versions

Version	8049-Ex	8049-Ex-0
nominal stroke	3 - 28 mm	3 - 28 mm
voltage of the working resistance	14 V (700 Ohm@20mA)	14 V (700 Ohm@20mA)
auxiliary energy, pneumatic	4,5 - 6 bar	4,5 - 6 bar
adjustment of stroke and zero point	self-learning	
internal air consumption	none	
configuration	with PC-Software	
air quality	not oiled, dry industrial air, content of solid < 30 µ, pressure dew point 20 K under the lowest ambient temperature	
mounting to control valve	standardized mounting kits (also with optical position indicator)	
pressure supply port	G 1/8"	
protection class acc. DIN 40050	IP 65 (additional over pressure in the body with scavenging air)	
general information concerning explosion-proofing		
product type test certificate	BVS 08 ATEX E154	BVS 08 ATEX E154
ATEX specification	II 2G Ex ia T3/T4	II 1G Ex ia T3/T4
temperature ranges	T4: T_{amb} = -10 … +40°C T3: T_{amb} = -10 … +75°C	T4: T_{amb} = -10 … +40°C T3: T_{amb} = -10 … +75°C
information concerning explosion-proofing		
max. input voltage	Ui = DC 30V	Ui = DC 30V
max. input current	Ii = 100mA	Ii = 100mA
max. input power	Pi = 600mW	Pi = 600mW
max. interior capacity	Ci = insignificant	Ci = insignificant
max. interior inductance	Li = insignificant	Li = insignificant

Materials

	standard version	version "ground plate in stainless steel"	version "completely stainless steel"
positioner housing	Vestamid (electroconductive)	Vestamid (electroconductive)	stainless steel
ground plate	Aluminium, KTL-coated	stainless steel	stainless steel

Combination possibilities

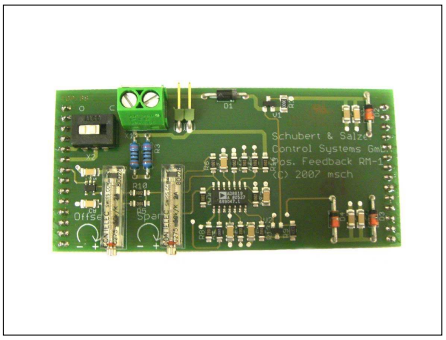
	8049-4 (4-wire) version V3	8049-4 (4-wire) version V5	8049-2 (2-wire) version V2	8049-Ex (ex-version) version V2
standard body	●	●	●	●
ground plate in stainless steel		●		
positioner completely in stainless steel		●		
positioner for part turn actuator single acting	●	●		
feed back module analog RM-1	●		●	●
feed back module RM-2		●		
manometer block	●	●	●	●

Digital Positioner 8049

Accessories

Analogue feedback module RM-1

- Linear feedback signal 4 - 20 mA
- Independent from positioner electronics
- Uses a separate potentiometer path
- Easy to retrofit
- 2 wire design
- Not appropriate for 8049-Ex or 8049-Ex-0



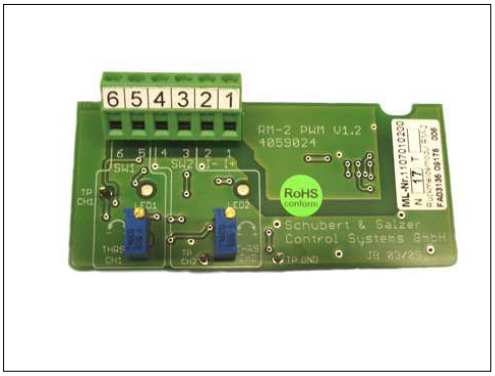
Technical Information

Supply voltage	24V DC
Output signal	4 - 20 mA
Temperature range	0 - 50℃ *
Temperature coefficient	< 0,2% / K

* at temperatures outside this range, the feedback module must be readjusted at operating temperature.

Feedback module RM-2

- Feedback on current valve position
- Feedback signal does not require calibration
- Feedback by 2 wire design
- 2 electrically isolated limit signal transmitters
- Limit signal transmitters freely adustable (0-100%)
- Easy to retrofit



Technical Information

Supply voltage	24V DC (±10%)
Output signal	4 - 20 mA
Max. adm. working resistance	< 700 Ohm
Temperature range	-20 . . .+75℃
Limit signal transmitters	2 pieces
Switching range	adjustable 0-100%
Switching capacity of the limit sign.trans.	24V AC/DC , 70mA
Switching hysteresis	ca. 2,5%

Gauge block

- Gauge block between positioner and connection block
- Reading range of 0-6 bar
- Pressure reading in bar and PSI
- Easy to retrofit

Digital Positioner 8049

SCHUBERT & SALZER CONTROL SYSTEMS

quote only if required

8049/		-						-			-			S		-	

Basic design

dig. positioner 8049-4	4P1
dig. positioner 8049-2	2P1
dig. positioner 8049-Ex	EP1
dig. positioner 8049-Ex-0	0P1
dig. positioner 8049-4 (version 5)	4P5

For acutator

single acting	1
double acting	2

Air delivery

low	L
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

G 1/8"	0
NPT 1/8"	1

Position measuring

linear potentiometer without sensing pin	0
linear potentiometer with standard sensing pin (L=99,6mm)	1
linear potentiometer with curtated sensing pin (L=94,4 mm)	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

without auxiliary module	0
analog feedback modul RM1	1
intelligent feedback modul RM2 with two limiting value encoders	2
IPC-process controller	C
ASI	A

Accessories

without accessories	0
manometer bloc single acting, scaling in bar and PSI	1

Further details

special design (quote only if required)	S
positioner montage (ony for the manufacturer)	M

Settings

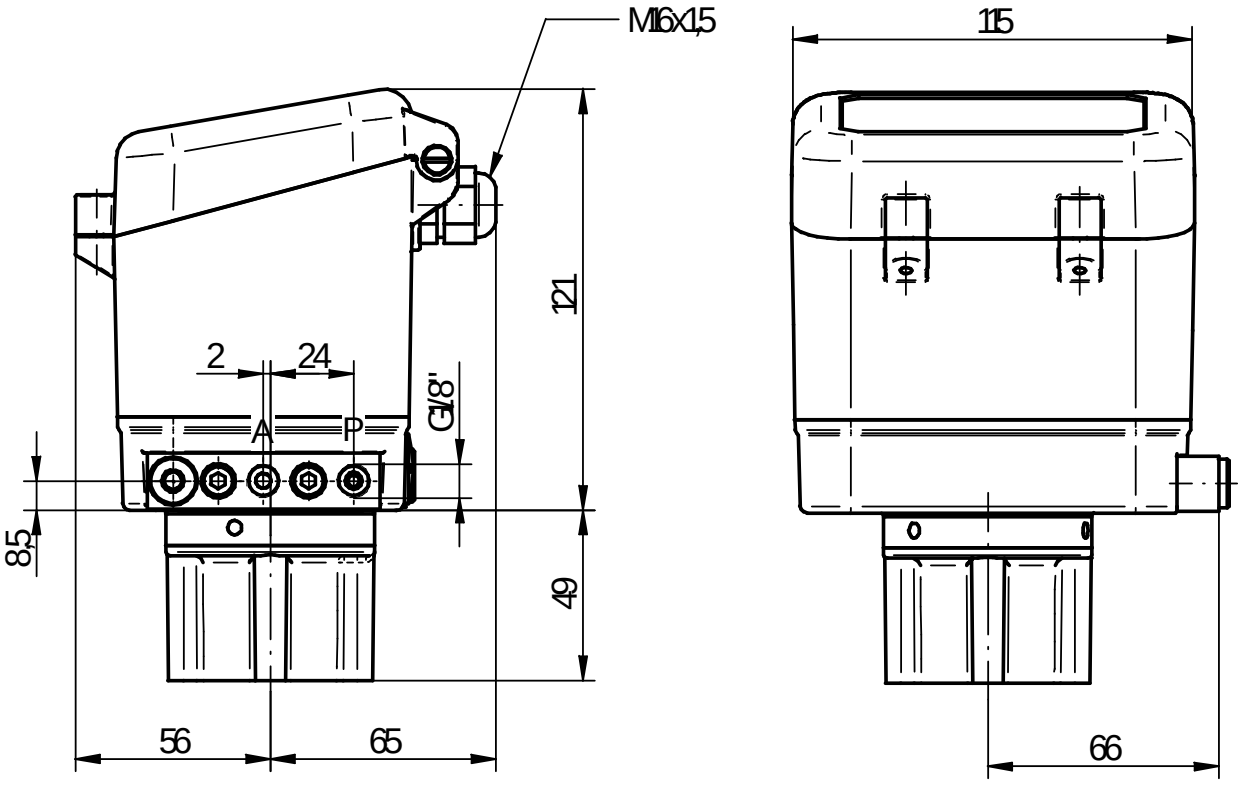
standard	-
settings on customer request	1

Special design

without	-
separated version incl. xxterior path sensor for lift drive	1
special design for ex zone 22 (dust)	2

Digital Positioner 8049

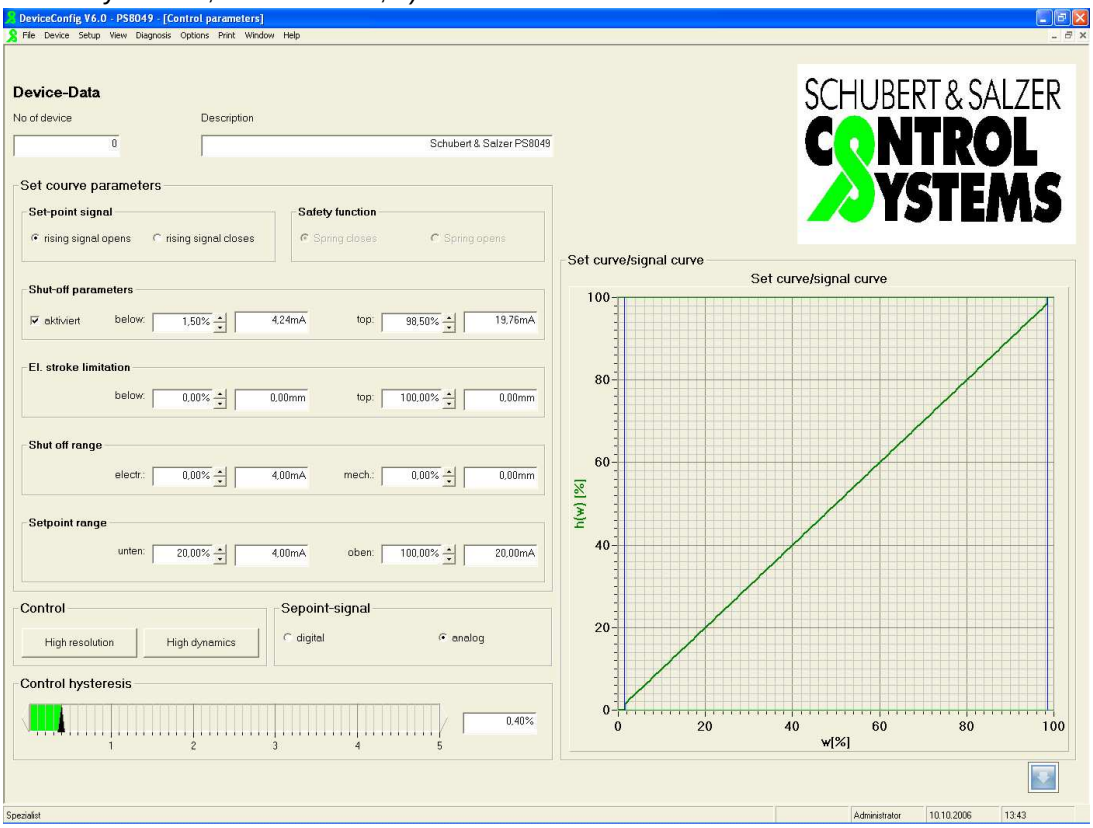
Measurements



Digital Positioner 8049

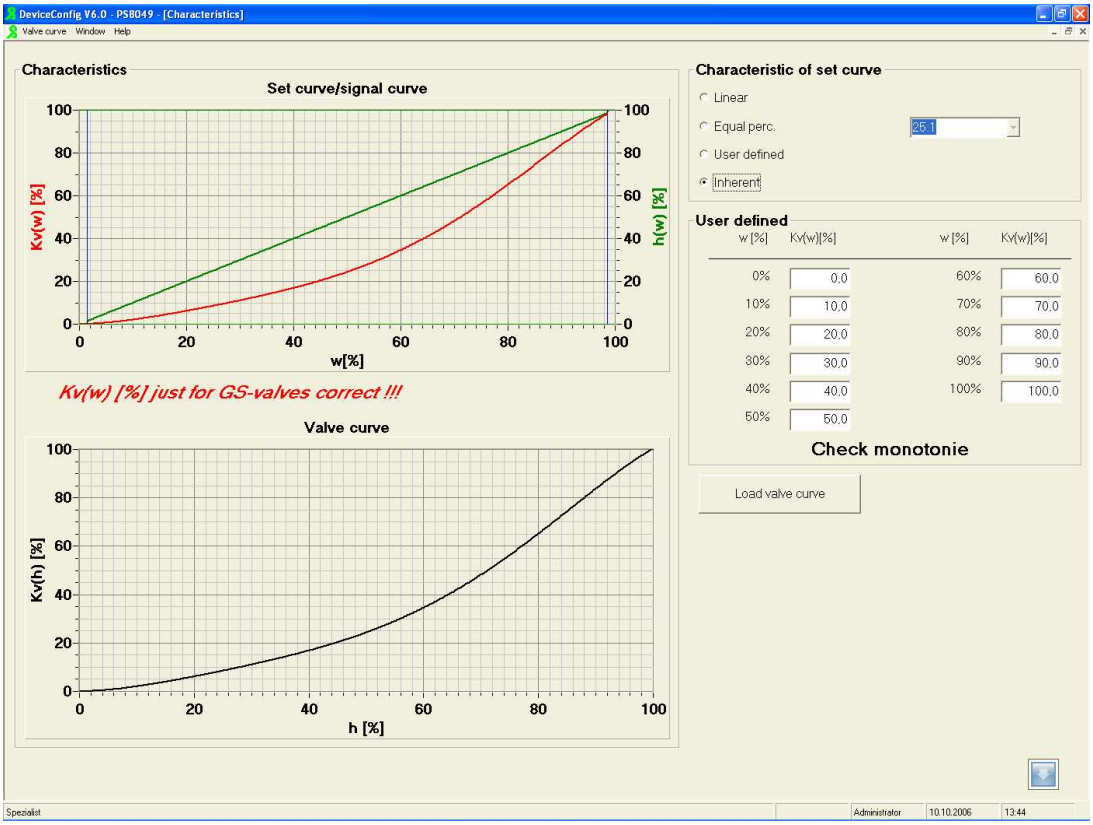
Configuration-Software - Setup-Parameters

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



Configuration-Software - Flow Characteristic Functions

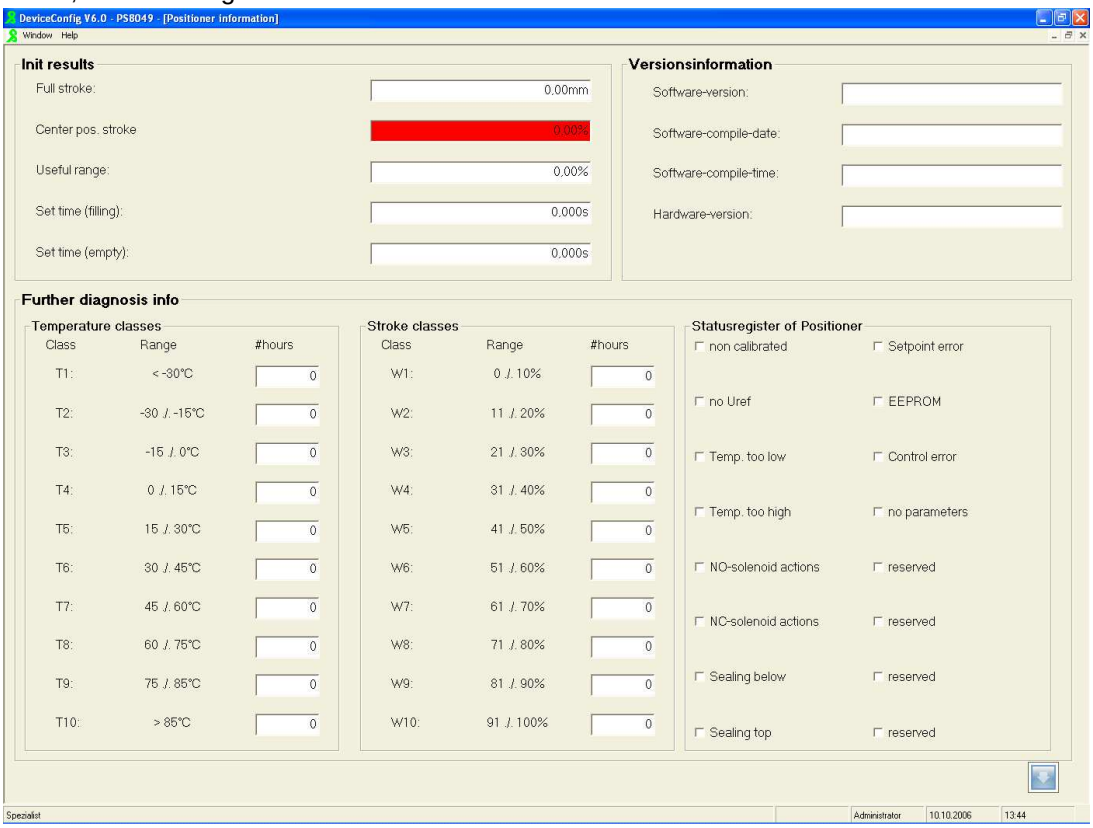
Adjustment of flow and display of various flow related functions.



Digital Positioner 8049

Configuration-Software - Informations of the positoiner

Information of valve stroke, running time, soft- and hardware-versionen, achieved temperature- and stroke levels, error messages



Positioner 8049 top mounted on GS-Control Valve Type 8021

Positioner 8049 top mounted on Aseptic Right Angle Control Valve Type 6021