

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:

- Ex II 2G Ex ia IIC T3/T4 for Type 8049-Ex
- 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 NI/min.	according the version	50 NI/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, CO ₂ ,...)		
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)		

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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: Tamb = -10 ... +40°C T3: Tamb = -10 ... +75°C	T4: Tamb = -10 ... +40°C T3: Tamb = -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

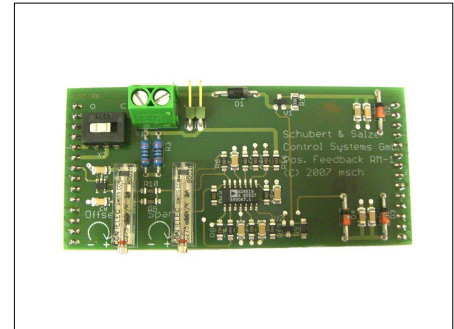
Analogue feedback module RM-1

- 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°C *
Temperature coefficient	< 0,2% / K

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

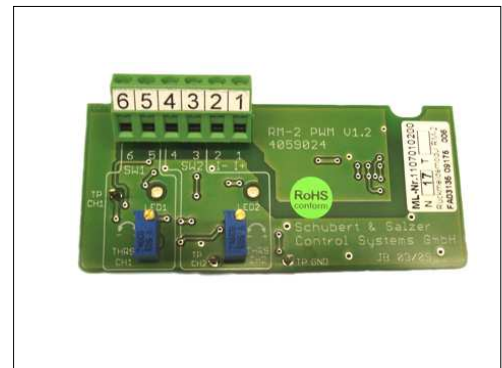


Feedback module RM-2

- 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 adjustable (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°C
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

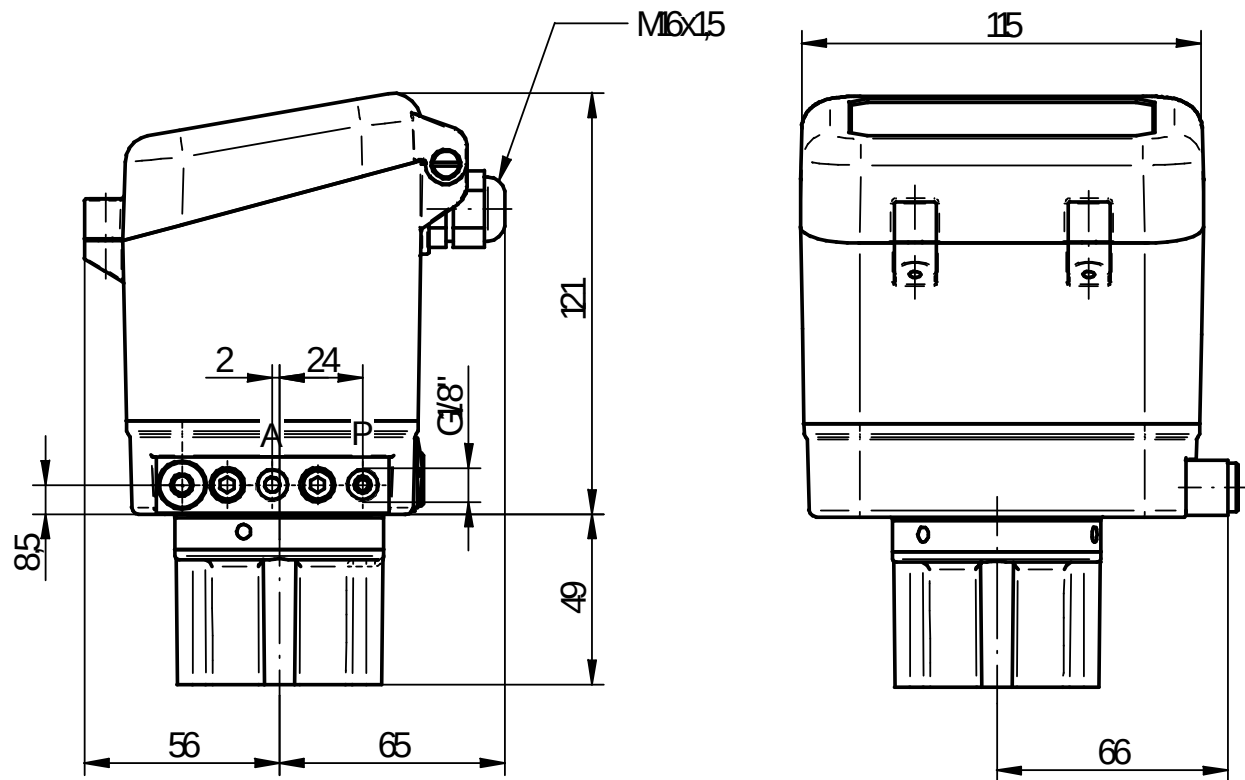


Digital Positioner 8049

														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 acuator																				
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 (only 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

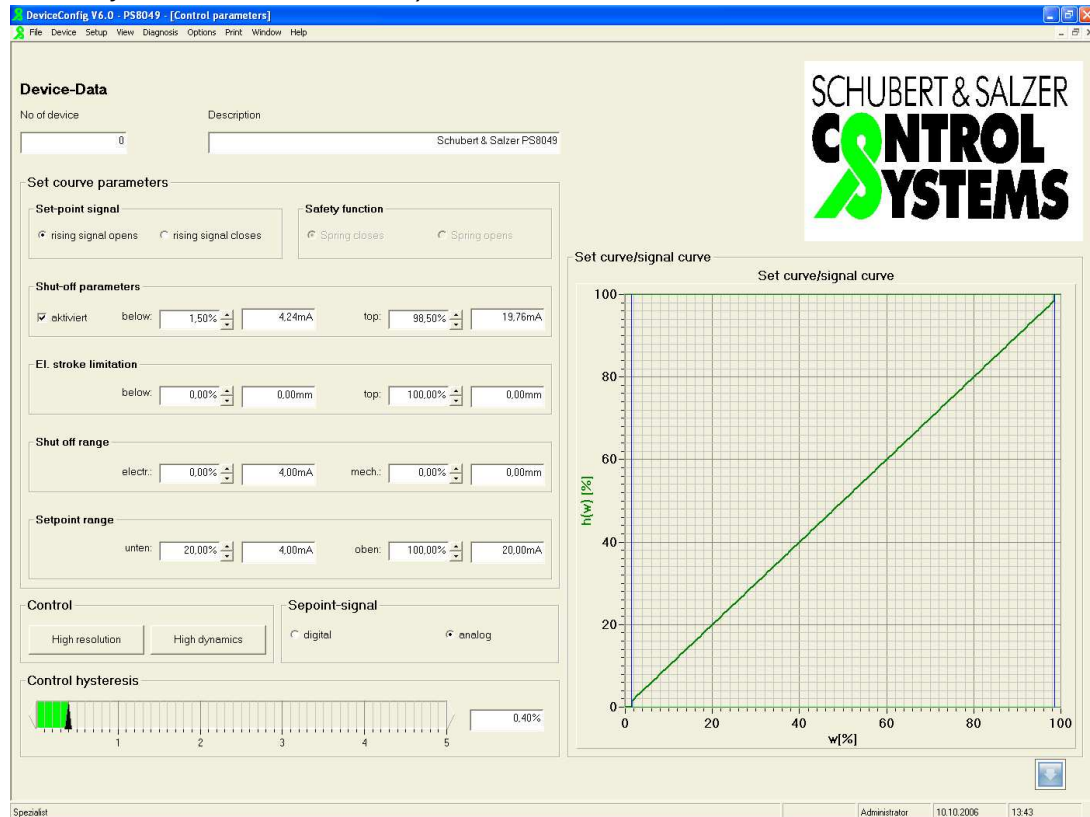
Measurements



Digital Positioner 8049

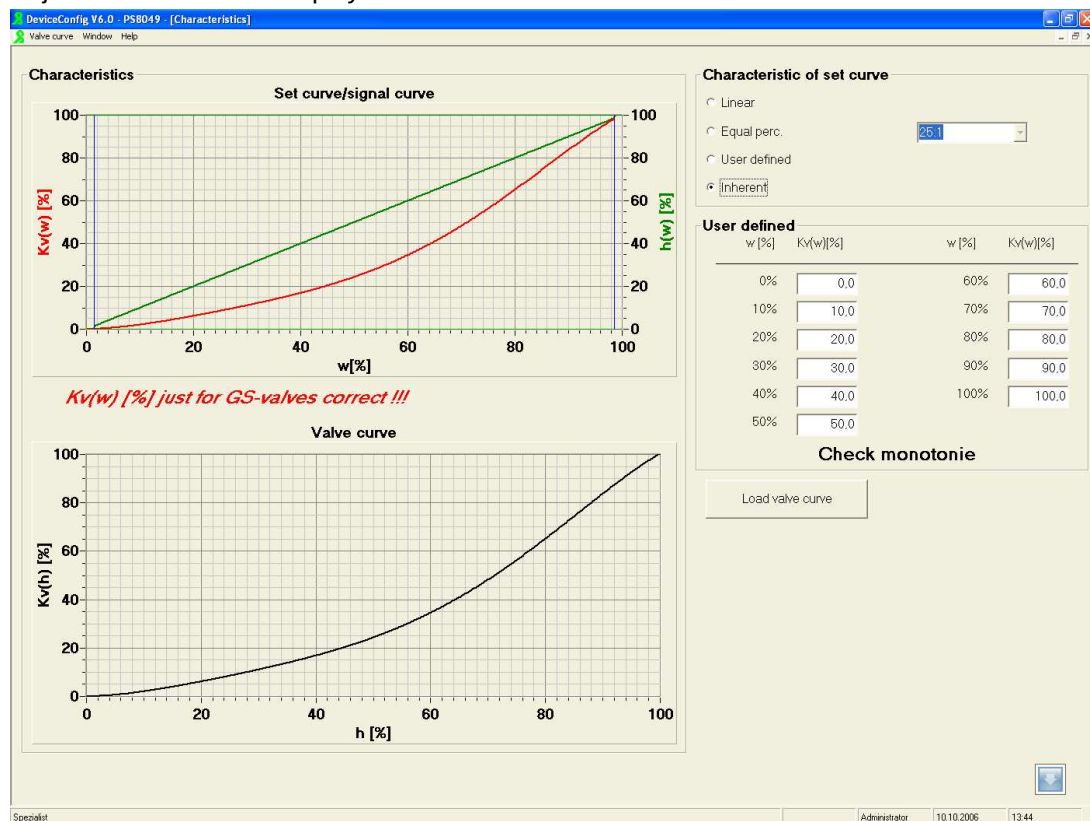
Configuration-Software - Setup-Parameters

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

DeviceConfig V6.0 - PS8049 - [Positioner information]

Window Help

Init results		Versionsinformation	
Full stroke:	0.00mm	Software-version:	
Center pos. stroke	0.00%	Software-compile-date:	
Useful range:	0.00%	Software-compile-time:	
Set time (filling):	0.000s	Hardware-version:	
Set time (empty):	0.000s		

Further diagnosis info

Temperature classes			Stroke classes			Statusregister of Positioner	
Class	Range	#hours	Class	Range	#hours	☐ non calibrated	☐ Setpoint error
T1:	< -30°C	0	W1:	0 / 10%	0	☐ no Uref	☐ EEPROM
T2:	-30 / -15°C	0	W2:	11 / 20%	0	☐ Temp. too low	☐ Control error
T3:	-15 / 0°C	0	W3:	21 / 30%	0	☐ Temp. too high	☐ no parameters
T4:	0 / 15°C	0	W4:	31 / 40%	0	☐ NO-solenoid actions	☐ reserved
T5:	15 / 30°C	0	W5:	41 / 50%	0	☐ NC-solenoid actions	☐ reserved
T6:	30 / 45°C	0	W6:	51 / 60%	0	☐ Sealing below	☐ reserved
T7:	45 / 60°C	0	W7:	61 / 70%	0	☐ Sealing top	☐ reserved
T8:	60 / 75°C	0	W8:	71 / 80%	0		
T9:	75 / 85°C	0	W9:	81 / 90%	0		
T10:	> 85°C	0	W10:	91 / 100%	0		

Specialist Administrator 10.10.2006 13.44

Positioner 8049 top mounted on GS-
Control Valve Type 8021



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



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