



PSL-AMS

Intelligent Linear Electric Actuators

The planning of process plants in the water, oil and gas, food and pharmaceutical industry as well as industrial utilities requires the ability to combine complex individual projects.

Very often, processes have to be modified or optimised at short notice. Actuators should be built in a way that they can be adapted to changing conditions fast.

State of the art for new process plants or for upgrades are the electric linear actuators the programmable AMS series



- ◆ Speed-controlled actuation The output is generated by a 24 VDC motor, which is controlled by the electronics via pulse width modulation (PWM), i.e. it is operated at variable speed. Absolute-coded feedback is done with a precision potentiometer. AMS standard equipment comprises positioner and active feedback function, automatic commissioning as well as comprehensive diagnostics functions.
- ◆ Electrical connection The electrical wiring of PSL-AMS is done directly to the terminal blocks in the integrated terminal box.
- ◆ Parameterisation via software Via the communication software PSCS it is possible to adjust valve-specific details, actuation thrust/torque and speed, to configure alerts, and to do a freely programmable valve curve correction.
- ◆ Diagnostics function The diagnostics function of the communication software PSCS allows to retrieve counting values (such as operating hours, number of start-ups and running time of motor) and sets of running parameters (such as the analogue set value input actual position value, currently required motor torque and inside temperature of the actuator). The actual values can be graphically displayed and analysed using the monitor function. Thus the AMS concept allows proactive maintenance and as a result an increase in process safety.
- ◆ Automatic commissioning The automated one key commissioning is a standard function.
- ◆ Power failure backup Integrated emergency supply on the basis of super-capacitors. Enables the actuator to perform an emergency operation in case of power failure to a freely adjustable safety position (Option).
- ◆ Mechanical design The mechanical part of the PS-AMS actuator consists of the components of PS Automation's standard actuators with their well-proven components, namely a robust spur gear with trapezoidal thread in PSL-AMS. All AMS actuators are lubricated for life and therefore are maintenance-free

Technical Data

		PSL202 AMS11	PSL204 AMS11 AMS12	PSL208 AMS11	PSL210 AMS11 AMS12	PSL214 AMS12	PSL320 PSL325 AMS13
Thrust	kN	2,3	4,5	8	10	14	20/25
Stroke	mm	50	50	50 opt. 65	50 opt. 65	65	60 100 (24 V)
Pillar distance	mm	100	100	100	100	100	155
Manual override		Handwheel Knob	Handwheel Knob	Handwheel Knob	Handwheel Knob	Handwheel Knob	Handwheel
Handwheel dia.	mm	59	59	59	59	59	
Weight approx.	kg	7	7	10/12	10/12	12	23
Operating speed	mm/s	0.45 - 0.9	0.45 - 0.9	0.3 - 0.7	0.2 - 0.35	0.65 - 1.3	0.2—0.4
Power supply		24 V, 115 V, 230 V, 320...575 V AC 50/60Hz, 24 V DC					
Motor protection		electronic motor current monitoring with safety cut-off					
Duty cycle as per IEC 60034-1,8		S2 30 min S4 50% ED at 25°C					
Permitted ambient temperature		-20 to +60°C					
Mounting position		any position, except cover pointing downwards					
Conduit entries M20x1,5		2 pcs.					
Control (options)		Analogue signal, split range, 24 V binary, fi eldbus					
Input and output signals		0 (4) - 20 mA, 0 (2) - 10 V					
Enclosure acc. to EN 60529		IP65 ¹⁾				IP67	
Cover material		Polycarbonate, cast aluminium for stroke 65 mm or IP67 version					
Gear case material		high quality aluminium die casting					

Electrical Connections

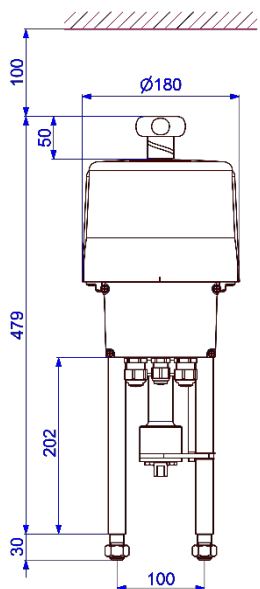
																	1-Phasen Wechselfspannung / DC 1-Phase AC / DC				3-Phasen 3-Phase AC										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	⊕		RJ-45 TTL	Taster Button	L1	L2	L3	PE	
↑	↑	↑	↓	↓	↓	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕			↕	↕	↕	↕	
+ 0(2) - 10 V	+ 0(4) - 20 mA	GND	+ 0(2) - 10 V	+ 0(4) - 20 mA	GND	max. Last / max. Load 100 mA bei / at 24 VDC		L+/ AUF/ OPEN	N/-	L+/ ZU/ CLOSE	L+/ (24V AC/DC)	N/- (24V AC/DC)	21 - 40 VDC / 100 mA	+ 0(2) - 10 V	+ 0(4) - 20 mA	GND	(Option)	(Option)	(Option)	(Option)	(Option)	L+ (siehe Typenschild/ see tag plate)	N/- (siehe Typenschild/ see tag plate)	PE	(Option)		400VAC	400VAC	400VAC	Schutzerleiter / protective conductor	
Sollwert- Eingang	Aktive Positions- rückmeldung		Störmeldung potentialfrei	Binäre Ansteuerung	Netz- ausfall- signal	Ver- sor- gung	Istwert	24 V AC/DC	115 V - 230 V AC	(Option)				Zu / Closed	Auf / Open	Wegschalter potentialfreier Kontakt	Versorgungs- spannung	Feldbus- Anschluß	PC Kommuni- kation	Inbetrieb- nahme	Versorgungs- spannung					Power supply voltage	Fieldbus interface	PC communi- cation	Com- missio- ning	Power supply voltage	Schaltnetzteil
Galvanisch getrennt / Galvanically isolated 1 kV													Process-Sensor																		

Accessories / Options

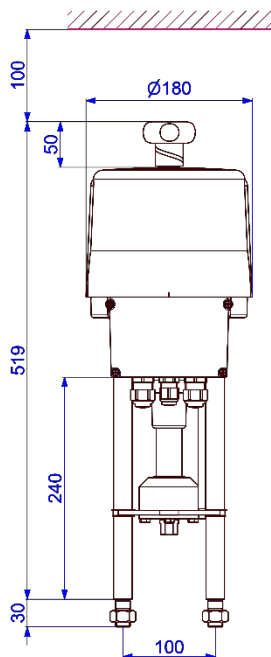
Add'l position switches	2WE	Potential-free additional position switches with silver contacts (0.1 A - 10 A switching current)
Add'l position 2WE switches gold	Gold	Potential-free additional position switches with gold contacts (0.1 mA - 100 mA switching current)
Binary inputs	115-230VAC*	Binary input voltage of 115-230 VAC for ON/OFF control
Fail-safe*	PSCP	Emergency power supply based on supercapacitors, safety position OPEN, CLOSED or free defined position
Fieldbus interface*		Digital transmission of nominal and actual value per mill or percent, report of monitoring and diagnostic data using Profibus DP (PSPDP) or CANOpen (PSCA) interfaces, additional interfaces available on request
Local control	PSC.2	Illuminated display to show the actuator status and lockable selector to switch between modes: automatic, manual process ON/OFF, STOP and parameter menu. Control buttons for manual movement, menu operation and adjustment of parameters, display of diagnostic information
Remote local control		Mounting separately from the actuator (incl. 10 m connection cable)
Data cable	PSCS-USB	USB data cable enables the communication between the actuator and a PC by using the software PSCS
Fault indication relay*	FIR	Potential-free opening contact provides a freely definable collective fault signal
Fail-safe port*	FSP	Signal port to drive to a "safety position", selectable fail-safe position, standard 24 V
IP67		Increased enclosure IP67
Heating resistor	HR	Heating resistor to prevent condensation

AMS DIMENSIONS

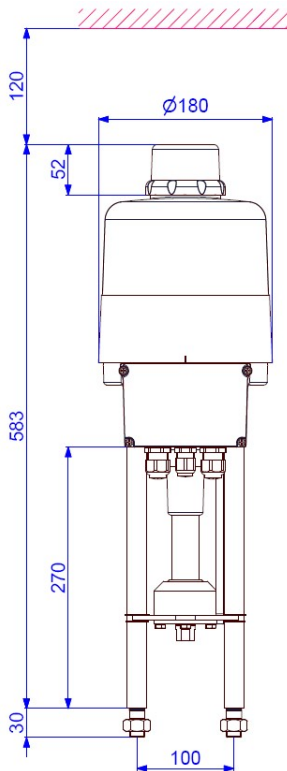
PSL202-204AMS



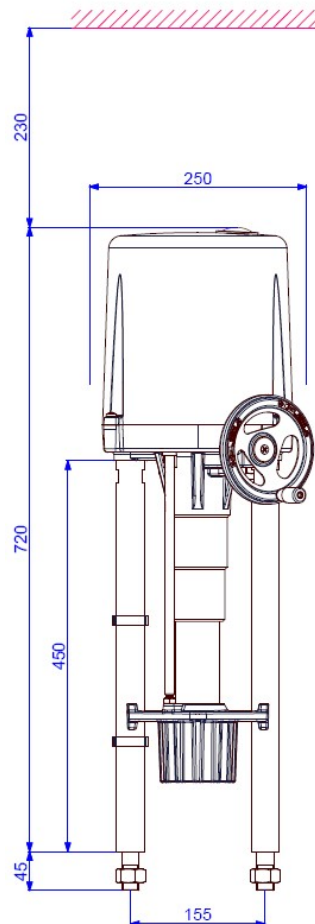
**PSL208-214AMS
(Stroke 50)**



**PSL208-214AMS
(Stroke 65)**



PSL320-325AMS



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