

STANDARD

SP 0

STANDARD EQUIPMENT:

- Voltage 230 V AC
- Terminal board connection
- 2 position switches
- Mechanical connection - flange ISO 5211
- Enclosure protection IP 54



Specification table SP 0

Order code

280. X - X X X X X / X X

Climate Resistance	Ambient Temperature	Corrosivity Category ¹⁰⁾	Enclosure	
Standard	-25°C ... +55°C	C3	IP54	0
	-25°C ... +55°C	C3	IP67	1
	-25°C ... +55°C	C3	IP68 ¹¹⁾	5
Tropics and Wet	-25°C ... +55°C	C4	IP67	2
Tropical dry and Dry	-25°C ... +55°C	C3	IP67	6
Sea	-25°C + +55°C	C4	IP 67	7

Electric Connection	Voltage of Electric Motor		Wiring Diagram	
To terminal board	230 V AC	50 Hz	Z19, Z40	0
	220 V AC			L
	24 V AC			3
	24 V AC	J		
	110 V AC	D		
	120 V AC	Z		
	24 V DC ²²⁾	-	Z216	A

Max. Load Torque ³²⁾	Max. Load Torque ³³⁾	Operating Time s/90° ³⁴⁾		Electric Motor	
ON - OFF Duly	Modulating Duly	50 Hz	60 Hz		
4 Nm	3.2 Nm	20	17	1W	0
8 Nm	6.4 Nm	40	34	1W	1
16 Nm	12.5 Nm	80	66	1W	2
25 Nm	20 Nm	120	100	1W	3
32 Nm	25 Nm	160	132	1W	4
12 Nm (7 Nm) ³⁰⁾	9.5 Nm (7 Nm)	15	13	2.75W	6
25 Nm (15 Nm) ³⁰⁾	20 Nm (15 Nm)	30	26	2.75W	7
32 Nm	25 Nm	60	50	2.75W	8
40 Nm	32 Nm	100	85	2.75W	9
40 Nm	32 Nm	130	110	2.75W	5
25 Nm ²²⁾	20 Nm	20 ²²⁾	17	1.92W	Q

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Notes:

10) Climate resistance according to ISO 9223 / EN ISO 12944-2.

11) IP 68-10 m / 48 hours.

22) Valid for 24 V DC only; 25 Nm; 20 s/90°; < 90°; Order code Q.

30) Actuators are self-locking up to the torque value indicated in brackets.

33) The actuator can be loaded with this torque under duty cycle S2 – 10 min, or S4 – 25%, 6–90 cycles per hour.

For duty cycle S4 – 25%, 90–1200 cycles per hour, the maximum load torque must be multiplied by 0.8.

Order code

280. X - X X X X X / X X

Operating Angle				
With stop ends ⁴²⁾	90°		F	
	120°		G	
Without stop ends	90°		B	
	120°		C	
	160°		D	
	0° ≤ 270° (≤ 220°) ^{40) 41)}		Z	
Transmitter	Connection	Output	Wiring Diagram	
Without transmitter	-	-	-	A
Potentiometer	Single	1x100 Ω	Z5c	B
		1x2000 Ω		F
Elektronický - proudový	2-wire	4-20 mA	Z10g	S
		0-20 mA	Z257j	T
	3-wire	4-20 mA		V
		0-5 mA		Y
	2-wire	4-20 mA	Z269t	Q
		0-20 mA	Z260j	U
	3-wire	4-20 mA		W
		0-5 mA		Z
Elektronický napěťový ⁵¹⁾	Passive	0 - 10 V	Z257k	D
	Active ⁵⁹⁾	0 - 10 V	Z260k	R

Mechanical Connection		Coupling Shape		Dimensional Drawing	
		ISO	Dimensions		
Flange ISO 5211	F03	D-9	9x9	P-1172	B
		L-9	9x9		T
		SD-9	9x9	P-1173	D
		SL-9	9x9		V
	F04	D-11	11x11	P-1172	A
		L-11	11x11		S
		SD-11	11x11	P-1173	C
		SL-11	11x11		U
Bracket ISO 5211	F05	D-14	14x14	P-1451/A	N
		D-11	11x11	P-1451/B	P
		H-14	14x18	P-1451/C	R
		D-14	14x14	P-1451/F	K
	F07	H-14	14x18	P-1451/E	L
		H-8	8x13	P-1451/D	M
		V-12	Ø12	P-1451/G	6
Stand	-	SL-11	11x11	P-1174 P-0100	E
Stand + Lever ⁶¹⁾	-	-	-		F
Stand + Lever + Pull-rod TV 160 ⁶¹⁾	-	-	-		G
For mixing valves KOMEX	-	-	-	P-1219	I
For mixing valves ESBE	-	-	-	P-1221	J

Additional Equipment		Wiring Diagram		
A	Disengagement without manual control ⁷⁰⁾	-	0	0
B	Manual control ⁷¹⁾	-	0	1
C	2 additional position switches	Z21 (Z218, Z216)	0	2
D	Space heater ⁷³⁾	Z218, Z216	0	5
H	Gold Coated contacts of microswitches, details after consultation with the manufacturer	-	4	0
Permitted combination code: A+C=03, B+C=04, A+D=06, B+D=07, C+D=08, A+C+D=09, B+C+D=10				

Notes:

34) Deviation of operating speed for the DC electric motor is from -50% up to +30% depending on load. For other voltages the deviation is ± 10%.

40) Operation angle ≤ 220° is valid for versions with additional positional switches S5,S6.

41) Valid for version without transmitter only.

42) Actuator does not have torque switching, therefore it must not run into stop ends.

51) Not valid for temperatures below -60°C.

59) Active position transmitter for version 24 V AC/DC only after agreement with producer.

60) Operating angle 90°.

61) Load torque can be specified as 32 Nm only.

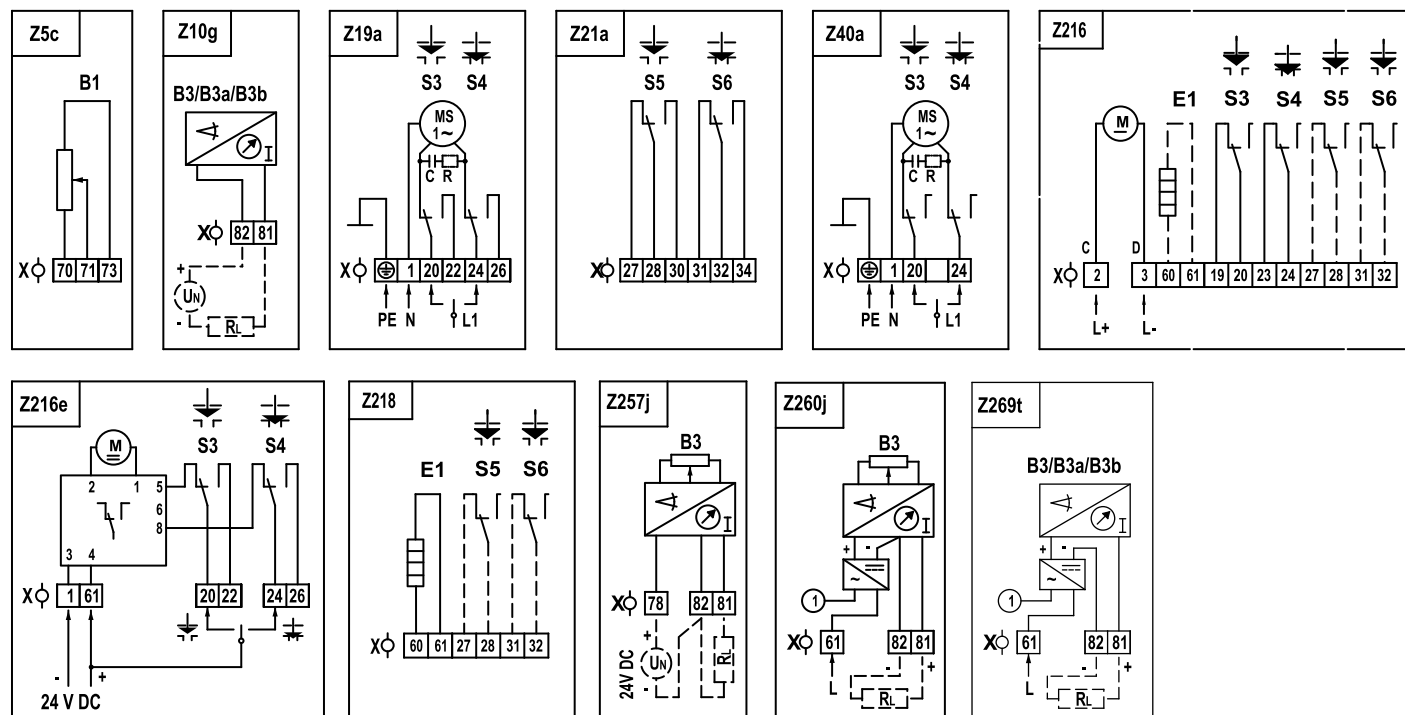
70) After disengagement of the gear with a button (on the side) the actuator can be operated with a lever or with a pull-rod (it does not contain any handwheel).

71) After disengagement the actuator can be operated manually with a handwheel placed on the upper cover (disengagement mechanism does not need to be specified).

73) Space heaters cannot be specified either with a 1W electric motor or with an electronic position transmitter.

Wiring diagrams

Terminal board connection



Electric connection:

to a terminal board with 12 terminals, wire cross section 1.5 mm², via 3 cable glands M16x1.5 for cable diameter 6 to 10.5 mm.

Notes:

1. Wiring connection is limited by max. number of 12 terminals.
2. For the EA version with additional position switches (S5, S6) and with potentiometer (B1) use wiring diagrams Z40a+Z21a+Z5c, or Z40a+Z218+Z5c.
3. The version of EA with supply voltage of 24 V AC does not require connection of an earthing cable PE.
4. Wiring configurations different from those shown in the catalogue are possible upon agreement with the manufacturer..

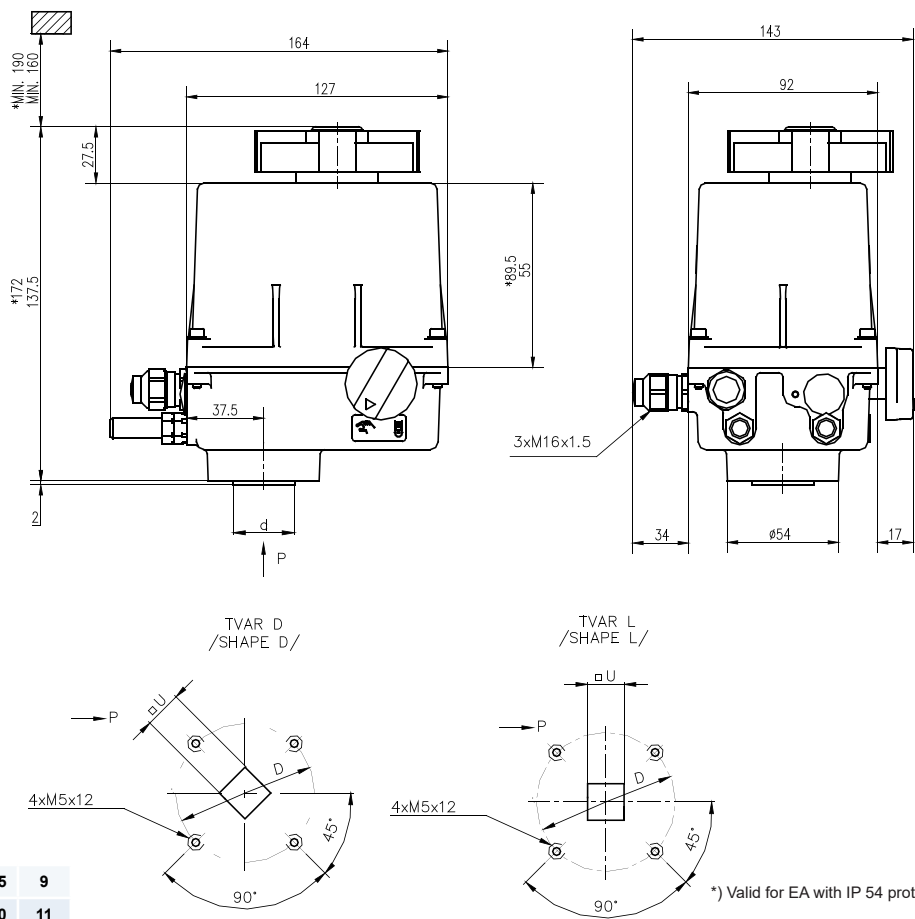
Legend:

Z5c.....connection of single potentiometer
 Z19a.....connection of electric motor with position switches
 Z21a.....connection of additional position switches
 Z23.....connection of electronic position transmitter - 2 - wire, passive
 Z40a.....connection of electric motor with position switches for the EA version with additional position switches and with potentiometer (Z21+Z22 or Z218+Z22)
 Z216.....connection of EA with electric motor 24 V DC
 Z216e.....connection of EA with electric motor 24 V DC with reverse module
 Z218.....connection of space heater with additional position switches
 Z257j.....connection of electronic position transmitter - 3 - wire, passive
 Z260j.....connection of electronic position transmitter, 3-wire, active
 Z269t.....connection of electronic position transmitter, 2-wire, active

Legend:

B1.....single potentiometer
 B3.....electronic position transmitter
 C.....capacitor
 E1.....space heater
 I.....output current signal
 M, MS.....1-phase electric motor
 R.....reducing resistor
 RL.....loading resistor
 S3.....position switch „open“
 S4.....position switch „closed“
 S5.....additional position switch „open“
 S6.....additional position switch „closed“
 X,X1,X2.....terminal board

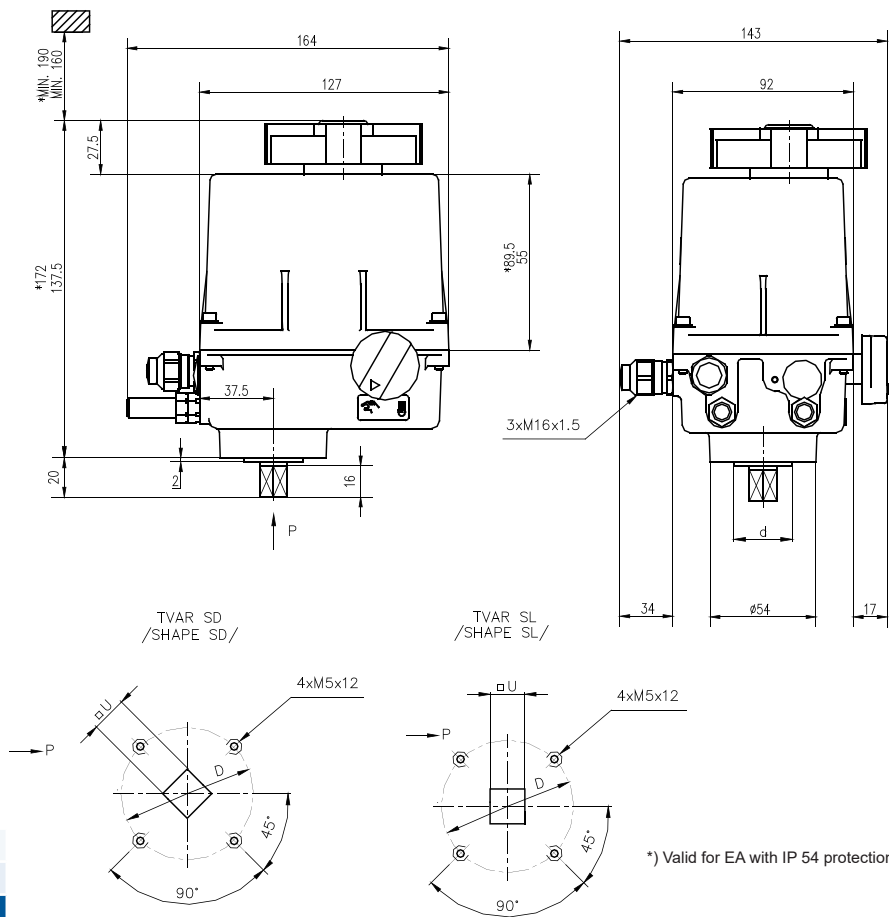
Dimensional drawing SP 0



F03	Ø36	Ø25	9
F04	Ø42	Ø30	11
Flange ISO 5211	D	d	U

*) Valid for EA with IP 54 protection without electronic transmitter

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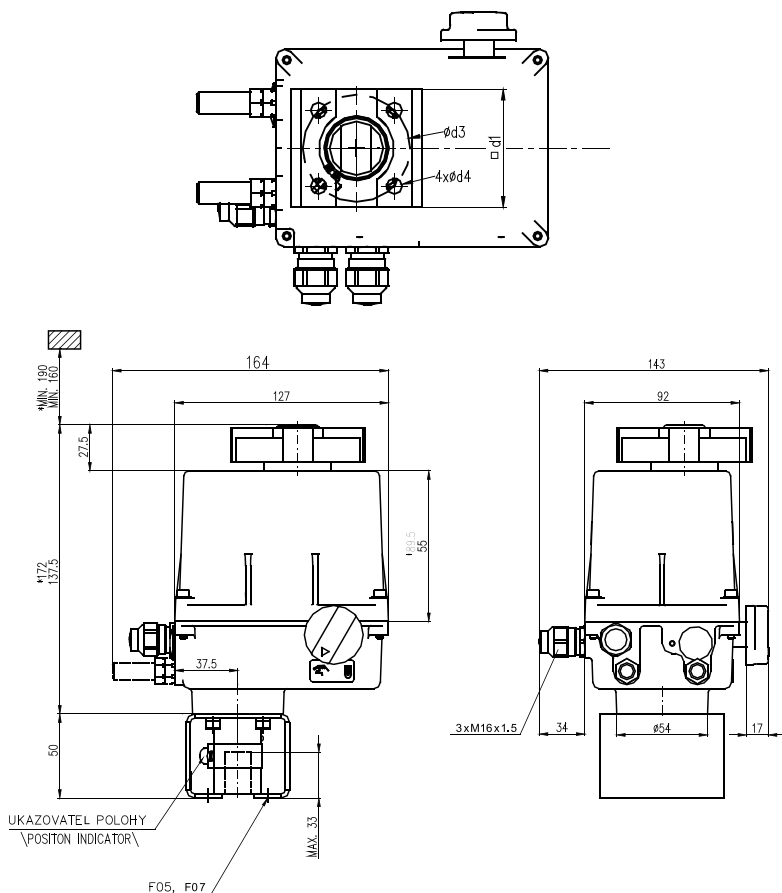


F03	Ø36	Ø25	9
F04	Ø42	Ø30	11
Flange ISO 5211	D	d	U

*) Valid for EA with IP 54 protection without electronic transmitter

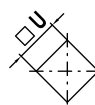
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Dimensional drawing SP 0

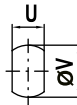


Coupling shape

Tvar A



Tvar C

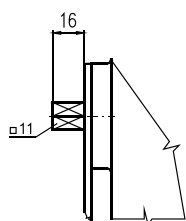


P-1451/G	F07	-	-	-	-	-	
P-1451/F		14	-	70	70	9	C
P-1451/E		14	18				A
P-1451/D		8	13				A
P-1451/C	F05	14	18	55	50	7	C
P-1451/B		11	-				A
P-1451/A		14	-				A
Version	Flange Size	U	ØV	d1	Ød3	Ød4	Coupling Shape

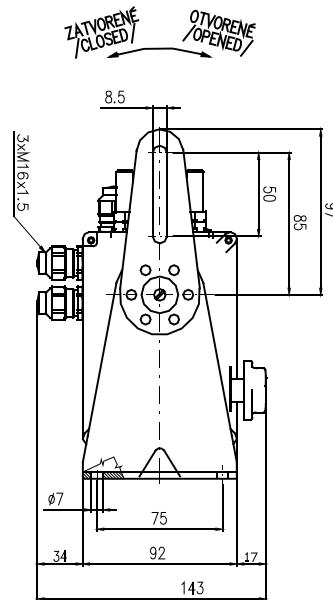
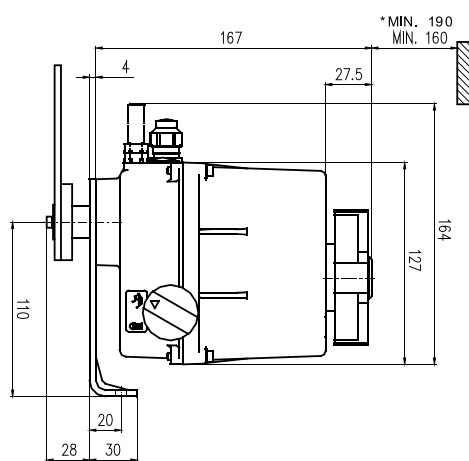
*) Valid for EA with IP 54 protection without electronic transmitter

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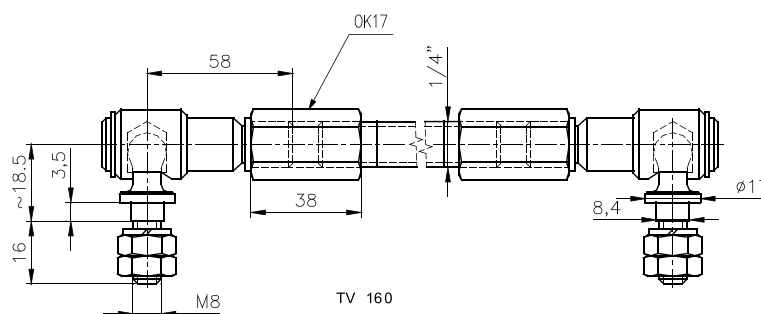
Mechanical connection SL-11 - code E according to specification table



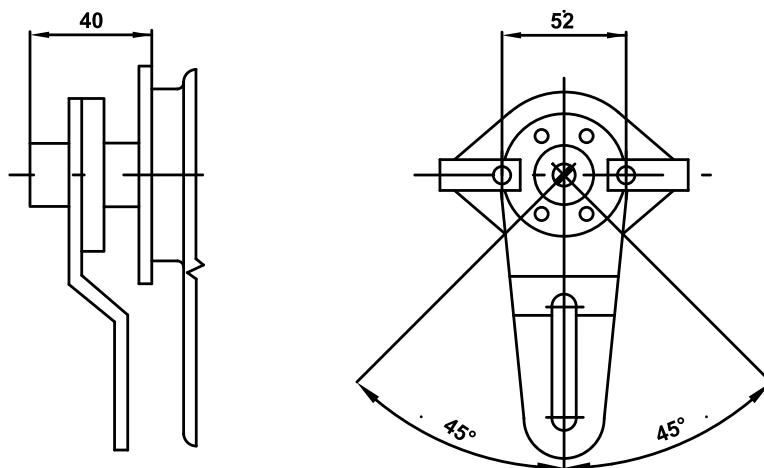
*) Valid for EA with IP 54 protection without electronic transmitter



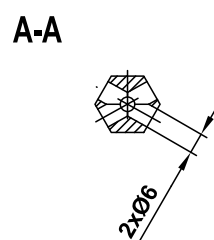
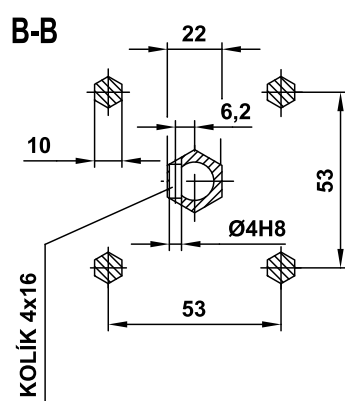
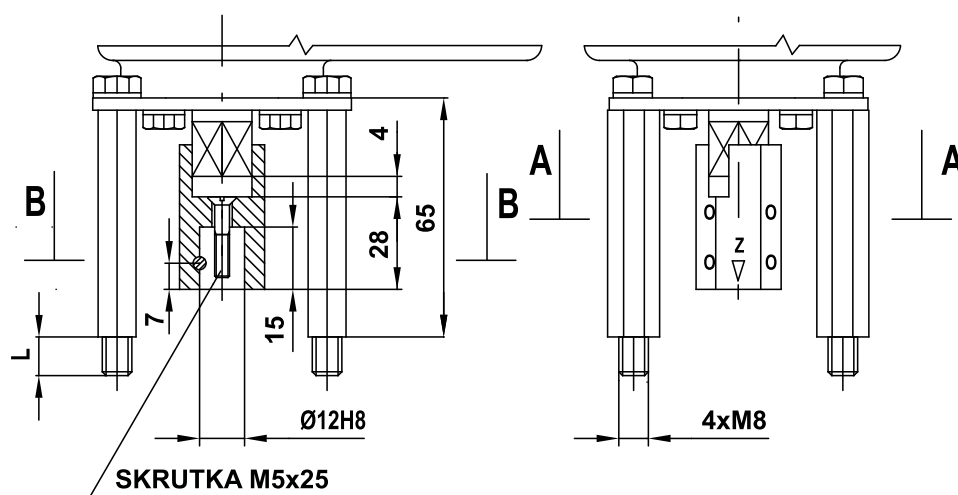
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P-0100



P-1219



*) Valid for EA with IP 54 protection without electronic transmitter

25	for DN 20, 25, 32, 40
9	for DN 50, 65, 80, 100, 125, 150
L	Notes

P-1221