

ELECTRIC ACTUATORS

AL 78-003 - AL 78-250

Description

AL 78 electric 90° actuator for operating ball valves and butterfly valves. Due to the self-locking gearbox the actuator retains its position in the event of a power failure. Compact designed actuator in epoxy painted aluminum with built-in thermal motor protection, manual operation and illuminated visual position indication.

Also available for control applications with digital control card type PCU and super capacitor type SCP (see page 3).

Installation

To be installed on valves with direct mounting or with a bracket and carrier on valves with 90° rotation. The actuators can be mounted in any position, but installations in applications with strong vibrations should be avoided.

Technical data

AL 78 type	Nm max	Operating time sec. 90° 50HZ	Gear wheel no. of turns	Power max (A) 24 VDC	Power max (A) 1-phase 230V	ISO 5211	Square
003	30	8	6	1,8	0,11	F03/F05/ F07	11
005	50	17	6	1,8	0,23	F03/F05/ F07	14
006	58	17	8,5	2,3	0,38	F07	17
009	88	17	8,5	3,5	0,56	F07	17
015	147	20	10	4,5	0,7	F07-F10	17
019	186	20	10	4,5	0,7	F07-F10	17
028	274	24	12,5	7,0	0,7	F10-F12	22
038	373	24	12,5	-	1,06	F10-F12	22
050	490	24	12,5	-	1,18	F10-F12	22
060	588	29	14,5	-	1,18	F12-F14	27
080	785	29	14,5	-	1,8	F12-F14	27
100	981	29	14,5	-	2,0	F12-F14	27
150	1471	87	43,5	-	1,18	F14 - F16	36
200	1962	87	43,5	-	1,80	F14 - F16	36
250	2450	87	43,5	-	2,15	F14 - F16	36

Supply voltage	230 VAC / 24 VDC
Operation	0° - 90° (adjustable ± 5°)
Operating torque	Recommended operating torque = 80% of specified maximum torque
Protection class	IP 67
Ambient temperature	-30° - +70°C (type 003 and 005: -20°)
Limit switches	2 mechanical potential-free switches. 2 mechanical limit switches.
Hand operation	Control wheel with automatic disconnection (type 003, 005: Only in de-energized position with Allen key (6 mm, included))
Heater	Built-in 20 W heating element to prevent water condensation (type 003: 2 x 1,5 W standard, type 005: 2 W standard)
Cable input	M20 x 1,5, 2 pcs (type 003: 1 pcs)

Options type 005

- Other voltages
- Explosion proof version
- High casing AL 78-005L with space for following options:
 - Control card 4-20 mA
 - Position sensor 4-20 mA/Potentiometer
 - Control module for local/remote operation
- Contact us for further information

Options type 006-250

- Control card 4-20 mA
- Protection class IP 68
- Extended rotation angles 120°, 135°, 180°, 270°, 300°
- Other voltages
- Other square
- Explosion proof version
- Local control unit
- Contact us for further information

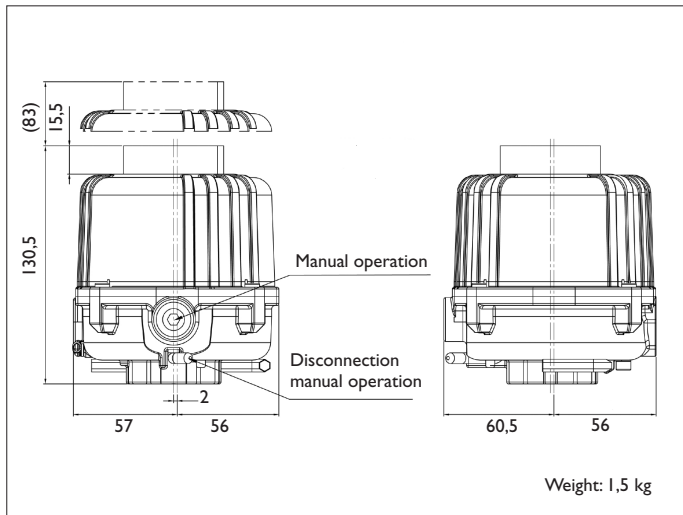


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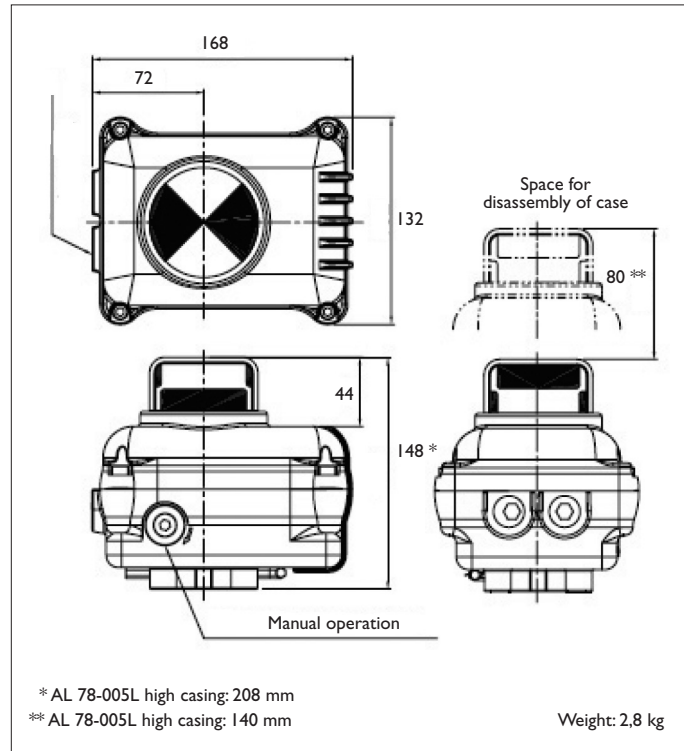
AL 78-003 - AL 78-250

Dimensions

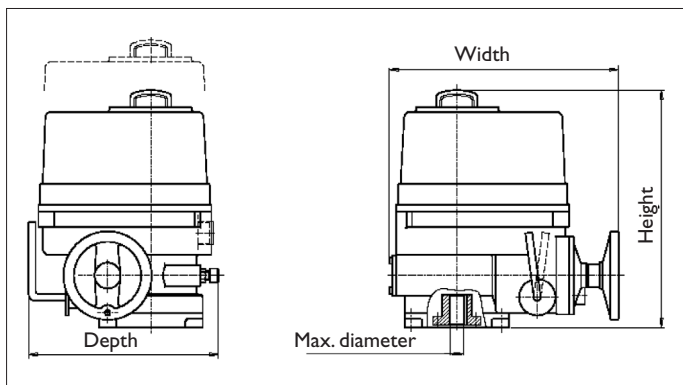
AL 78-003



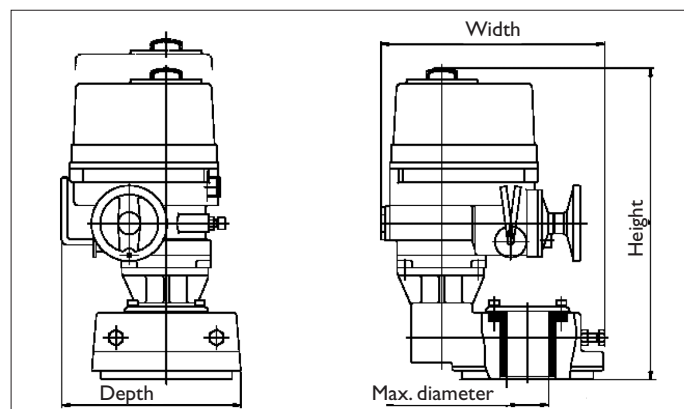
AL 78-005



AL 78-006 - AL 78-100



AL 78-150 - AL 78-250



AL 78 type	D max. Ø mm	Total height mm	Total width mm	Total depth mm	Weight kg
006	22	273	231	181	11
009	22	273	231	181	11
015	22	273	261	224	14
019	22	273	261	224	14
028	32	320	285	258	17
038	32	320	285	258	18
050	32	320	285	258	19
060	42	361	325	307	22
080	42	361	325	307	23
100	42	361	325	307	25

AL 78 type	D max. Ø mm	Total height mm	Total width mm	Total depth mm	Weight kg
150	75	556	388	318	68
200	75	556	388	318	70
250	75	556	388	318	70

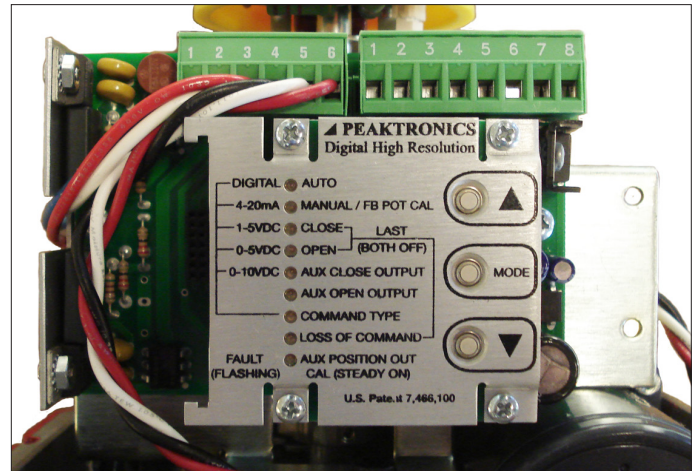
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PCU - Digital controller

As an option for type 006-250, there is PCU DHC-100, a digital control card for control and positioning 90° ball valves and butterfly valves. Suitable for simple as well as demanding industrial process applications where a simple but reliable regulation is desired.

The DHC-100D control card has a resolution of 450 points with a 90° turn. Three buttons configure all parameters and the direction of rotation. The card has an adaptable control function that continuously regulates the load and the characteristics of the actuator.



SCP - Super capacitor

Optional electric 90° actuator that can be operated in the event of a power failure using a built-in supercapacitor.

- "Fail to position" function
- Housing in anodized aluminum with powder epoxy coating (Polyester, TGIC-Free) for corrosion protection
- Protection class IP 67 with O-ring sealings makes the actuator suitable for outdoor applications (IEC IP67, NEMA 4 and 6)
- A built-in 20 W heating element keeps the electronics free of condensation.
- Self-locking gear
- Built-in torque switches (open / closed) (not type 006 and 009) protects the actuator and valve from electrical and mechanical overload.
- Depending on the user's requirements, the actuator may stop at the latest mode or run to closed or open end position in case of power failure.
- LED indicator shows the charging status of the super capacitor.

Available as option for type:

- AL 78-006
- AL 78-009
- AL 78-015
- AL 78-019
- AL 78-028



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