

505-507 VALVES WITH SA05 ELECTRIC ACTUATOR

FEATURES

The 505+SA and 507+SA cast iron ball valves are dedicated to the automatic opening/shut-off of pipes carrying low pressure unloaded common fluids. The 505-507 full bore split body ball valve has the EC 2014/68 certification. The 505 valve complies with the NF 29323 face-to-face standards and the 507 valve complies with the DIN 3202 F4/F5 face-to-face standards. The ISO 5211 pad allows a direct mounting of the SA05 actuator. It is perfectly suitable for an indoor or outdoor industrial use.

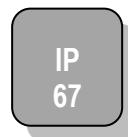
AVAILABLE MODELS

505 : Face to face according to NF 29-323 F18 standard for DN 40.

507 : Face to face according to DIN 3202 F4/F5 standard for DN 15 to 40.

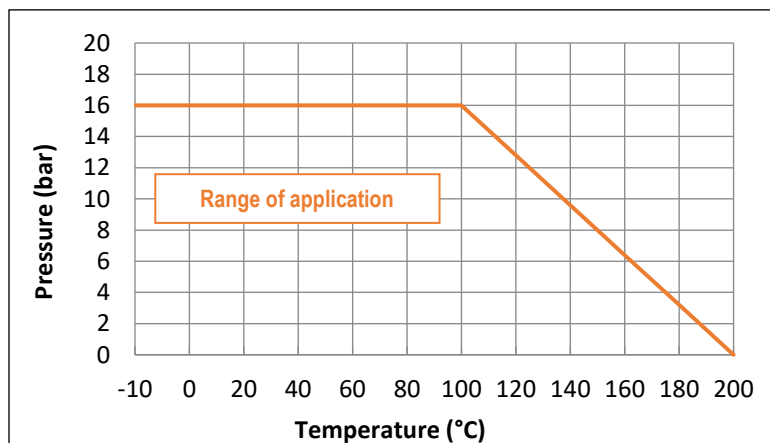
Flanged connections RF PN10/16.

Supply voltages : 12V dc, 24V ac-dc and 230V ac.



LIMITS OF USE

| | |
|------------------------|------------------------------------|
| Fluid pressure : PS | 16 bar (20°C) |
| Fluid temperature : TS | -10°C / +200°C |
| Prohibited use | Steam, compressed air and gases |
| Ambiant temperature | - 20°C / + 70°C |
| Service factor | S2 : 15mn - S4 : 50% |



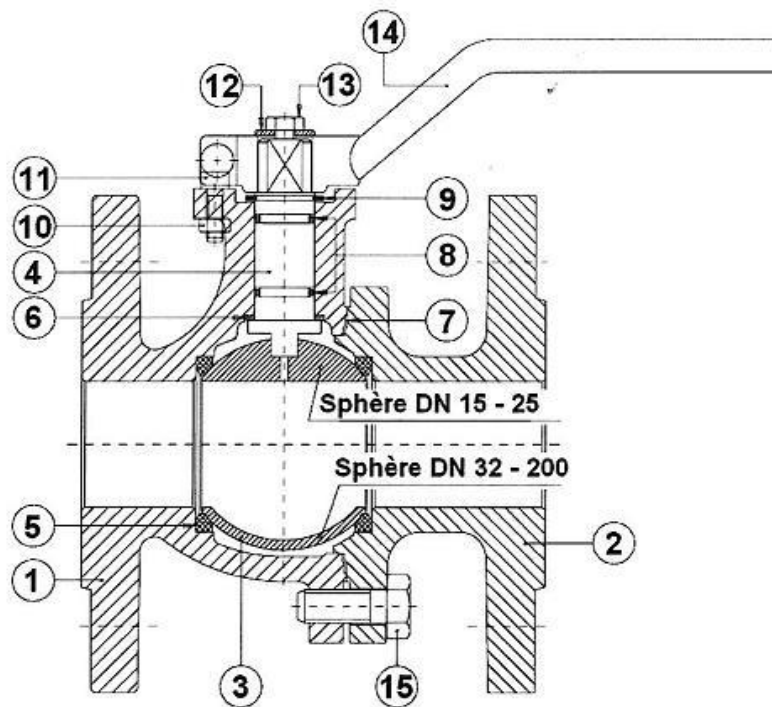
Information given as an indication only, and subject to possible modifications



505-507 VALVES WITH SA05 ELECTRIC ACTUATOR

DIRECTIVES AND MANUFACTURING STANDARDS

| OBJET | Standard | OBJET | Standard |
|--|-----------------------------------|----------------------------|--------------------|
| Pressure Equipment Directive 2014/68/EC | DN 15 and 20 : not subject | Final test | EN 12266-1 |
| | DN 25 to 200 : category I | Face-to-face dimension 505 | NF 29-323 |
| Conception | DIN 3357 | Face-to-face dimension 507 | EN 558-1 series 27 |
| Size | DIN 3840 | Marking code | EN 19 |
| Flanges dimension | EN 1092-2 | Motorisation connection | ISO 5211 |



CONSTRUCTION

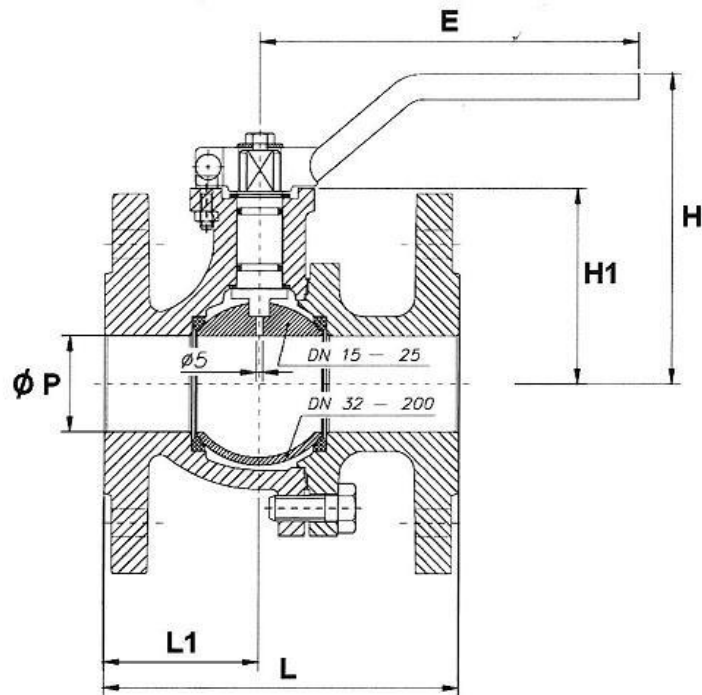
| No. | Name | Material | No. | Name | Material |
|-----|----------------|------------------------|-----|--------|--------------------|
| 1 | Body | EN GJL-250 Cast Iron | 8 | O ring | FKM |
| 2 | End | EN GJL-250 Cast Iron | 9 | Washer | DIN 471 steel |
| 3 | Ball DN 15-25 | SS 303 Stainless steel | 10 | Nut | DIN 934-8 steel |
| 3 | Ball DN 32-200 | SS 304 Stainless steel | 11 | Screw | DIN 912- 8.8 steel |
| 4 | Stem | SS 304 Stainless steel | 12 | Washer | Zinc plated steel |
| 5 | Seat | PTFE | 13 | Screw | DIN 935 5.6 |
| 6 | Friction ring | PTFE | 14 | Handle | Steel |
| 7 | Body gasket | PTFE | 15 | Screw | DIN 933 5.6 |

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505-507 VALVES WITH SA05 ELECTRIC ACTUATOR

DIMENSIONS (mm)



| DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
|-------------|------|------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| Ø P | 13 | 17 | 24 | 31 | 38 | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
| L (505) | / | / | / | / | 136 | 142 | 154 | 160 | 172 | 186 | 200 | / |
| L (507) | 115 | 120 | 125 | 130 | 140 | 150 | 170 | 180 | 190 | 200 | 210 | 400 |
| L1 | 49 | 55.5 | 51.5 | 53 | 61 | 62 | 81.5 | 79 | 94 | 120.5 | 155 | 190 |
| H | 92 | 95.5 | 102.2 | 114.7 | 119 | 127 | 141 | 151.5 | 176.5 | 208 | 254.2 | 293.5 |
| H1 | 48.5 | 53 | 59.5 | 72 | 77 | 85 | 98 | 108.5 | 134 | 165 | 190 | 229 |
| E | 170 | 170 | 170 | 170 | 302.5 | 302.5 | 224 | 335 | 350 | 350 | 500 | 500 |
| Weight (kg) | 2.12 | 2.72 | 3.62 | 5.32 | 6.90 | 9.00 | 11.7 | 14.7 | 20.2 | 33.8 | 49.8 | 81.8 |

FLOW-RATE COEFFICIENT Kv (m³/h)

| DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
|----|------|------|-----|-----|-----|-----|-----|------|------|------|------|-------|
| Kv | 37.4 | 74.8 | 105 | 176 | 223 | 416 | 660 | 1200 | 1980 | 3600 | 5040 | 10890 |

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505-507 VALVES WITH SA05 ELECTRIC ACTUATOR

SA ELECTRICAL MOTORISATION

Suggested standard SA actuation under the following conditions :

- Electric actuator with an IP 67 epoxy coated aluminium enclosure and steel gears,
- A minimum 1.3 safety factor compared with the valve nominal torque rating,
- A maximum pressure differential up/downstream of 10 bar (=ΔP)

Electric actuator mounted with stainless steel bracket and coupler according to the EN 15081 standard.




| DN | Actuator | Power | Intensity 230V AC | Intensity 24V AC-DC | Time* | Standard equipment of the electric actuator | |
|-----|---|-------|----------------------|------------------------|-------|--|--|
| 15 | SA 05 | 6 W | 28 mA | 1,8 mA | 17 s | 2 adjustable limit switches. 2 dry auxiliary switches. 5 W anti-condensation heater. Actuator thermal cut-out Manual override by key. Backlit position indicator (except for SA-X). Electrical connection: 2 gland packs M20x1,5. | |
| 20 | SA 05 | 6 W | 28 mA | 1,8 mA | 17 s | | |
| 25 | SA 05 | 6 W | 28 mA | 1,8 mA | 17 s | | |
| 32 | SA 05 | 6 W | 28 mA | 1,8 mA | 17 s | | |
| 40 | SA 05 | 6 W | 28 mA | 1,8 mA | 17 s | | |
| 50 | Refer to 505-507 + NA electric actuator | | | | | | |
| 65 | | | | | | | |
| 80 | | | | | | | |
| 100 | | | | | | | |

For any other operating conditions, please contact us.

* indicative time for actuator running empty

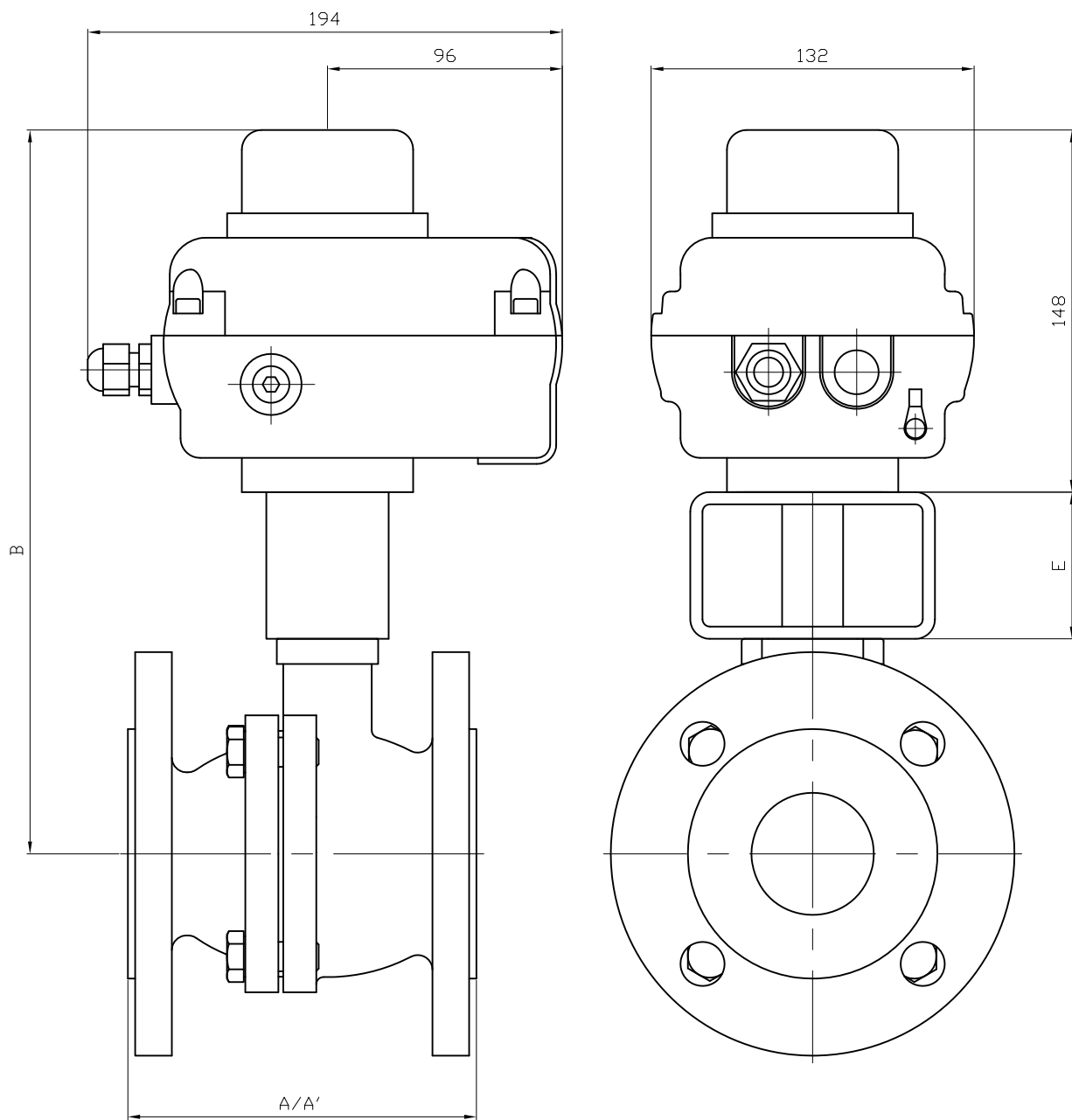
MOTORISATION OPTIONS

There are many options for which you are invited to contact our sales service:

| 1 | 2 | 3 |
|---|---|--|
| SA 05 S : Slow closing electric actuator 70 s | SA 05 PCU : Regulation actuator 4-20 mA or 0-10 V | SA 05 RBP : Safety actuator with an integrated battery emergency shutdown |
|  |  |  |
| 4 | SAPUI electric actuator with a feedback potentiometer | |
| 5 | Electric actuator sized for a maximum pressure differential up/downstream over 10 bar (=ΔP) | |
| 6 | NA electric actuator with a declutchable manual override by handwheel | |

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| DN | 15 | 20 | 25 | 32 | 40 |
|---------|-------|-----|-------|-----|-----|
| A(505) | / | / | / | / | 136 |
| A'(507) | 115 | 120 | 125 | 130 | 140 |
| B | 256.5 | 261 | 267.5 | 280 | 285 |
| E | 60 | 60 | 60 | 60 | 60 |

SA 05 ELECTRIC ACTUATOR

FEATURES

The SA 05 electric actuator is intended for motorising industrial 1/4" turn valves. The torque is of 50 Nm. With a compact, robust construction and IP67 epoxy-coated aluminium housing, the SA actuator is especially well suited for motorising ball valves and butterfly valves installed in workshops or outdoors. The SA 05 has a manual key control and a 3D visual position indicator. Compliant with the EN 15714-2 standard.

AVAILABLE MODELS

Supply voltages: 230 Vac (50-60Hz), 24 Vac/dc and 12 Vdc.

Options: 110 Vac, feedback potentiometer, local command.



LIMITS OF USE

| | |
|---------------------|----------------------------------|
| IP Code | IP 67 |
| Ambient temperature | - 20°C / +70°C |
| Service factor | S2: 15mn - S4: 50% |



MECHANICAL FEATURES

| | |
|-------------------|-----------------------------|
| Gear box | treated steel pinions |
| Torque | 50 Nm |
| Angle of rotation | 90° +/- 5° |
| Declutching | Without |
| Override control | by key (except for SA 05 S) |

| Actuator | SA 05 | | | SA 05 S | |
|----------------------|---------------------|---------|-----------|---------|---------|
| | Voltage | 230V AC | 24V AC/DC | 12V DC | 230V AC |
| Torque (Nm) | 50 | | | | |
| Manoeuvring time (s) | 17 | 10 | 11 | 100 | 100 |
| ISO 5211 | F03/F05/F07 star 14 | | | | |

ELECTRICAL FEATURES

| | | | |
|--------------------|---------------------------|-----------------------|------------------|
| Motor protection | Thermal switch | Anti-condensation | 5W heater |
| Limit switches | 2 adjustable switches | Electrical connection | 2 x P.E. M20x1.5 |
| Auxiliary switches | 2 adjustable dry switches | | |

| Actuator | SA 05 | | | SA 05 S | |
|-------------|---------|---------|-----------|---------|---------|
| | Voltage | 230V AC | 24V AC/DC | 12V DC | 230V AC |
| Power (W) | 6 W | 15 W | 6 W | 6 W | 6 W |
| Current (A) | 0.23 | 1.8 | 3.2 | 0.23 | 1.8 |

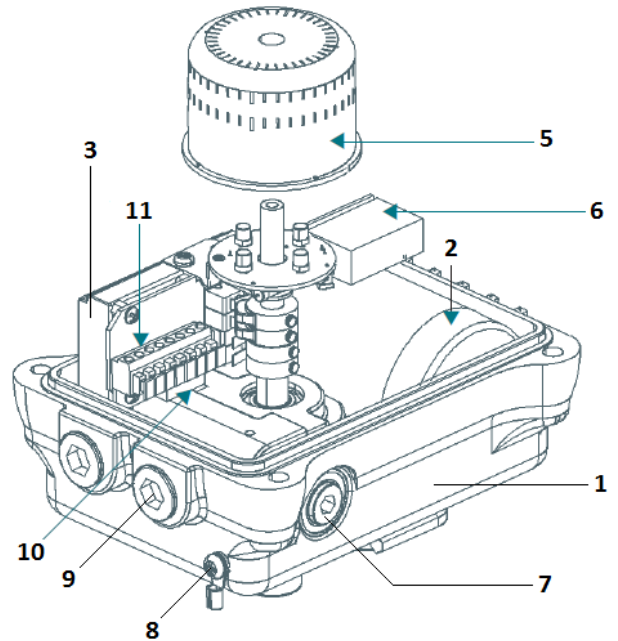
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SA 05 ELECTRIC ACTUATOR

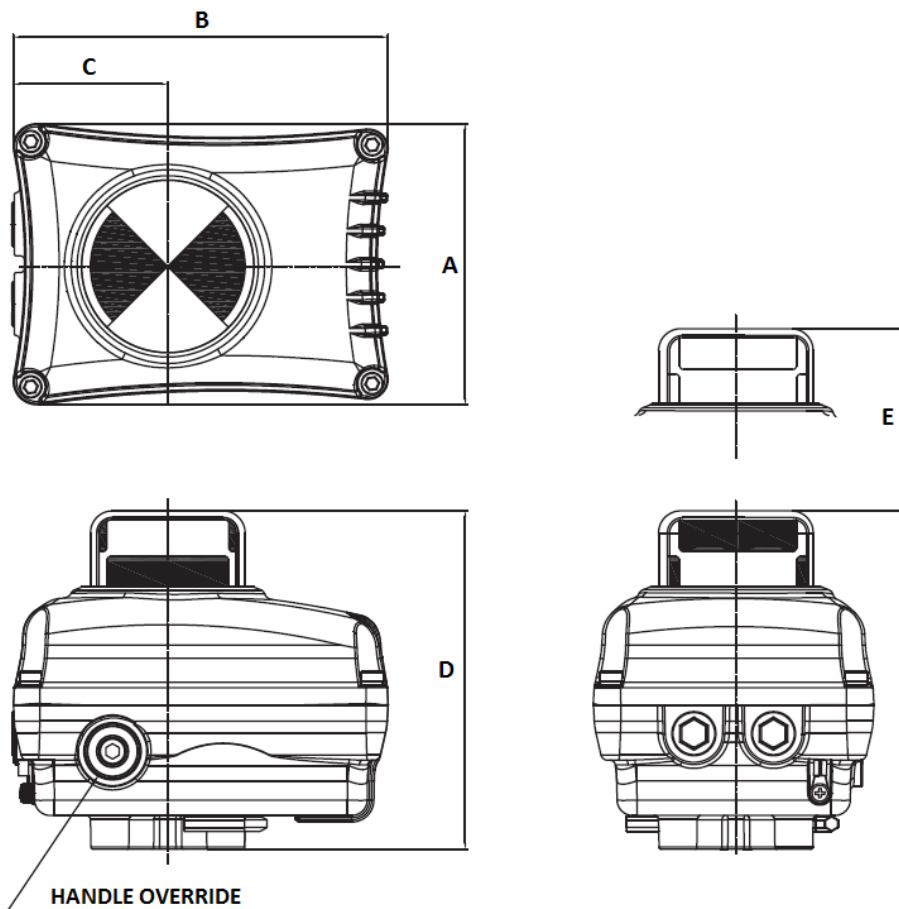
CONSTRUCTION

| | | |
|----|--------------------------|----------------------------|
| 1 | Housing | Polyester-coated aluminium |
| 2 | Electrical motor | |
| 3 | Gear box | Treated steel pinions |
| 4 | Cover | Polyester-coated aluminium |
| 5 | Position indicator | Polycarbonate plastic |
| 6 | Condenser | |
| 7 | Handle override | |
| 8 | Earthing | |
| 9 | Cable inlet | |
| 10 | Anti-condensation heater | |
| 11 | Terminal box | |



DIMENSIONS (mm) AND WEIGHT (kg)

| Dimensions (mm) | A | B | C | D | E | Weight (kg) |
|-----------------|-----|-----|----|-----|----|-------------|
| SA 05 | 127 | 170 | 70 | 153 | 80 | 3.2 |



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SA 05 ELECTRIC ACTUATOR

WIRING DIAGRAM 230V AC 50Hz/60Hz

| | | |
|---|--------------------------|--|
| 1 | common | <p>CLS : Close Limit Switch (250VAC 3A) OLS : Open Limit Switch (250VAC 3A) ACLS : Aux Close Limit Switch (250VAC 3A) AOLS : Aux Open Limit Switch (250VAC 3A) TP : Thermal Protector (250VAC 3A) RM : Motor Regulation</p> |
| 2 | Anti-condensation heater | |
| 3 | closing command | |
| 4 | opening command | |
| 5 | closing auxiliary | |
| 6 | closing auxiliary | |
| 7 | opening auxiliary | |
| 8 | Opening auxiliary | |

WIRING DIAGRAM 24V AC/DC-12V DC

| | | |
|---|---------------------------------------|--|
| 1 | Common or + | <p>CLS : Close Limit Switch (250VAC 3A) OLS : Open Limit Switch (250VAC 3A) ACLS : Aux Close Limit Switch (250VAC 3A) AOLS : Aux Open Limit Switch (250VAC 3A) TP : Thermal Protector (250VAC 3A) RM : Motor Regulation</p> |
| 2 | Closing command | |
| 3 | Opening command | |
| 4 | closing auxiliary | |
| 5 | opening auxiliary | |
| 6 | Auxiliaries common | |
| 7 | Anti-condensation heater power supply | |
| 8 | Anti-condensation heater power supply | |

OPTIONS

| | |
|---|---|
| 1 | SA 05 X: version for ATEX zone |
| 2 | SA 05 PIU: version with feedback potentiometer |
| 3 | SA 05 CPT: version with position transmitter 4-20 mA |
| 4 | SA 05 PCU: version with adjustment card 0-10, 2-10V, 2-20 mA, 4-20 mA |
| 5 | SA 05 LCU: version with local control |
| 6 | SA 05 RBP: version with in-built fail safe/security |

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