



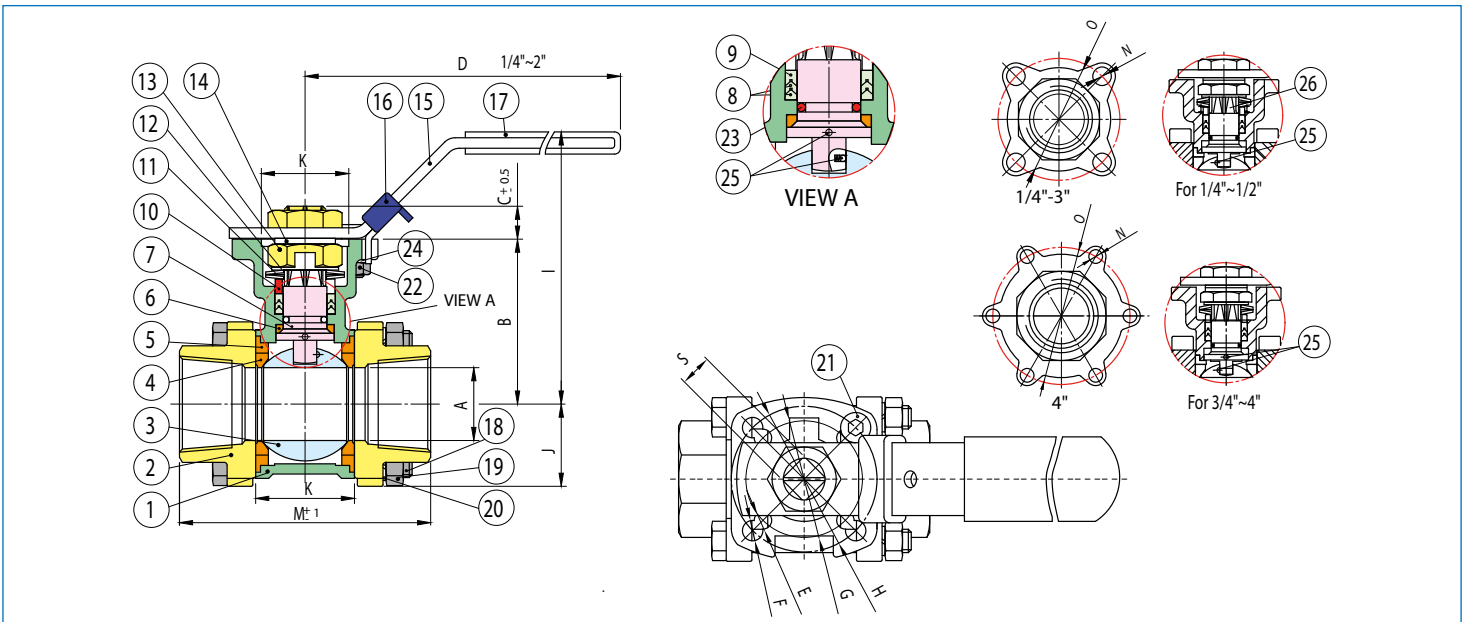
## SERIES 620LL WCB-FNPT - 720LL CF8M-FNPT

## SERIES 621LL WCB-SW - 721LL CF8M-SW

## SERIES 622LL WCB-BW - 722LL CF8M-BW

Direct mount 3-piece valve, with locking lever.

- Full port sizes 1/4" to 4"
- Direct mount ISO 5211/DIN 3337 for automation.
- Pressure rating 1/4" to 2" 1000 psi, 2 1/2" to 4" 800 psi.
- Temperature range -60°F to +440° F.
- Blow out proof stem, multi-layer V-ring adjustable stem packing.
- Multi-direction square drive locking lever.
- Dual mounting hole patterns.
- 150 WSP saturated steam.



| N Pos | PART NAME          | MATERIAL                | N POS |
|-------|--------------------|-------------------------|-------|
| 1     | BODY               | CF8M/WCB                | 1     |
| 2     | END CAP            | CF8M/WCB                | 2     |
| 3     | BALL               | SS316                   | 1     |
| 4     | SEAT               | TFM1600                 | 2     |
| 5     | JOIN GASKET        | P.T.F.E                 | 2     |
| 6     | STEM SEAL          | R.T.F.E                 | 1     |
| 7     | STEM               | SS316                   | 1     |
| 8     | STEM PACKING       | P.T.F.E                 | 1     |
| 9     | STEM PACKING       | 25% fiberglass +P.T.F.E | *     |
| 10    | GLAND              | SS304                   | 1     |
| 11    | BELLEVILLE WASHER  | SS304                   | 2     |
| 12    | LOCK SADDLE        | SS304                   | 1     |
| 13    | STEM NUT           | SS304                   | 2     |
| 14    | STEM WASHER        | SS304                   | 1     |
| 15    | HANDLE             | SS304                   | 1     |
| 16    | LOCKING DEVICE     | SS304                   | 1     |
| 17    | HANDLE SLEEVE      | VINYL                   | 1     |
| 18    | BOLT               | SS304                   | *     |
| 19    | BOLT NUT           | SS304                   | *     |
| 20    | BLOT WASHER        | SS304                   | *     |
| 21    | STOP PIN           | SS304                   | 1     |
| 22    | PIN NUT            | SS304                   | 1     |
| 23    | O-RING             | VITON                   | 1     |
| 24    | WASHER             | SS304                   | 1     |
| 25    | ANTI-STATIC DEVICE | SS316                   | 1     |
| 26    | SPRING             | SS316                   | 1     |

\* Varies with size

| SIZE   | ØA   | B    | C    | D     | ØE   | ØF   | ØG   | ØH   | I    | J    | K    | L    | M    | ØN   | ØO   | S in | S mm | Cv   | Lbs  | ISO 5211 |
|--------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
| 1/4"   | 0.46 | 1.66 | 0.25 | 5.47  | 0.24 | 0.24 | 1.42 | 1.65 | 3.03 | 0.92 | 0.93 | 0.98 | 2.51 | 1.81 | 0.34 | 0.35 | 9    | 8    | 55   | F03/F04  |
| 3/8"   | 0.50 | 1.66 | 0.25 | 5.47  | 0.24 | 0.24 | 1.42 | 1.65 | 3.03 | 0.92 | 0.93 | 0.98 | 2.51 | 1.81 | 0.34 | 0.35 | 9    | 10   | 55   | F03/F04  |
| 1/2"   | 0.59 | 1.66 | 0.25 | 5.47  | 0.24 | 0.24 | 1.42 | 1.65 | 3.03 | 0.92 | 0.93 | 0.98 | 2.59 | 1.81 | 0.34 | 0.35 | 9    | 15   | 55   | F03/F04  |
| 3/4"   | 0.79 | 1.89 | 0.27 | 5.47  | 0.24 | 0.24 | 1.42 | 1.65 | 3.27 | 1.00 | 1.10 | 0.98 | 3.00 | 2.05 | 0.34 | 0.35 | 9    | 34   | 69   | F03/F04  |
| 1"     | 0.98 | 2.23 | 0.44 | 6.45  | 0.24 | 0.28 | 1.65 | 1.97 | 3.78 | 1.11 | 1.34 | 1.18 | 3.39 | 2.36 | 0.34 | 0.43 | 11   | 56   | 127  | F04/F05  |
| 1 1/4" | 1.26 | 2.34 | 0.44 | 6.45  | 0.24 | 0.28 | 1.65 | 1.97 | 3.94 | 1.36 | 1.67 | 1.18 | 4.05 | 2.89 | 0.43 | 0.43 | 11   | 85   | 173  | F04/F05  |
| 1 1/2" | 1.50 | 3.05 | 0.56 | 8.47  | 0.30 | 0.35 | 1.97 | 2.76 | 5.00 | 1.55 | 2.10 | 1.38 | 4.70 | 3.37 | 0.47 | 0.55 | 14   | 125  | 243  | F05/F07  |
| 2"     | 1.97 | 3.35 | 0.56 | 8.47  | 0.30 | 0.35 | 1.97 | 2.76 | 5.28 | 1.86 | 2.54 | 1.38 | 5.17 | 4.09 | 0.52 | 0.55 | 14   | 250  | 346  | F05/F07  |
| 2 1/2" | 2.56 | 4.28 | 0.67 | 11.81 | 0.39 | 0.47 | 2.76 | 4.02 | 6.58 | 2.30 | 3.43 | 2.17 | 6.46 | 5.12 | 0.60 | 0.67 | 17   | 320  | 518  | F07/F010 |
| 3"     | 3.15 | 4.63 | 0.67 | 14.57 | 0.39 | 0.47 | 2.76 | 4.02 | 6.93 | 2.72 | 3.90 | 2.17 | 7.19 | 6.12 | 0.68 | 0.67 | 17   | 580  | 806  | F07/F010 |
| 4"     | 3.94 | 5.22 | 0.67 | 14.57 | 0.39 | 0.47 | 2.76 | 4.02 | 7.56 | 3.76 | 5.00 | 2.17 | 9.28 | 7.40 | 0.68 | 0.67 | 17   | 1020 | 1094 | F07/F010 |



Type 4X Indoor Use Only Enclosure.

**DESIGN PROTECTED**

## GENERAL SPECIFICATIONS

The VALBIA electric actuators are suitable for the automation of ball and butterfly valves for the industrial and construction sector. The usage of electronic components of last generation, together with precise mechanic, thanks to a careful research and development, enables high performance and long-term reliability of the product.

The range has been manufactured with following characteristics:

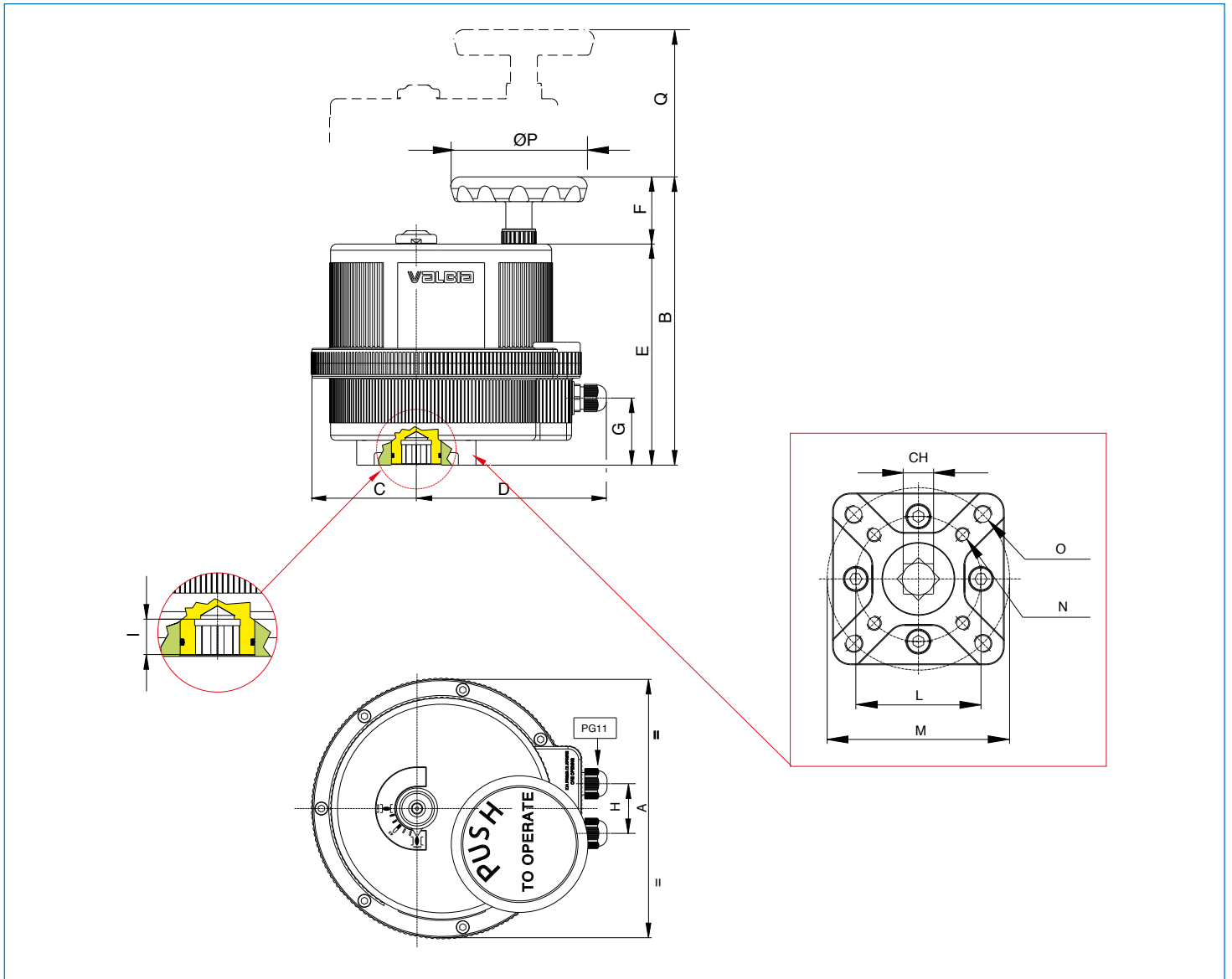
- The housing of the actuators provides a V0 self-extinguish class techno-polymer material.
- The kinematics is made by steel and techno-polymer gear wheels, sustained by hardened steel pinions, mounted on self-lubricating bushes and inserted in a strong structure of die-cast aluminium (excluding mod. VB015).
- The connection part of the actuators with the valves, is made by a die-casted and painted aluminium plate cataphoresis, with a dual drilling interface as per the ISO5211-DIN 3337 Standard.
- The electronic circuit adjusts automatically the motor speed depending on the mechanical load variations in order to drive the cycle always in the same time.
- The whole range of actuators is provided with an electronic safety system for the torque control (torque limiter).
- The whole range of actuators is standard provided of heater activated with the powered actuator.
- The whole range of actuators (except for mod. VB015) is modulable: and programmable in standard mode (4-20 mA or 0-10V) or reverse mode (20-4 mA or 10-0V)
- All electric actuators (except for mod. VB015) can be equipped with rotary potentiometer (5K $\Omega$  1W).
- All electric actuators (except for mod. VB015 and for 12V power supply), can be equipped with battery backup for emergency control.

| MODEL   |              | VB015  | VB030                                      | VB060                                      | VB110                                      | VB190                                      | VB270                                      | VB350                                      |  |
|---|--------------|--|--|--|--|--|--|--|--|
| MAX WORKING TORQUE (IN-LBS)   |              | 133  | 266  | 530  | 975  | 1680                                       | 2390                                       | 3100                                       |  |
| VOLTAGE (V)   | LOW VOLTAGE  | 12V AC/DC  | 12V AC/DC                                  | 12V AC/DC                                  | 12V AC/DC                                  | 12V AC/DC                                  | 12V AC/DC                                  | 12V AC/DC                                  |  |
|   |              | 24V AC/DC  | 24V AC/DC                                  | 24V AC/DC                                  | 24V AC/DC                                  | 24V AC/DC                                  | 24V AC/DC                                  | 24V AC/DC                                  |  |
|   | MULTIVOLTAGE | 100-240V AC                                      | 100-240V AC                                | 100-240V AC                                | 100-240V AC                                | 100-240V AC                                | 100-240V AC                                | 100-240V AC                                |  |
| WORKING TIME (sec)  |              | 10   | 8  | 9  | 27   | 27   | 50   | 50   |  |
| TORQUE LIMITER  |              | STD  | STD  | STD  | STD  | STD  | STD  | STD  |  |
| DUTY RATING   |              | 12VAC/24VAC 50%<br>12VDC/24VDC 75%<br>100-240VAC | 12VAC/DC 50%<br>24VAC/DC 75%<br>100-240VAC | 12VAC/DC 50%<br>24VAC/DC 75%<br>100-240VAC | 12VAC/DC 50%<br>24VAC/DC 75%<br>100-240VAC | 12VAC/DC 50%<br>24VAC/DC 75%<br>100-240VAC | 12VAC/DC 50%<br>24VAC/DC 75%<br>100-240VAC | 12VAC/DC 50%<br>24VAC/DC 75%<br>100-240VAC | 12VAC/DC 50%<br>24VAC/DC 75%<br>100-240VAC |
| PROTECTION  |              | IP65   | IP67                                       | IP67                                       | IP67                                       | IP67                                       | IP67                                       | IP67                                       |  |
| ROTATION  |              | 90°  | 90°  | 90°  | 90°  | 90°  | 90°  | 90°  |  |
| UPON REQUEST  |              | 180°   | 180° or 270°                               | 180° or 270°                               | 180° or 270°                               | 180° or 270°                               | 180° or 270°                               | 180° or 270°                               |  |
| MANUAL OVERRIDE   |              | STD  | STD  | STD  | STD  | STD  | STD  | STD  |  |
| POSITION INDICATOR  |              | STD  | STD  | STD  | STD  | STD  | STD  | STD  |  |
| WORKING TEMPERATURE   |              | -4°F + 131°F                                     | -4°F + 131°F                               | -4°F + 131°F                               | -4°F + 131°F                               | -4°F + 131°F                               | -4°F + 131°F                               | -4°F + 131°F                               |  |
| HEATER  |              | STD  | STD  | STD  | STD  | STD  | STD  | STD  |  |
| ADDITIONAL FREE LIMIT SWITCHES                                      |              | n°2 STD (type SPDT)                              | n°2 STD (type SPDT)                        | n°2 STD (type SPDT)                        | n°2 STD (type SPDT)                        | n°2 STD (type SPDT)                        | n°2 STD (type SPDT)                        | n°2 STD (type SPDT)                        |  |
| DRILLING ISO 5211   |              | *F03 - F05                                       | *F03 - F05                                 | F05 - F07                                  | F07 - F10                                  | F07 - F10                                  | F07 - F10                                  | F07 - F10                                  |  |
| SQUARE (in)   |              | 0.43   | 0.43                                       | 0.55                                       | 0.67                                       | 0.67                                       | 0.87                                       | 0.87                                       |  |
| SQUARE UPON REQUEST   |              | 0.35   | 0.35-0.55                                  | 0.43-0.67                                  | 0.55-0.87                                  | 0.55-0.87                                  | 0.67                                       | 0.67                                       |  |
| FAIL-SAFE OPERATION (BATTERY BACKUP)                                |              | NOT AVAILABLE                                    | UPON REQUEST                               | UPON REQUEST                               | UPON REQUEST                               | UPON REQUEST                               | UPON REQUEST                               | UPON REQUEST                               |  |
|   |              | NOT AVAILABLE FOR MOD. 12V                       |  |  |  |  |  |  |  |
| POSITIONER STD (4~20mA or 0~10 VDC)<br>REVERSE (20~4mA or 10~0 VDC) |              | NOT AVAILABLE                                    | UPON REQUEST                               | UPON REQUEST                               | UPON REQUEST                               | UPON REQUEST                               | UPON REQUEST                               | UPON REQUEST                               |  |
| LINEAR POTENTIOMETER (5K Ω 1W)                                      |              | NOT AVAILABLE                                    | UPON REQUEST                               | UPON REQUEST                               | UPON REQUEST                               | UPON REQUEST                               | UPON REQUEST                               | UPON REQUEST                               |  |
| ELECTRICAL CONNECTIONS  |              | PG11   | PG11                                       | PG11                                       | PG11                                       | PG11                                       | PG11                                       | PG11                                       |  |
| WEIGHT (LBS)  |              | 3.09   | 5.07                                       | 7.28                                       | 10.80                                      | 10.80                                      | 13.23                                      | 13.23                                      |  |

\* F04 or F07 upon request.

| POWER CONSUMPTION |                  |             |           |            |           |            |           |            |           |            |           |            |           |             |             |
|-------------------|------------------|-------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|-------------|-------------|
| MODEL             |                  | VB015       |           | VB030      |           | VB060      |           | VB110      |           | VB190      |           | VB270      |           | VB350       |             |
| VERSION H         | NOMINAL VOLTAGE  | 100-240V AC |           |            |           |            |           |            |           |            |           |            |           |             |             |
|                   | ABSORBED CURRENT | 0.3-0.19 A  |           | 0.4-0.2 A  |           | 0.6-0.3 A  |           | 0.4-0.2 A  |           | 0.6-0.3 A  |           | 0.6-0.3 A  |           | 0.75-0.4 A  |             |
|                   | ABSORBED POWER   | 30-46 VA    |           | 40-48 VA   |           | 60-72 VA   |           | 40-48 VA   |           | 60-72 VA   |           | 60-72 VA   |           | 75-96 VA    |             |
| VERSION L         | NOMINAL VOLTAGE  | 12V AC/DC   | 24V AC/DC | 12V AC/DC  | 24V AC/DC | 12V AC/DC  | 24V AC/DC | 12V AC/DC  | 24V AC/DC | 12V AC/DC  | 24V AC/DC | 12V AC/DC  | 24V AC/DC | 12V AC/DC   | 24V AC/DC   |
|                   | ABSORBED CURRENT | 1.2 A       | 0.6 A     | 2.2-1.8 A  | 1-0.7 A   | 3.8-2.85 A | 1.8-1.2 A | 2.2-1.8 A  | 1-0.7 A   | 3.8-2.85 A | 1.8-1.2 A | 3.8-2.85 A | 1.8-1.2 A | 4.75-3.65 A | 1.95-1.65 A |
|                   | ABSORBED POWER   | 15 VA       |           | 26.5-22 VA | 24-17 VA  | 46-34 VA   | 43-29 VA  | 26.5-22 VA | 24-17 VA  | 46-34 VA   | 43-29 VA  | 46-34 VA   | 43-29 VA  | 57-44 VA    | 47-40 VA    |
| FREQUENCY         |                  | 50/60 HZ    |           |            |           |            |           |            |           |            |           |            |           |             |             |

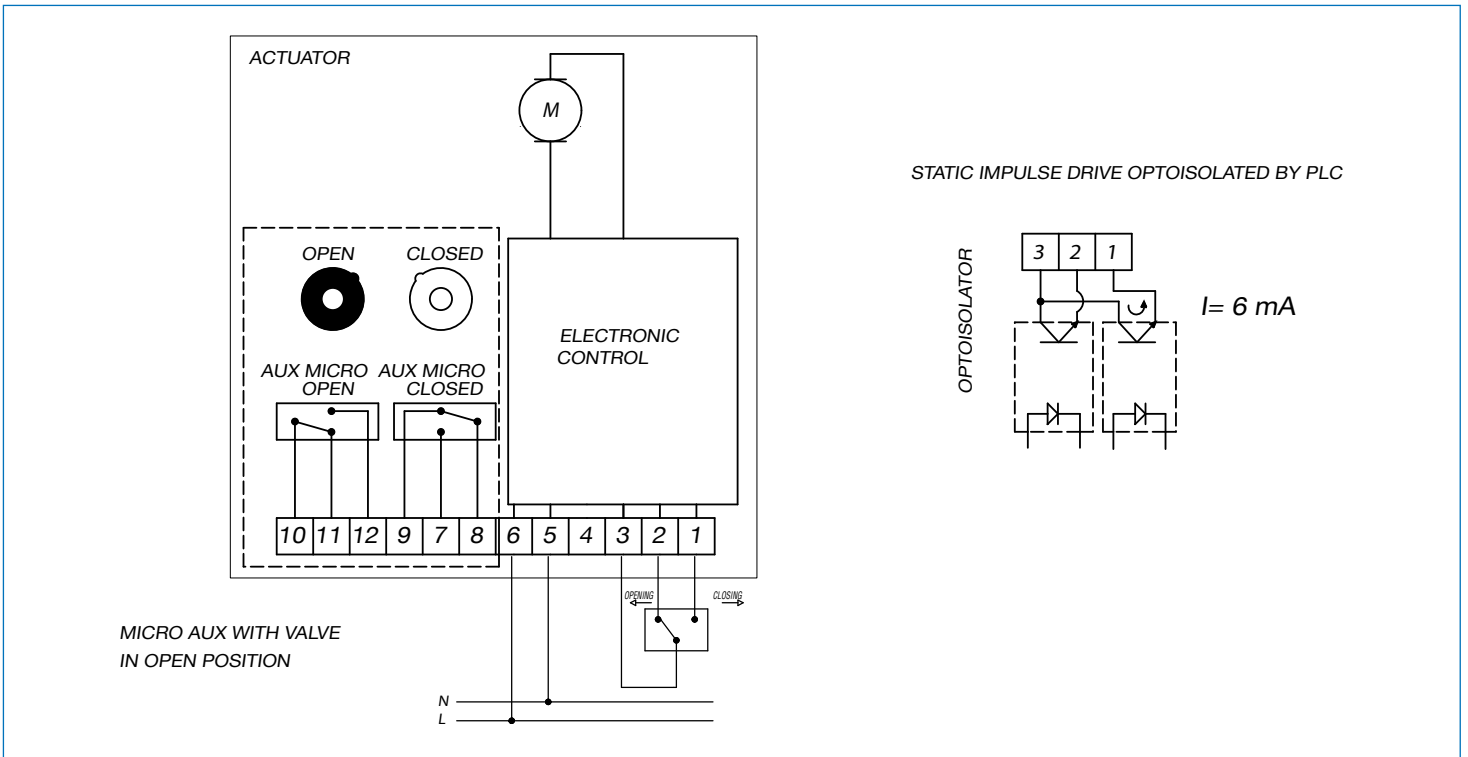




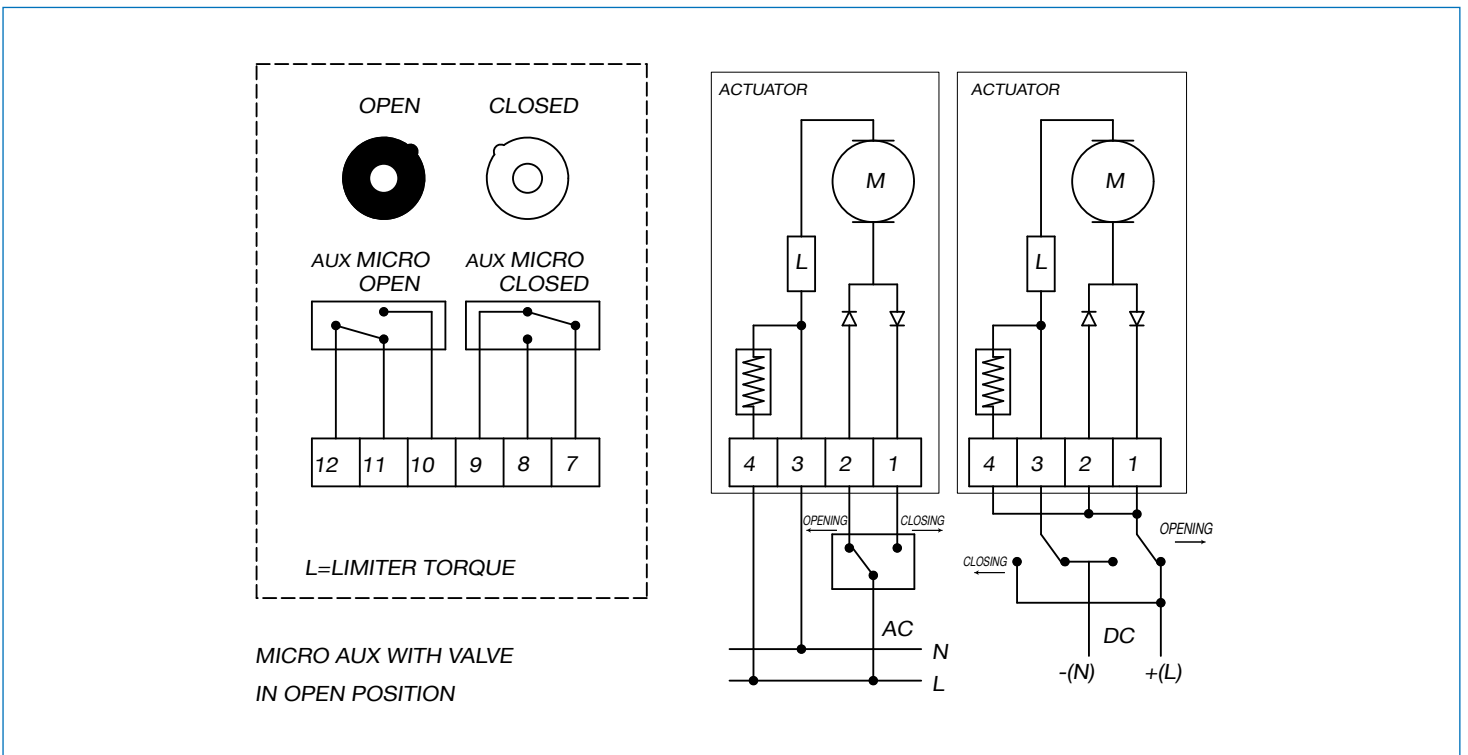
| MOD.  | DRILLING<br>ISO 5211 | CH   | A    | B    | C    | D    | E    | F    | G    | H    | I    | L    | M    | N                   | O                   | ØP   | Q    |
|-------|----------------------|------|------|------|------|------|------|------|------|------|------|------|------|---------------------|---------------------|------|------|
| VB015 | F03 - F05 *          | 0.43 | 4.84 | 5.57 | 1.67 | 4.74 | 4.96 | 0.61 | 4.06 | 1.26 | 0.55 | 1.42 | 1.97 | 10-24 UNC 2BX0.47   | 1/4-20 UNC 2BX0.51  | 2.68 | 2.56 |
| VB030 | F03 - F05 *          | 0.43 | 6.18 | 7.40 | 2.38 | 5.10 | 5.75 | 1.65 | 1.30 | 1.42 | 0.47 | 1.42 | 1.97 | 10-24 UNC 2BX0.47   | 1/4-20 UNC 2BX0.51  | 2.56 | 3.94 |
| VB060 | F05 - F07            | 0.55 | 7.28 | 8.46 | 2.66 | 5.77 | 6.81 | 1.65 | 2.01 | 1.42 | 0.63 | 1.97 | 2.76 | 1/4-20 UNC 2BX0.59  | 5/16-18 UNC 2BX0.63 | 2.56 | 4.33 |
| VB110 | F07 - F10            | 0.67 | 8.31 | 9.14 | 3.31 | 6.02 | 7.01 | 2.13 | 2.13 | 1.58 | 0.75 | 2.76 | 4.02 | 5/16-18 UNC 2BX0.75 | 3/8-16 UNC 2BX0.75  | 4.33 | 4.53 |
| VB190 | F07 - F10            | 0.67 | 8.31 | 9.14 | 3.31 | 6.02 | 7.01 | 2.13 | 2.13 | 1.58 | 0.75 | 2.76 | 4.02 | 5/16-18 UNC 2BX0.75 | 3/8-16 UNC 2BX0.75  | 4.33 | 4.53 |
| VB270 | F07 - F10            | 0.87 | 8.74 | 9.19 | 3.03 | 6.69 | 7.17 | 2.03 | 2.13 | 1.58 | 0.95 | 2.76 | 4.02 | 5/16-18 UNC 2BX0.75 | 3/8-16 UNC 2BX0.75  | 4.33 | 4.53 |
| VB350 | F07 - F10            | 0.87 | 8.74 | 9.19 | 3.03 | 6.69 | 7.17 | 2.03 | 2.13 | 1.58 | 0.95 | 2.76 | 4.02 | 5/16-18 UNC 2BX0.79 | 3/8-16 UNC 2BX0.75  | 4.33 | 4.53 |

\* Upon request F04 or F07.

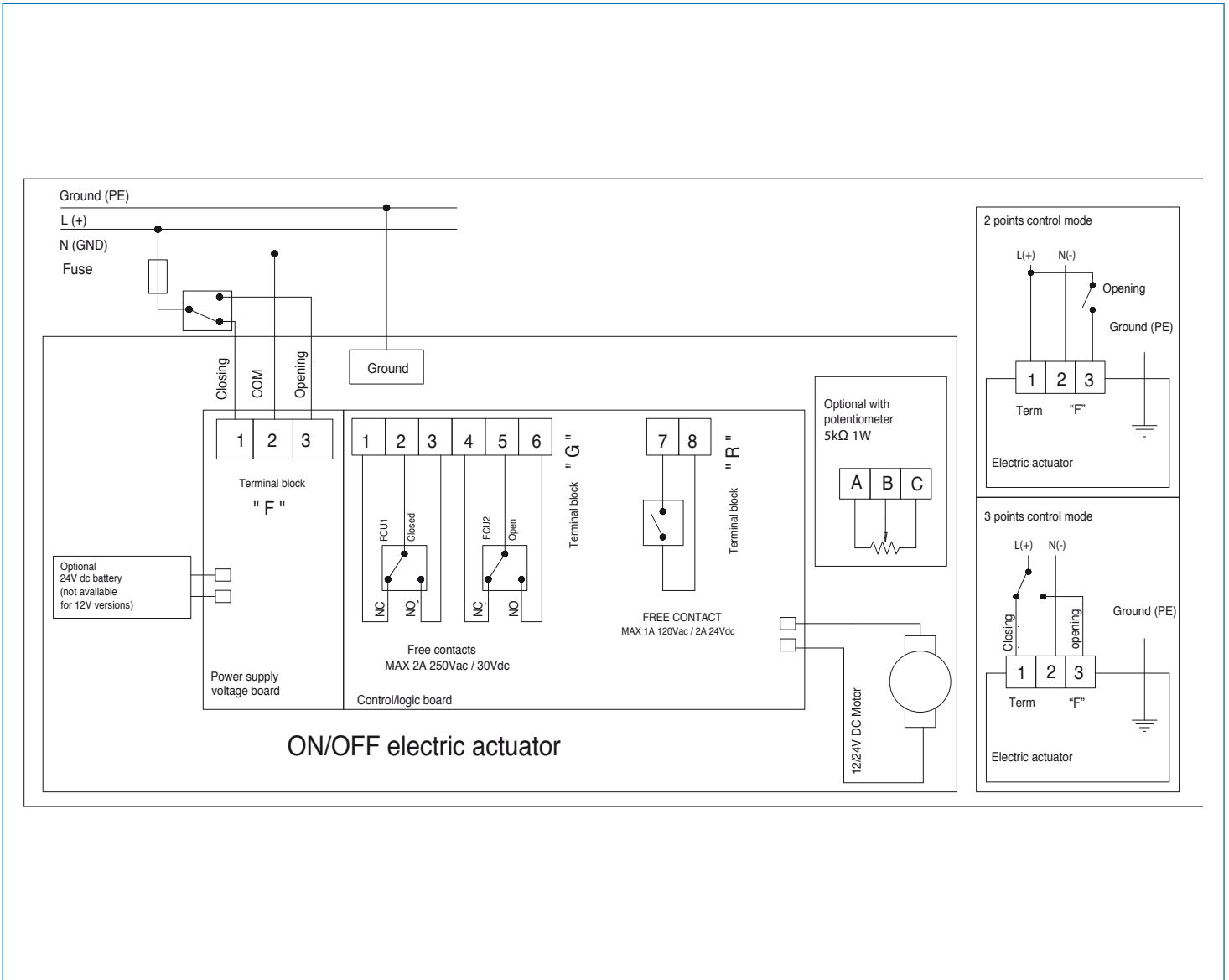
## ELECTRIC WIRING VB015 100–240V 50/60Hz



## ELECTRIC WIRING VB015 12V–24V AC/DC 50/60 Hz



**ELECTRIC WIRING FROM VB030 TO VB350 12V AC/DC 50/60 Hz, 24V AC/DC 50/60 Hz, 100-240V AC 50/60 Hz**



**ELECTRIC WIRING WITH POSITIONER FROM VB030 TO VB350 12V AC/DC 50/60 Hz, 24V AC/DC 50/60 Hz, 100-240V AC 50/60 Hz**

