

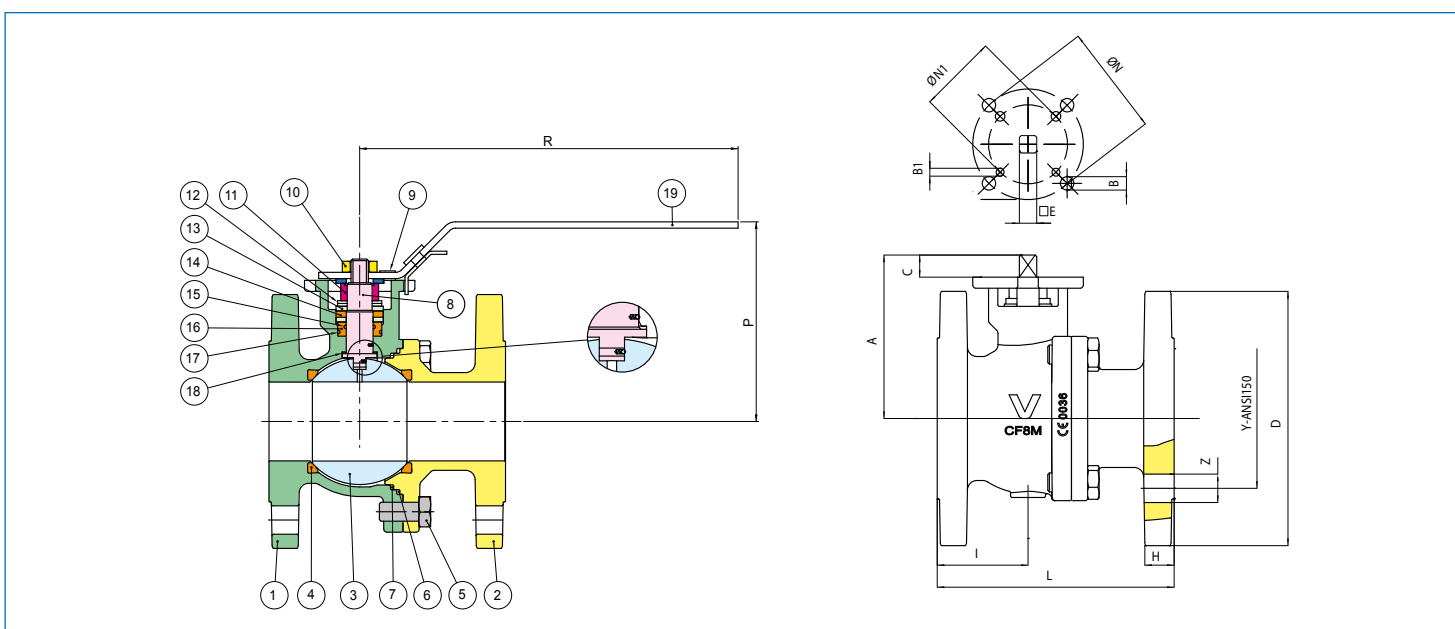


SERIES 766001 CARBON STEEL - DIRECT MOUNT

Carbon steel, ANSI class 150 flanged ends ball valve.

- Direct mount ISO 5211.
- Locking handle as standard.
- Full port, sizes 1" to 4".
- Temperature range -4° F to 366° F.
- Blow out proof stem, adjustable stem packing.
- P.T.F.E. seats, packing and thrust washer.
- FIRE SAFE certified to API 607 6th edition.
- 100% tested.
- ANSI B16.5, B16.10, B16.34 design.
- Antistatic device.

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 010.3



N Pos	PART NAME	MATERIAL	N PCS	SIZE	D	Y	Z	H	I	L	P	R	A	C	E	ØN	B	ØN1	B1	Cv	Lbs
1	BODY	A216-WCB	1	1/2"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	END CONNECTION	A216-WCB	1	3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	BALL	A216-316 A351-CF8M	1	1"	4.33	3.13	4xØ0.63	0.57	2.13	5.00	3.66	6.30	2.72	0.43	0.35	1.97-F05	0.28	-	-	50.00	8.38
4	BALL SEAT	P.T.F.E.	2	1 1/2"	5.12	3.88	4xØ0.63	0.69	2.99	6.50	4.65	9.45	3.70	0.55	0.43	2.76-F07	0.33	1.97-F05	M6	267.44	15.43
5	SCREW	CARBON STEEL	4-8	2"	5.91	4.04	4xØ0.75	0.77	3.33	7.01	5.00	9.45	4.06	0.53	0.43	2.76-F07	0.33	1.97-F05	M6	308.14	21.16
6	BODY SEAL	GRAPHOIL	1	3"	7.48	6.00	4xØ 0.75	0.94	3.66	7.99	6.38	12.60	5.41	0.69	0.55	4.02-F10	0.43	2.76-F07	M10	1.015.12	39.45
7	BODY SEAL	P.T.F.E.	1	4"	9.06	7.50	8xØ0.75	0.94	3.92	9.02	6.97	14.96	6.04	0.75	0.67	4.02-F10	0.43	2.76-F07	M10	1.616.28	53.56
8	STEM	A276-304	1																		
9	SCREW	CARBON STEEL	1																		
10	NUT	CARBON STEEL	1																		
11	NUT	CARBON STEEL	1																		
12	SPRING WASHER	CARBON STEEL	2																		
13	BUSH	A276-316	2																		
14	STEM SEAL	GRAPHOIL	1																		
15	O-RING	FKM (VITON®)	1																		
16	STEM SEAL	P.T.F.E.	1																		
17	O-RING	FKM (VITON®)	1																		
18	THRUST WASHER	P.T.F.E.	1																		
19	HANDLE	STAINLESS STEEL	1																		



NEW

GENERAL SPECIFICATIONS

The new series 86 actuators, with metal enclosure, are designed and manufactured for the automation of ball and butterfly valves. Our experience, applied to careful research and accurate design, is a reliable guarantee of quality and functionality over time.

The series is produced with the following characteristics:

- the enclosure is made of die cast aluminum coated with polyester powder;
- the gear train is made of steel and techno-polymer gear wheels, supported by hardened steel pinions, mounted on self-lubricating bushes. All the components are inserted in a strong structure of die-cast aluminum;
- the connection part of the actuators with the valves meets the ISO5211-DIN 3337 standard requirements;
- the electronic circuit adjusts automatically the motor speed, depending on the mechanical load variations. This ensures consistent cycle 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 when the actuator is powered;
- the whole range of actuators can be supplied with positioner, programmable in standard (4-20mA or 0-10V) or reverse (20-4mA or 10-0V) mode;
- all electric actuators can be equipped with rotary potentiometer (5K Ω 1W);
- the whole range of actuators can be supplied with battery backup for failsafe operation (except model with 12VAC/DC power supply);
- Optional middle position operation available for all versions.

ELECTRIC ACTUATOR VERSIONS

Standard version 0°-90° (0°-180° or 0°-270° available upon request)

Version with fail-safe operation N.C. (battery backup)

Version with standard (4 - 20mA or 0 - 10V) or reverse (20 - 4mA or 10 - 0V) mode positioner

Version with potentiometer

Three position, 180° version

Version with positioner and fail safe operation N.C. (battery backup)

MODEL		VB030M	VB060M	VB110M	VB190M	VB270M	VB350M
MAX WORKING TORQUE (in-Lbs)		266	530	975	1680	2390	3100
NOMINAL VOLTAGE (V)	LOW VOLTAGE	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
	MULTIVOLTAGE	100-240V AC	100-240V AC	100-240V AC	100-240V AC	100-240V AC	100-240V AC
WORKING TIME (sec)		8	9	27	27	50	50
TORQUE LIMITER		STD	STD	STD	STD	STD	STD
DUTY RATING	12V AC/DC	50%	50%	50%	50%	50%	50%
	24V AC/DC	75%	75%	75%	75%	75%	75%
	100-240V AC						
PROTECTION (IP rating/UL)		IP67/Type4	IP67/Type4	IP67/Type4	IP67/Type4	IP67/Type4	IP67/Type4
ENCLOSURE		Aluminium	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
ROTATION		90°	90°	90°	90°	90°	90°
END MECHANICAL STOPS (only reg.0-90°)		NO	NO	STD	STD	STD	STD
UPON REQUEST ROTATION		180° or 270°	180° or 270°	180° or 270°	180° or 270°	180° or 270°	180° or 270°
MANUAL OVERRIDE		STD Ø 0.39 in	STD Ø 0.39 in	STD with hand wheel	STD with hand wheel	STD with hand wheel	STD with hand wheel
DOME POSITION INDICATOR		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
HEATER		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)
DRILLING ISO 5211		F03-F05-F07	F05 - F07	F07 - F10	F07 - F10	F07 - F10	F07 - F10
SQUARE (in)		0.43	0.55	0.67	0.67	0.87	0.87
OPTIONAL SQUARE (in)		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)		UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST
		NOT AVAILABLE FOR MOD 12V					
STD (4~20mA or 0~10 VDC) REVERSE (20~4mA or 10~0 VDC) MODE POSITIONER		UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST
ROTARY POTENTIOMETER (5K Ω 1W)		UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST
THREE POSITION, 180°		UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST	UPON REQUEST
ELECTRIC CABLE ENTRIES		N°2 1/2" NPT	N°2 1/2" NPT	N°2 1/2" NPT	N°2 1/2" NPT	N°2 1/2" NPT	N°2 1/2" NPT
WEIGHT (Lbs)		7.3	9.9	18.7	18.7	20.9	20.9

POWER CONSUMPTION							
MODEL		VB030M	VB060M	VB110M	VB190M	VB270M	VB350M
VERSION H	NOMINAL VOLTAGE	100-240V AC					
	ABSORBED CURRENT	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	40-48 VA	60-72 VA	40-48 VA	60-72 VA	60-72 VA	75-96 VA
VERSION L	NOMINAL VOLTAGE	12V 24V AC/DC AC/DC	12V 24V AC/DC AC/DC	12V 24V AC/DC AC/DC	12V 24V AC/DC AC/DC	12V 24V AC/DC AC/DC	12V 24V AC/DC AC/DC
	ABSORBED CURRENT	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	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					

ALUMINUM ALLOY ENCLOSURE WITH POLYESTER POWDER COATING

CONTROL BOARD

POWER SUPPLY BOARD



POSITION CAMS:

- Black cams: limit switches open and closed adjustment.
- Blue cams: auxiliary limit switches open and closed adjustment.



SNAP SWITCH (only for mod. VB110M-VB350M):

- To avoid the motor automatic rotation when the actuator is in manual mode.



MANUAL OVERRIDE (only for mod. VB110M - VB350M):

- Allows manual operation.





DOME POSITION INDICATOR

DC MOTOR

MECHANICAL END STOPS

MANUAL HANDWHEEL

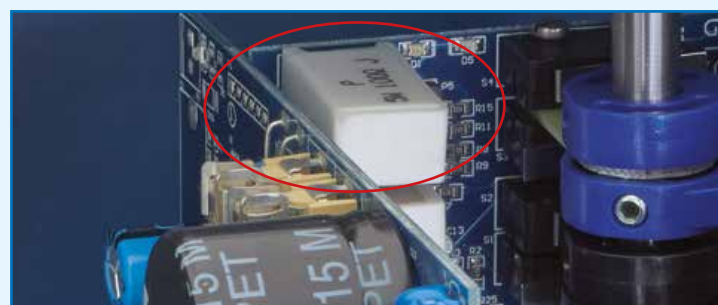


CAPTIVE COVER BOLT:

- Cover bolts are specially designed to prevent losing them during maintenance or installation.
- All external bolts are stainless steel.



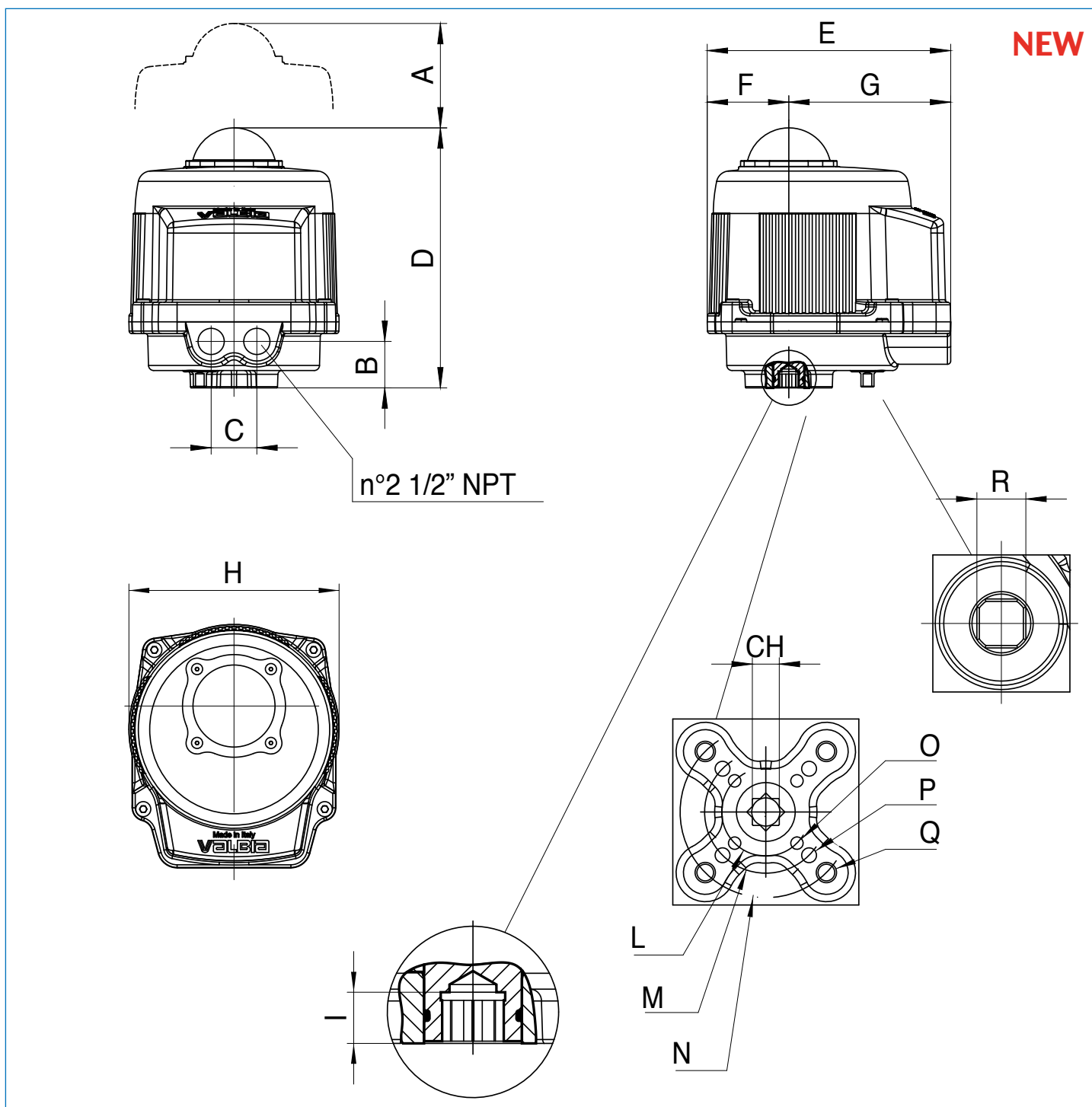
EASY UPPER COVER OPENING



HEATER:

- Managed by control board to guarantee the right internal temperature.

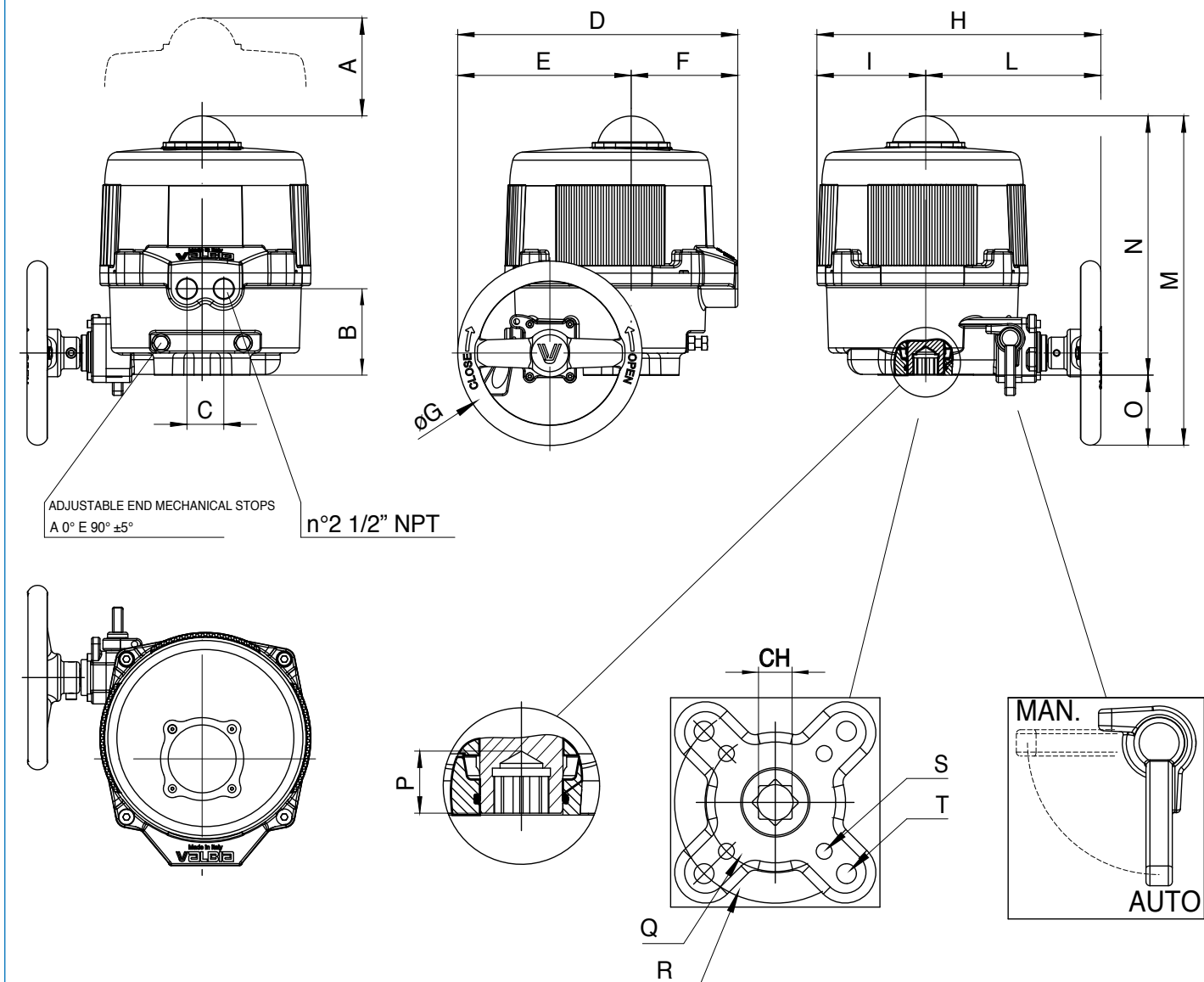
MOD. VB030M – VB060M



MOD.	ISO 5211 FLANGE	CH	A	B	C	D	E	F	G	H	I	L	M	N	O	ØP	Q	R
VB030M	F03-F05-F07	0.43	5.47	1.42	1.38	7.83	7.36	2.48	4.88	6.34	0.47	1.42	1.97	2.76	10-24 UNC 2B x 0.31"	1/4-20 UNC 2B x 0.39"	5/16-18 UNC 2B x 0.43"	0.39
VB060M	F05-F07	0.55	5.47	2.20	1.38	8.66	7.76	2.48	5.28	6.93	0.63	-	1.97	2.76	-	1/4-20 UNC 2B x 0.55"	5/16-18 UNC 2B x 0.59"	0.39

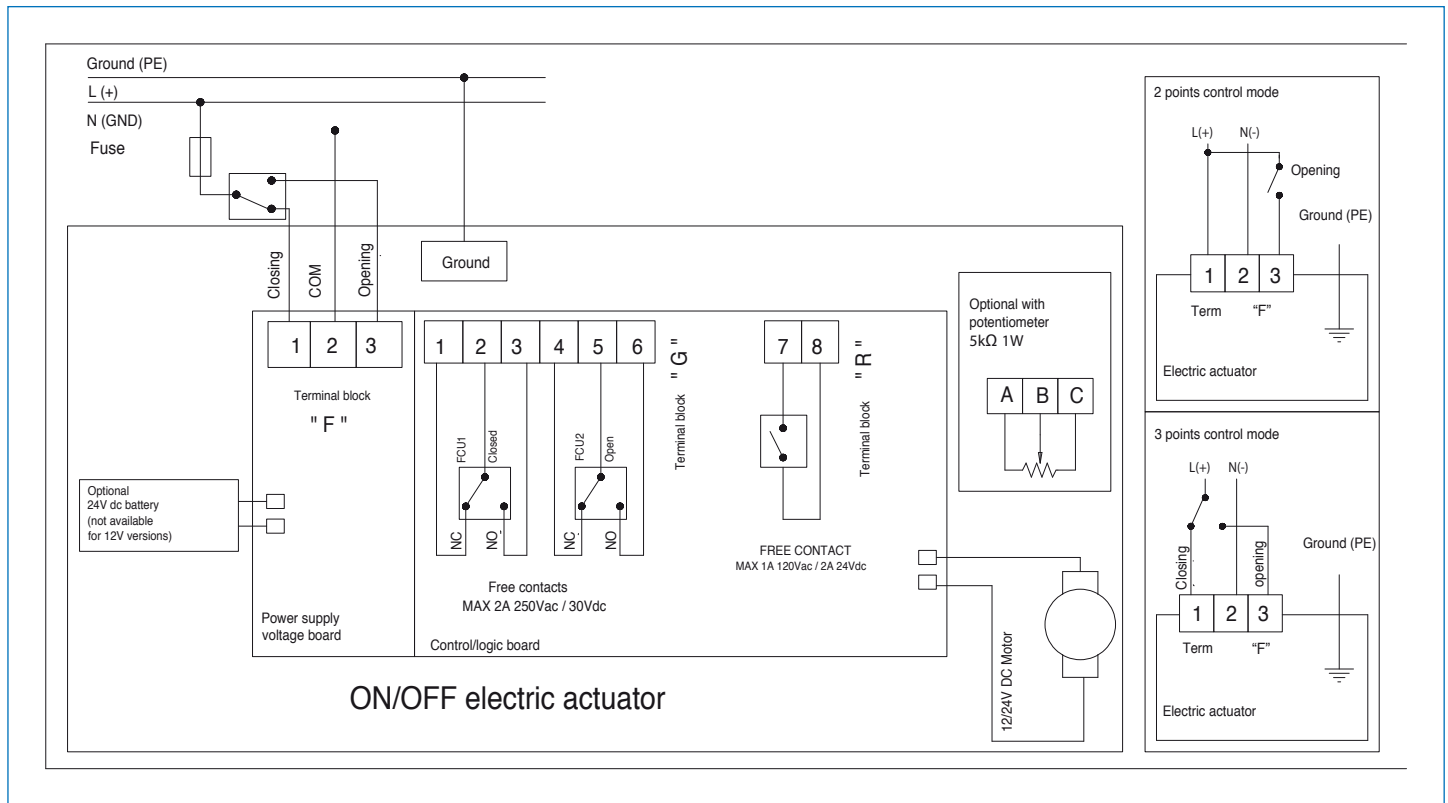
MOD. VB110M ÷ VB350M

NEW

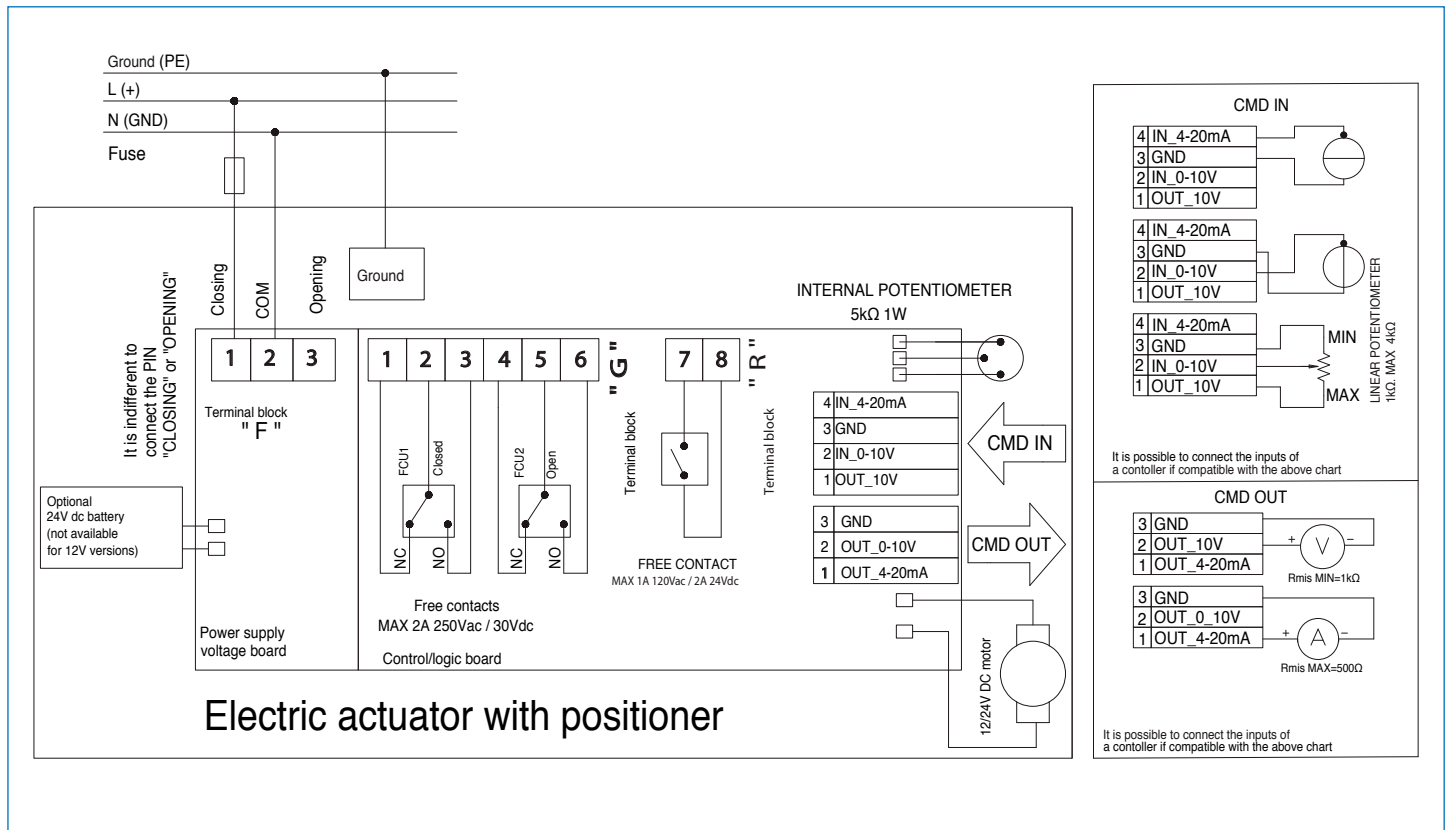


MOD.	ISO 5211 FLANGE	CH	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	T
VB110M	F07-F10	0.67	5.47	3.23	1.38	10.47	6.50	3.98	6.89	10.63	4.05	6.57	12.32	9.68	2.64	0.75	2.76	4.02	5/16-18 UNC 2B x 0.39"	3/8-16 UNC 2B x 0.39"
VB190M	F07-F10	0.67	5.47	3.23	1.38	10.47	6.50	3.98	6.89	10.63	4.05	6.57	12.32	9.68	2.64	0.75	2.76	4.02	5/16-18 UNC 2B x 0.38"	3/8-16 UNC 2B x 0.38"
VB270M	F07-F10	0.87	5.47	3.27	1.38	10.98	7.24	3.74	6.89	10.83	4.29	6.53	12.36	9.72	2.64	0.94	2.76	4.02	5/16-18 UNC 2B x 0.59"	3/8-16 UNC 2B x 0.59"
VB350M	F07-F10	0.87	5.47	3.27	1.38	10.98	7.24	3.74	6.89	10.83	4.29	6.53	12.36	9.72	2.64	0.94	2.76	4.02	5/16-18 UNC 2B x 0.59"	3/8-16 UNC 2B x 0.59"

ELECTRIC WIRING FROM VB030M TO VB350M 12V AC/DC 50/60 Hz, 24V AC/DC 50/60 Hz, 100-240V AC 50/60 Hz



ELECTRIC WIRING WITH POSITIONER FROM VB030M TO VB350M 12V AC/DC 50/60 Hz, 24V AC/DC 50/60 Hz, 100-240V AC 50/60 Hz



ELECTRIC WIRING WITH THREE POSITION, 180° FROM VB030M TO VB350M 12V AC/DC 50/60Hz, 24V AC/DC 50/60Hz, 100-240V AC 50/60Hz

