

CONTROL BALL VALVES
WITH EQUAL PERCENTAGE CHARACTERISTIC

2010

NEW

ELECTRICAL ACTUATORS



ENOLGAS



ACTUATORS

Electrical actuators



ACTUATORS

Electrical actuators



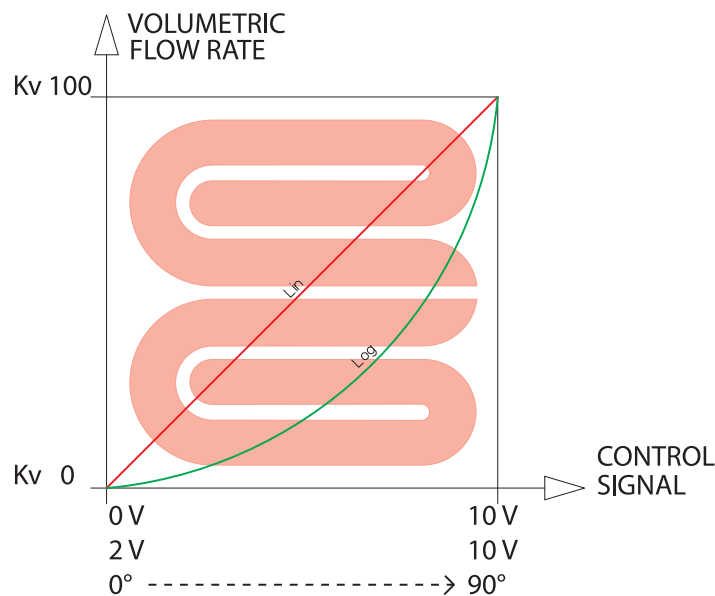
FEATURES

- R2813P00 AC 230V operating voltage, 2-position control signal, red colour, without auxiliary switch
- S2815,17 QM for 2-way ball valves - S2935,37 ISO•TOP for 3-way ball valves..... AC 230V operating voltage
- S2816,18 QM for 2-way ball valves - S2936,38 ISO•TOP for 3-way ball valves.....AC 24V operating voltage
- S2912P00 and S2940P09 AC 24V operating voltage and 0 to 10 Vdc, for 2-way modulating ball valves
- All actuators are from IP 54 to IP 65
- All actuators include an auxiliary switch for additional functions
- Directly mounting on the valve, without adjustment or brackets

APPLICATIONS

- Suitable to operate the valves S3041....S1070....
- Ambient temperatures: -20°C to +80°C; -4°F to +176°F
- Cooling water
- Chilled water
- Low temperature hot water
- Water with anti-freeze
- -20 to + 130°C

PRODUCT NUMBER	OPERATING VOLTAGE	TYPE OF CONTROL (CONTROL SIGNAL)	TORQUE (Nm)	RUN-TIME (SECOND) 90°	AUXILIARY SWITCHES	QM OR ISO-TOP CONNECTION VALVE ACTUATOR		
R2813P00	AC 230 V	2 position control signal	10Nm; 88,50Lbin max.	60	No	QM		
S2815P00		3 position control signal				ISO-TOP		
S2935P00						QM		
S2936P00	AC 24 V	2 position control signal			ISO-TOP			
S2816P00					QM			
S2817P00	AC 230 V	2 position control signal			10Nm; 88,50Lbin max.	60	Yes	ISO-TOP
S2937P00								QM
S2938P00	AC 24 V	2 position control signal					ISO-TOP	
S2818P00							QM	
S2940P00	AC/DC 24 V	AC 0...10 VDC	ISO-TOP					
S2912P00			QM					

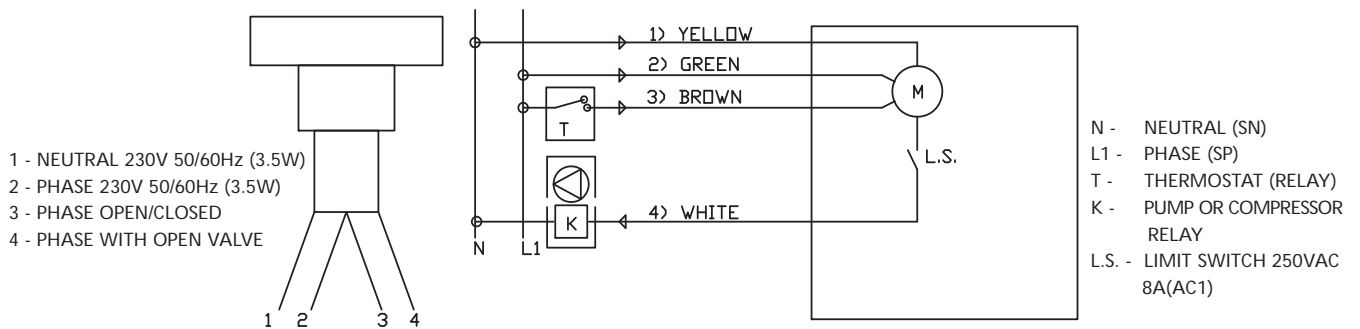




ELECTRIC ACTUATORS QM SERIES - COMPACT

CODE	R2813
POWER SUPPLY VOLTAGE	230V 50-60Hz
ABSORBED POWER W	3.5W
OUTPUT TORQUE	10Nm max.; 88.50 Lbin max.
WORKING TIME	60 Sec/90°
MOTOR TYPE	Unidirectional
ASSEMBLY	Quick Mounting
WORKING ANGLE	90°
INPUT SIGNAL	2 Position Control Signal / SPST / On-Off / With Internal Relay
OUTPUT SIGNAL	230V 50-60Hz 200VA - White Wire Out (L) Pump Relay Output (Open Valve)
PROTECTION	IP54
CONNECTION	4-Wires Cable With Cable Gland
WEIGHT	0.4 Kg; 0.88 lb
OPERATING TEMPERATURE	-20° +80°; -4F +176F
PLENUM RATED CABLE	

WIRING DIAGRAM



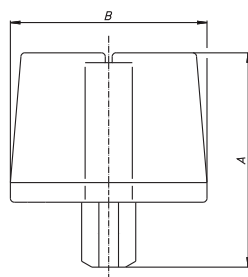
CONNECTION

ELECTRIC CONNECTION	2 WIRE SPST:
YELLOW	IN (N) NEUTRAL (SN)
GREEN	IN (L) PHASE (SP)
BROWN	IN (L) OPEN (Y1)
WHITE	OUT (L.S.) PUMP RELAY OUTPUT (OPEN VALVE)

WIRE COLOR	DIRECTION	CONNECTION	DESCRIPTION
YELLOW	IN	NEUTRAL (SN)	POWER SUPPLY VOLTAGE NEUTRAL CONNECTION
GREEN	IN	PHASE (SP)	POWER SUPPLY VOLTAGE PHASE CONNECTION
BROWN	IN	OPEN (Y1)	WHEN POWER SUPPLY VOLTAGE PHASE IS CONNECTED TO THE BROWN WIRE THE VALVE OPENS
WHITE	OUT	PUMP RELAY OUTPUT	WHEN OPEN, PRESENCE OF PHASE ON THE GREY WIRE

OPERATING LED
 RED LIGHT ON: IN MOTION
 RED LIGHT OFF: ACTUATOR OFF

Art. R.2813 ELECTRIC ACTUATOR



Electric actuator with quick mounting connection, for 2-way valves.

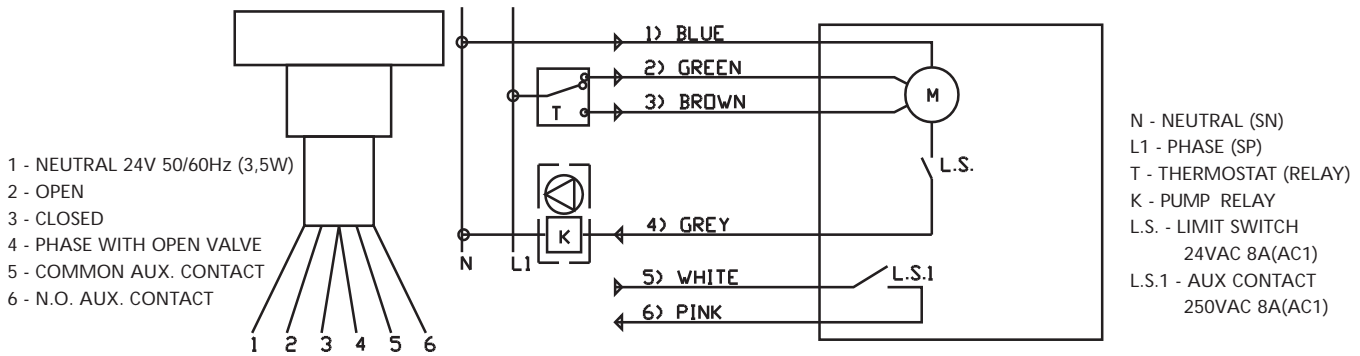
SIZE																			
A mm	84																		
B mm	100																		



ELECTRIC ACTUATORS QM SERIES - COMPACT

CODE	S2816
POWER SUPPLY VOLTAGE	24V 50-60Hz Available 230V: ART. S2815
ABSORBED POWER W	3.5W
OUTPUT TORQUE	10Nm max.; 88.50 Lbin max.
WORKING TIME	60 Sec/90°
MOTOR TYPE	Bidirectional
ASSEMBLY	Quick Mounting
WORKING ANGLE	90°
INPUT SIGNAL	3 Position Control Signal / SPST / On-Off / With Internal Relay
OUTPUT SIGNAL	24V 50-60Hz 200VA - Grey Wire Out (L) Pump Relay Output (Open Valve)
PROTECTION	IP54
CONNECTION	6-Wires Cable With Cable Gland
WEIGHT	0.4 Kg; 0.88 lb
OPERATING TEMPERATURE	-20° +80°; -4F +176F
PLENUM RATED CABLE	

WIRING DIAGRAM



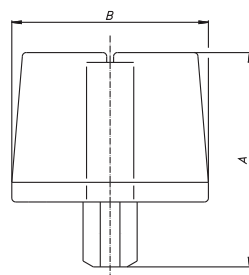
CONNECTION

ELECTRIC CONNECTION	3 WIRE SPST:	N°	WIRE COLOR	DIRECTION	FUNCTION	CONNECTION	DESCRIPTION
BLUE	IN (N) NEUTRAL (SN)G	1	BLUE	IN	POWER SUPPLY	NEUTRAL (SN) G	CONNECTION TO NEUTRAL
GREEN	IN (L1) PHASE (Y1)	2	GREEN	IN	THERMOSTAT (RELAY)	PHASE-OPEN (Y1)	WHEN PHASE CONNECTED VALVE OPENS
BROWN	IN (L1) PHASE (Y2)	3	BROWN	IN	THERMOSTAT (RELAY)	PHASE-CLOSED (Y2)	WHEN PHASE CONNECTED VALVE CLOSES
GREY	OUT (L.S.) PUMP RELAY OUTPUT (OPEN VALVE)	4	GREY	OUT	VOLTAGE OUTPUT	PUMP RELAY OUTPUT	WHEN VALVE IS OPEN, PRESENCE OF PHASE
WHITE	OUT (L.S.1) PUMP RELAY OUTPUT (OPEN VALVE)	5	WHITE	OUT	AUXILIARY OUTPUT	CLEAN CONTACT	WHEN VALVE IS OPEN, THE TWO WIRES ARE SHORTED
PINK		6	PINK				

OPERATING LED

RED LIGHT ON: IN MOTION
 RED LIGHT OFF: ACTUATOR OFF

Art. S.2816 ELECTRIC ACTUATOR



Electric actuator with quick mounting connection, for 2-way valves.

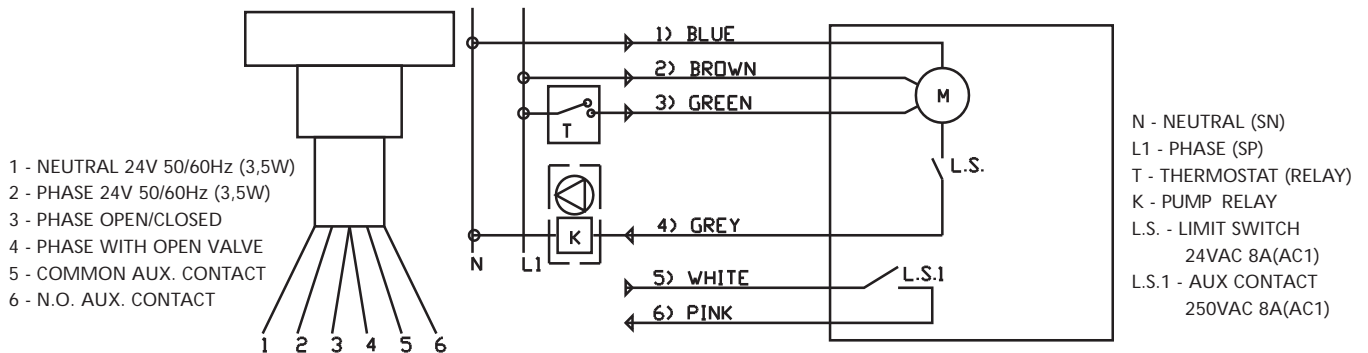
SIZE																				
A mm	84																			
B mm	100																			



ELECTRIC ACTUATORS QM SERIES - COMPACT

CODE	S2818
POWER SUPPLY VOLTAGE	24V 50-60Hz Available 230V: ART. S2817
ABSORBED POWER W	3.5W
OUTPUT TORQUE	10Nm max.; 88.50 Lbin max.
WORKING TIME	60 Sec/90°
MOTOR TYPE	Bidirectional
ASSEMBLY	Quick Mounting
WORKING ANGLE	90°
INPUT SIGNAL	2 Position Control Signal / SPST / On-Off / With Internal Relay
OUTPUT SIGNAL	24V 50-60Hz 200VA - Grey Wire Out (L) Pump Relay Output (Open Valve)
PROTECTION	IP54
CONNECTION	6-Wires Cable With Cable Gland
WEIGHT	0.4 Kg; 0.88 lb
OPERATING TEMPERATURE	-20° +80°; -4F +176F
PLENUM RATED CABLE	

WIRING DIAGRAM



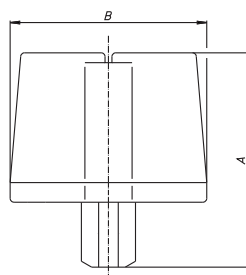
CONNECTION

ELECTRIC CONNECTION	2 WIRE SPST:	N°	WIRE COLOR	DIRECTION	FUNCTION	CONNECTION	DESCRIPTION
	BLUE IN (N) NEUTRAL (SN)	1	BLUE	IN	POWER SUPPLY	NEUTRAL (SN)	CONNECTION TO NEUTRAL
	BROWN IN (L1) PHASE (SP)	2	BROWN	IN	POWER SUPPLY	PHASE (SP)	CONNECTION TO PHASE
	GREEN IN (L1) PHASE	3	GREEN	IN	THERMOSTAT (RELAY)	OPEN-CLOSED (Y1)	WHEN PHASE CONNECTED VALVE OPENS; WHEN NOT PHASE CONNECTED VALVE CLOSES
	GREY OUT (L.S.) PUMP RELAY OUTPUT (OPEN VALVE)	4	GREY	OUT	VOLTAGE OUTPUT	PUMP RELAY OUTPUT	WHEN VALVE IS OPEN, PRESENCE OF PHASE
	WHITE OUT (L.S.1) PUMP RELAY OUTPUT (OPEN VALVE)	5	WHITE	OUT	AUXILIARY OUTPUT	CLEAN CONTACT	WHEN VALVE IS OPEN, THE TWO WIRES ARE SHORTED
	PINK	6	PINK				

OPERATING LED

RED LIGHT ON: IN MOTION
 RED LIGHT OFF: ACTUATOR OFF

Art. S.2818 ELECTRIC ACTUATOR



Electric actuator with quick mounting connection, for 2-way valves.

SIZE																			
A mm	84																		
B mm	100																		

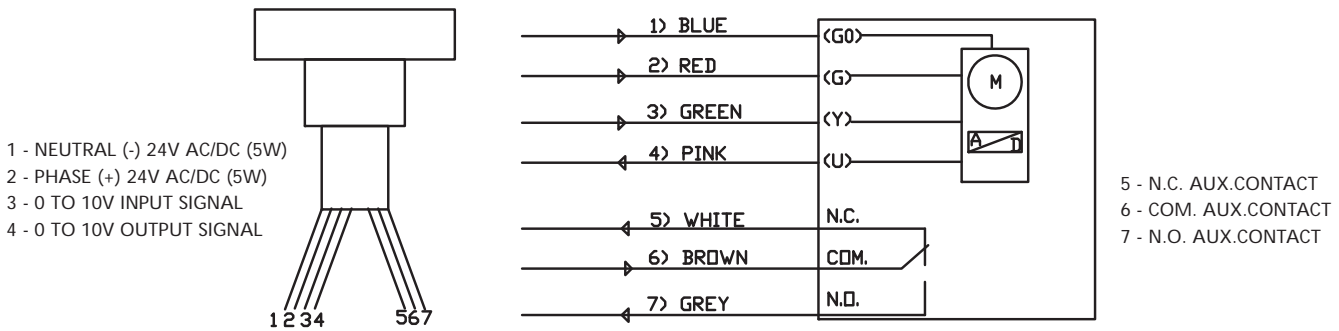
ACTUATORS QM PROPORTIONAL FOR 2-WAY



ELECTRIC ACTUATORS QM SERIES - PROPORTIONAL ACTUATOR

CODE	S2912
POWER SUPPLY VOLTAGE	24V AC/DC
ABSORBED POWER W	5W
OUTPUT TORQUE	10Nm max.; 88.50 Lbin max.
WORKING TIME	35 Sec/90°
MOTOR TYPE	Bidirectional
ASSEMBLY	Quick Mounting
WORKING ANGLE	90°
INPUT SIGNAL	0..10VDC
OUTPUT SIGNAL (FEEDBACK)	0..10VDC
AUX.CONTACT	SPDT Normally Open and Normally Close
PROTECTION	IP54
WEIGHT	0.51 Kg; 1.13 lb
OPERATING TEMPERATURE	-20° +80°; -4F +176F
PROTECTION	IP54
CONNECTION	7-Wires Cable
PLENUM RATED CABLE	

WIRING DIAGRAM



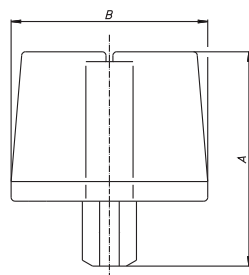
CONNECTION

ELECTRIC CONNECTION	0 TO 10VDC:	
	1-BLUE	IN (N) (-) NEUTRAL (SN)
	2-RED	IN (L) (+) PHASE (SP)
	3-GREEN	IN 0 TO 10VDC
	4-PINK	OUT 0 TO 10VDC
	5-WHITE	AUX.CONTACT N.C.
	6-BROWN	AUX.CONTACT COM
7-GREY	AUX.CONTACT N.O.	

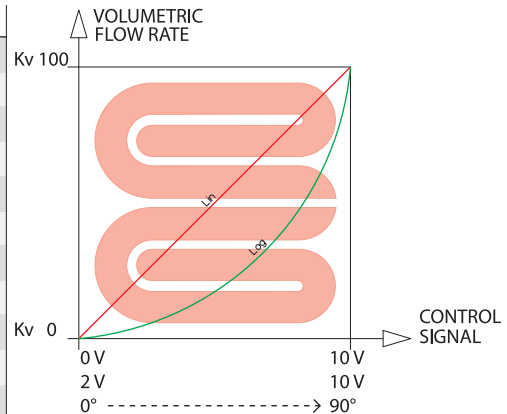
OFFSET	START POINT BETWEEN 0 TO 5 VDC
SPAN	END POINT BETWEEN 2 TO 10 VDC
RELAY	SWITCH BETWEEN 0 TO 10 VDC (0° TO 90°)

OPERATING LED	GREEN/LED:	
	OFF:	POWER FAILURE
	ON:	REACHED POSITION
	BLINK:	WORKING
RED/LED:	OFF:	AUX SWITCH OFF
	ON:	AUX SWITCH ON
	BLINK:	FAILURE

Art. S.2912 ELECTRIC ACTUATOR



SIZE	
A mm	84
B mm	100



Proportional actuator with quick mounting connection, for 2-way valves.



ELECTRIC ACTUATORS

ELECTRIC INDUSTRIAL ACTUATOR

- Power supply voltage:
24/230V A.C. 50 Hz - IP 54 - IP65
- Minimum and maximum running temperature: +14F (-10°C) +176F (+80°C)
- Torque on control rod: 9,8Nm
- Electric connection: with or without relay incorporated
- Manoeuvre time for 3-way valve both on opening and closing: 90° 60 s
- Other manoeuvre times on request
- Plenum rated cable

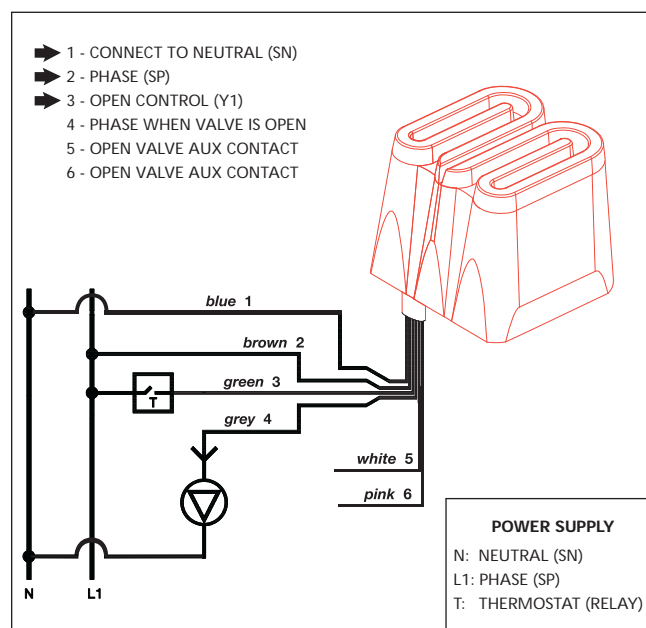
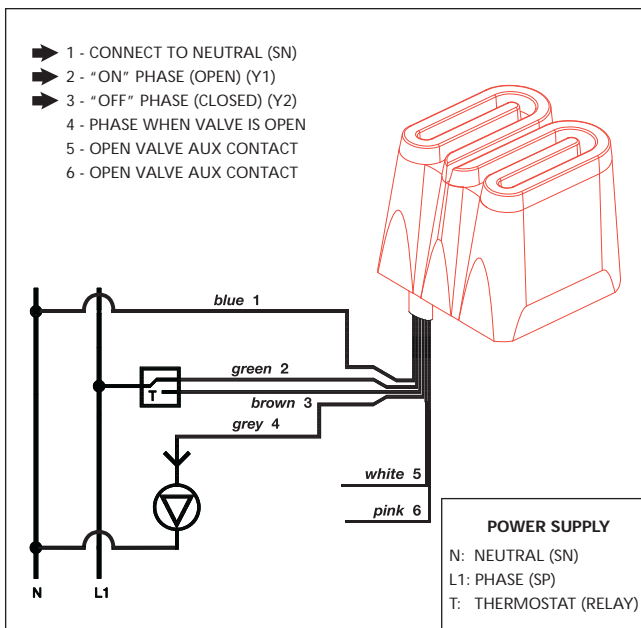
PROPORTIONAL ACTUATOR FOR REGULATION

- Power supply voltage:
24/230V A.C. - 50HZ - IP 54 - IP65
- Minimum and maximum running temperature: +14F (-10°C) +176F (+80°C)
- Piloting: (0 -10V) for opening 0-90°/ 0 -180°
- Manoeuvre time: 90° 35 s
- Torque on control rod: 9,8 Nm

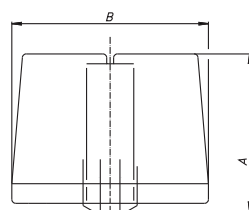
WIRING DIAGRAMS

Connection with **3 position control signal** (indicated by an arrow).

Connection with **2 position control signal** (indicated by an arrow).

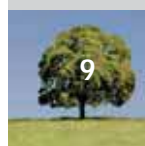


Art. S.2936 ELECTRIC ACTUATOR



Electric actuator with ISO•TOP connection.

SIZE															
A mm	75														
B mm	100														

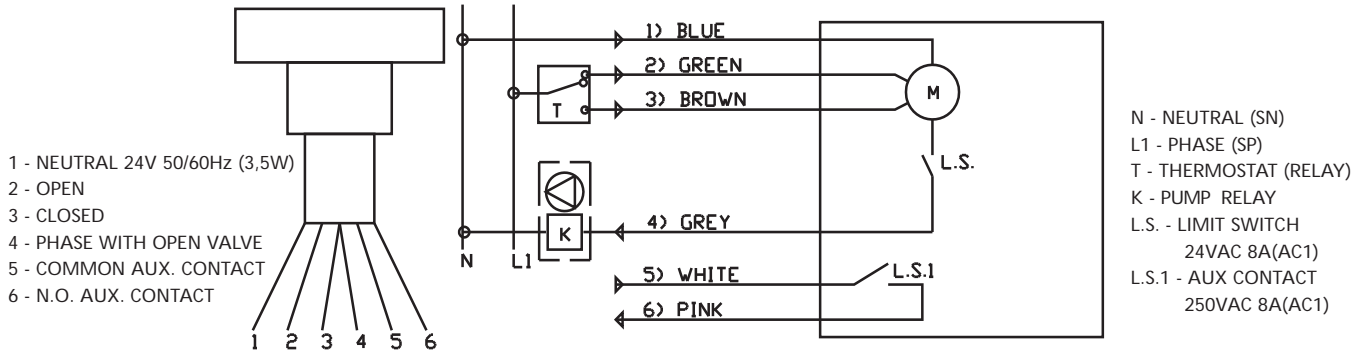




ELECTRIC ACTUATORS QM SERIES - COMPACT

CODE	S2936
POWER SUPPLY VOLTAGE	24V 50-60Hz Available 230V: ART. S2935
ABSORBED POWER W	3.5W
OUTPUT TORQUE	10Nm max.; 88.50 Lbin max.
WORKING TIME	60 Sec/90°
MOTOR TYPE	Bidirectional
ASSEMBLY	Quick Mounting
WORKING ANGLE	90°
INPUT SIGNAL	3 Position Control Signal / SPST / On-Off / With Internal Relay
OUTPUT SIGNAL	24V 50-60Hz 200VA - Grey Wire Out (L) Pump Relay Output (Open Valve)
PROTECTION	IP54
CONNECTION	6-Wires Cable With Cable Gland
WEIGHT	0.4 Kg; 0.88 lb
OPERATING TEMPERATURE	-20° +80°; -4F +176F
PLENUM RATED CABLE	

WIRING DIAGRAM



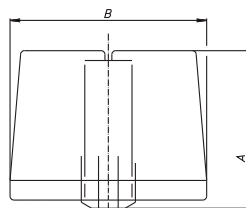
CONNECTION

ELECTRIC CONNECTION	3 WIRE SPST:	N°	WIRE COLOR	DIRECTION	FUNCTION	CONNECTION	DESCRIPTION
BLUE	IN (N) NEUTRAL (SN)G	1	BLUE	IN	POWER SUPPLY	NEUTRAL (SN) G	CONNECTION TO NEUTRAL
GREEN	IN (L1) PHASE (Y1)	2	GREEN	IN	THERMOSTAT (RELAY)	PHASE-OPEN (Y1)	WHEN PHASE CONNECTED VALVE OPENS
BROWN	IN (L1) PHASE (Y2)	3	BROWN	IN	THERMOSTAT (RELAY)	PHASE-CLOSED (Y2)	WHEN PHASE CONNECTED VALVE CLOSES
GREY	OUT (L.S.) PUMP RELAY OUTPUT (OPEN VALVE)	4	GREY	OUT	VOLTAGE OUTPUT	PUMP RELAY OUTPUT	WHEN VALVE IS OPEN, PRESENCE OF PHASE
WHITE	OUT (L.S.1) PUMP RELAY OUTPUT (OPEN VALVE)	5	WHITE	OUT	AUXILIARY OUTPUT	CLEAN CONTACT	WHEN VALVE IS OPEN, THE TWO WIRES ARE SHORTED
PINK		6	PINK				

OPERATING LED

RED LIGHT ON: IN MOTION
 RED LIGHT OFF: ACTUATOR OFF

Art. S.2936 ELECTRIC ACTUATOR



Electric actuator with ISO•TOP connection.

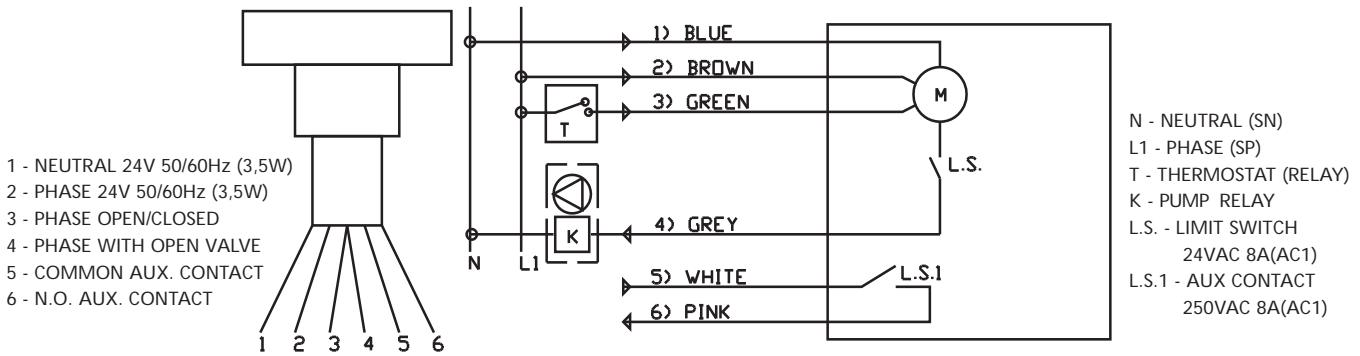
SIZE																				
A mm	75																			
B mm	100																			



ELECTRIC ACTUATORS QM SERIES - COMPACT

CODE	S2938
POWER SUPPLY VOLTAGE	24V 50-60Hz Available 230V: ART. S2937
ABSORBED POWER W	3.5W
OUTPUT TORQUE	10Nm max.; 88.50 Lbin max.
WORKING TIME	60 Sec/90°
MOTOR TYPE	Bidirectional
ASSEMBLY	Quick Mounting
WORKING ANGLE	90°
INPUT SIGNAL	2 Position Control Signal / SPST / On-Off / With Internal Relay
OUTPUT SIGNAL	24V 50-60Hz 200VA - Grey Wire Out (L) Pump Relay Output (Open Valve)
PROTECTION	IP54
CONNECTION	6-Wires Cable With Cable Gland
WEIGHT	0.4 Kg; 0.88 lb
OPERATING TEMPERATURE	-20° +80°; -4F +176F
PLENUM RATED CABLE	

WIRING DIAGRAM



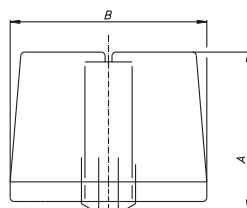
CONNECTION

ELECTRIC CONNECTION	2 WIRE SPST:	N°	WIRE COLOR	DIRECTION	FUNCTION	CONNECTION	DESCRIPTION
BLUE IN (N)	NEUTRAL (SN)	1	BLUE	IN	POWER SUPPLY	NEUTRAL (SN)	CONNECTION TO NEUTRAL
BROWN IN (L1)	PHASE (SP)	2	BROWN	IN	POWER SUPPLY	PHASE (SP)	CONNECTION TO PHASE
GREEN IN (L1)	PHASE	3	GREEN	IN	THERMOSTAT (RELAY)	OPEN-CLOSED (Y1)	WHEN PHASE CONNECTED VALVE OPENS; WHEN NOT PHASE CONNECTED VALVE CLOSES
GREY OUT (L.S.)	PUMP RELAY OUTPUT (OPEN VALVE)	4	GREY	OUT	VOLTAGE OUTPUT	PUMP RELAY OUTPUT	WHEN VALVE IS OPEN, PRESENCE OF PHASE
WHITE OUT (L.S.1)	PUMP RELAY OUTPUT (OPEN VALVE)	5	WHITE	OUT	AUXILIARY OUTPUT	CLEAN CONTACT	WHEN VALVE IS OPEN, THE TWO WIRES ARE SHORTED
PINK		6	PINK				

OPERATING LED

RED LIGHT ON: IN MOTION
 RED LIGHT OFF: ACTUATOR OFF

Art. S.2938 ELECTRIC ACTUATOR



Electric actuator with ISO•TOP connection.

SIZE																			
A mm	75																		
B mm	100																		

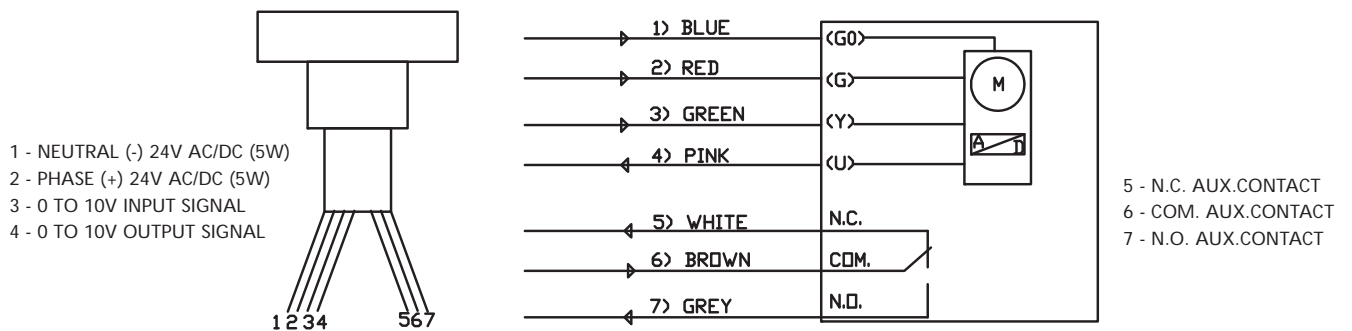


ACTUATORS ISO•TOP PROPORTIONAL FOR 3-WAY

ELECTRIC ACTUATORS QM SERIES - PROPORTIONAL ACTUATOR

CODE	S2940
POWER SUPPLY VOLTAGE	24V AC/DC
ABSORBED POWER W	5W
OUTPUT TORQUE	10Nm max.; 88.50 Lbin max.
WORKING TIME	35 Sec/90°
MOTOR TYPE	Bidirectional
ASSEMBLY	Quick Mounting
WORKING ANGLE	90°
INPUT SIGNAL	0..10VDC
OUTPUT SIGNAL (FEEDBACK)	0..10VDC
AUX.CONTACT	SPDT Normally Open and Normally Close
PROTECTION	IP54
WEIGHT	0.51 Kg; 1.13 lb
OPERATING TEMPERATURE	-20° +80°; -4F +176F
PROTECTION	IP54
CONNECTION	7-Wires Cable
PLENUM RATED CABLE	

WIRING DIAGRAM



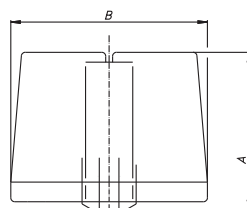
CONNECTION

ELECTRIC CONNECTION	0 TO 10VDC:
	1-BLUE IN (N) (-) NEUTRAL (SN)
	2-RED IN (L) (+) PHASE (SP)
	3-GREEN IN 0 TO 10VDC
	4-PINK OUT 0 TO 10VDC
	5-WHITE AUX.CONTACT N.C.
	6-BROWN AUX.CONTACT COM
7-GREY AUX.CONTACT N.O.	

OFFSET	START POINT BETWEEN 0 TO 5 VDC
SPAN	END POINT BETWEEN 2 TO 10 VDC
RELAY	SWITCH BETWEEN 0 TO 10 VDC (0° TO 90°)

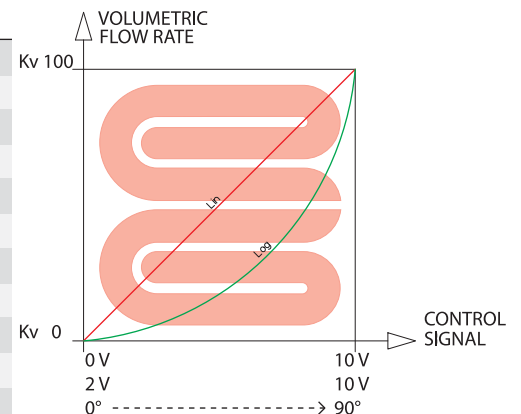
OPERATING LED	GREEN/LED:
	OFF: POWER FAILURE ON: REACHED POSITION BLINK: WORKING
RED/LED:	OFF: AUX SWITCH OFF
	ON: AUX SWITCH ON
	BLINK: FAILURE

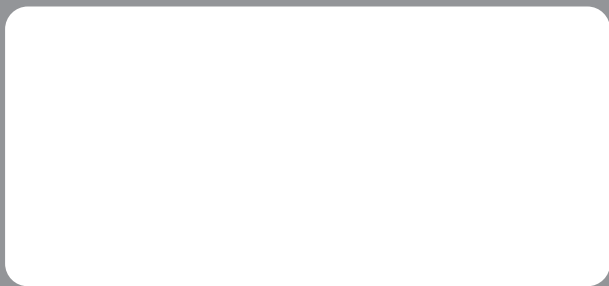
Art. S.2940 ELECTRIC ACTUATOR



Proportional actuator with quick mounting connection.

SIZE	
A mm	75
B mm	100





ENOLGAS BONOMI S.p.A. • via Europa 227 • 25062 Concesio (Bs) • Italy
tel. 030 2184311 • fax 030 2184333 • www.enolgas.it • enolgas@enolgas.it