

Modulating control valves

serie MDV-B1..., B1...E

Modulating control valves of the series MDV are approved by DVGW and certified **CE** according to the Norm EN 161 to meet requirements in industrial and residential combustion systems.

They are particularly suitable for the proportional regulation of gas flows of the first, second and third family and of air. The electric motor is unipolar and bidirectional, with high static and maintaining torque for 3-position-operation. The exact linear rating is achieved by means of particular, patented shutter disks, rotating on the same axis.

11 different orifice sizes are available according to the operating conditions.



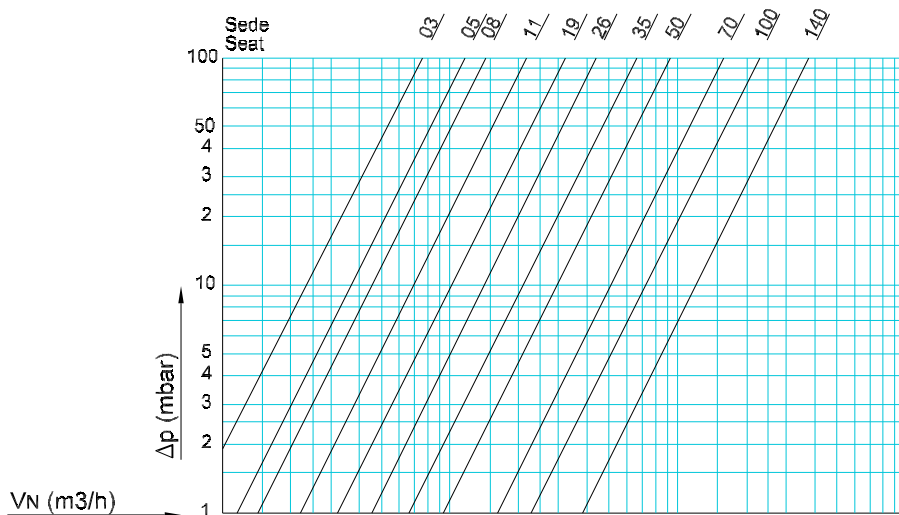
TECHNICAL FEATURES

Construction	Die-cast aluminium	Voltage	230V, 115V, 24V ac / 50-60 Hz
Rating feature	Linear	Nominal load	4,5 - 7 VA
Control ratio	>25:1	Input signal	4÷20 mA or 0÷10V dc
Operating pressure	Max 1 bar (see table)	Output signal (on request)	0÷10V dc
Ambient temperature	-10÷ +60 °C	Duty cycle	Continuous 100%
Opening/closing time	15, 30, 60 s. per 90°	Auxiliary end switches rating	0,5A / 48V dc and ac
Connections	Rp 1 ÷2 according to ISO7-1	Enclosure	IP54 - IEC 529, IP65 (on request)
Group	2	Cable gland	2 x Pg 13,5

FEATURES

- Sturdy, compact construction, especially suitable for industrial applications
- Installation in any position
- Adjustable rotation angle
- Minimum leakage with valve in closed position
- Connecting lever to be installed between the valve and the actuator
- Manual/automatic control station
- 2 adjustable auxiliary microswitches
- Wide range of accessories on request:
 - 1 or 2 feedback potentiometer: from 150 ohm to 5 kohm
 - Mechanical position indicator
 - Input signal 4÷20 mA or 0÷10V dc
 - Output signal 0÷10V dc

FLOW CHART



Aria Air	dv=1	1 2 3 4 5 6 8 10 2 3 4 5 6 8 100 2 3 4 5 6 8 1000
Metano Methane	dv=0,64	1 2 3 4 5 6 8 10 2 3 4 5 6 8 100 2 3 4 5 6 8 1000
Gas di citta' Town gas	dv=0,45	1 2 3 4 5 6 8 10 2 3 4 5 6 8 100 2 3 4 5 6 8 1000
Propano Propane	dv=1,56	1 2 3 4 5 6 8 10 2 3 4 5 6 8 100 2 3 4 5 6 8
Butano Butane	dv=2,09	1 2 3 4 5 6 8 10 2 3 4 5 6 8 100 2 3 4 5 6
G.P.L. L.P.G.	dv=1,70	1 2 3 4 5 6 8 10 2 3 4 5 6 8 100 2 3 4 5 6 8

MODELS

B1 = Linear control valve

Orifice

03 = 30 mm ²	11 = 110 mm ²	35 = 350 mm ²	99 = 1000 mm ²
05 = 50 mm ²	19 = 190 mm ²	50 = 500 mm ²	140 = 1400 mm ²
08 = 80 mm ²	26 = 260 mm ²	70 = 700 mm ²	

Supply voltage

- A = 24 V ac ± 10% / 50 - 60Hz
- B = 115 V ac + 6% -10% / 50 - 60Hz
- C = 230 V ac + 6% -10% / 50 - 60Hz
- B/A = with transformer 115/24V ac~ + 6% -10% / 50 - 60Hz
- C/A = with transformer 230/24V ac~ + 6% -10% / 50 - 60Hz

Rotation time for 90° at 50 Hz

- 1 = 15 s
- 2 = 30 s
- 3 = 60 s

Feedback Potentiometer (not to be supplied with incorporated transformer)

- 00 = no foreseen
- 15 = 2,5 kohm Bourns
- 21 = n. 2 - 150 ohm
- 11 = 150 ohm
- 16 = 5 kohm (Spectrol)
- 23 = n. 2 - 1 kohm each
- 13 = 1 kohm
- 18 = 1 kohm (Spectrol)
- 25 = n. 2 - 2,5 kohm each

Auxiliary Microswitches

- 0 = not foreseen (only for version 230V-60 s. rotation)
- 2 = 2 (standard)

Accessories

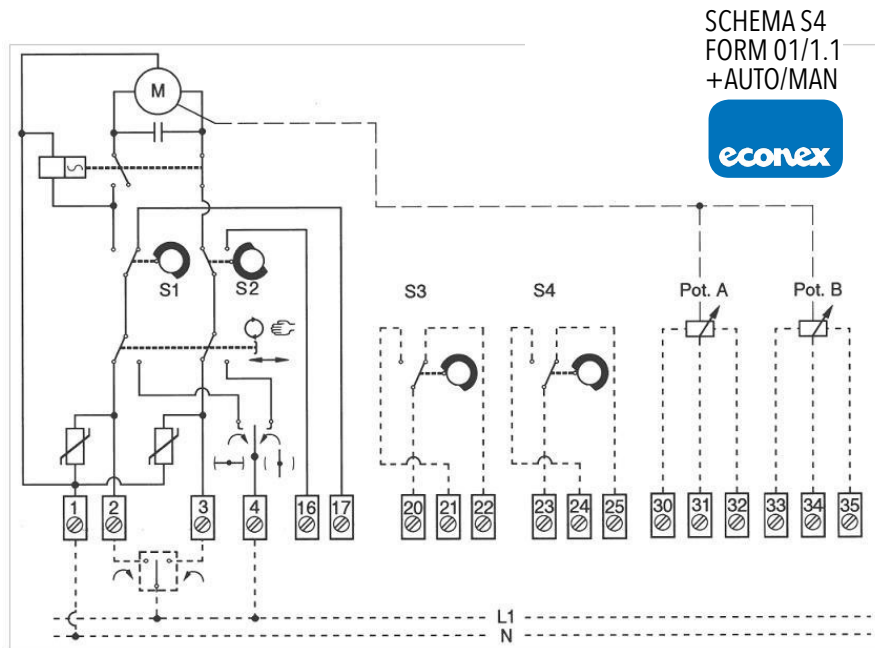
- S = Manual/Automatic control station
- O = Position indicator on the top cover
- R1 = Relay control (ON/OFF)
- DX = Clockwise rotation
- Z = Enclosure IP65

Control signal

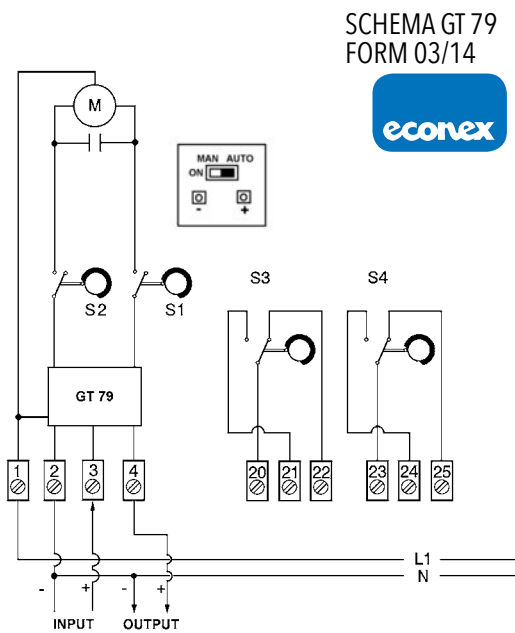
- E2 = Input 4÷20 mA oppure 0÷10V dc / output 0÷10V dc
- E4 = Input 0÷10V dc
- E5 = Input 4÷20 mA

B1 19 A 2 00 2 S E5

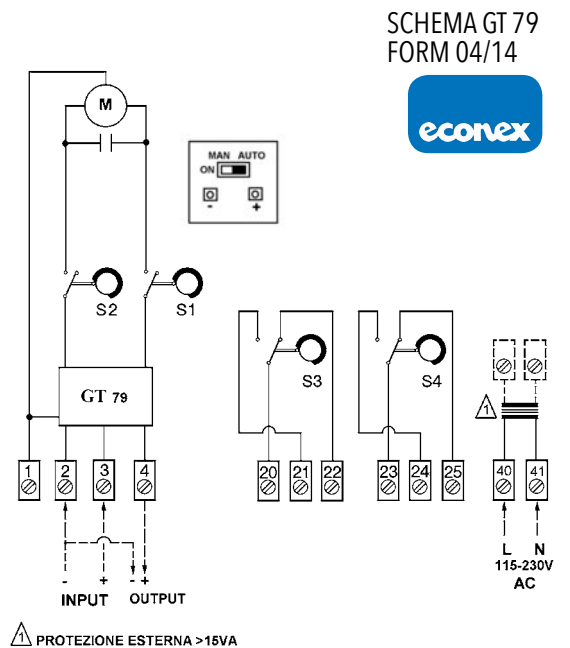
ELECTRIC FLOATING VERSION



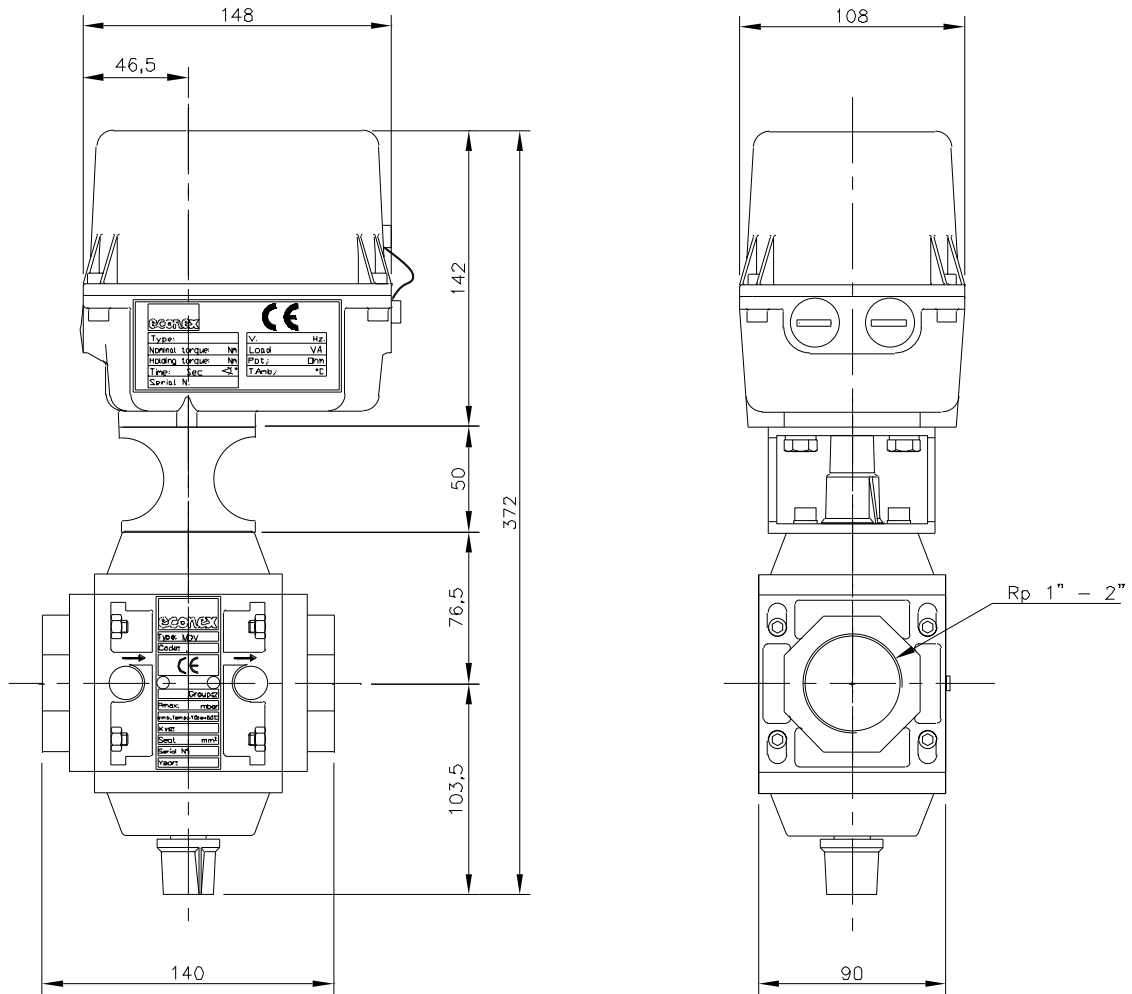
ELECTRONIC ANALOGIC VERSION 24V



ELECTRONIC ANALOGIC VERSION 115 - 230V



DIMENSIONS



Model	Orifice (mm ²)	Max. pressure in mbar	Raccomended flanges	Weight (Kg)
B 103	30	1000	1"	3,5
B 105	50	1000	1"	
B 108	80	1000	1"	
B 111	110	1000	1"	
B 119	190	500	1"	
B 126	260	500	1"	
B 135	350	350	1.1/4" - 1.1/2"	
B 150	500	300	1.1/4" - 1.1/2"	
B 170	700	200	1.1/4" - 1.1/2"	
B 199	1000	200	2"	
B 1140	1400	200	2"	

All the reported data are subject to be changed without notice.

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