

# Modulating control valves series MDV-D1

Modulating control valves of the MDV-D1 series are built according to the EN 161 norms to be used on industrial combustion systems.

They are particularly suitable for the proportional regulation of all combustion 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-control, or proportional with analogic input control signal current or voltage change.

The exact linear rating is achieved by means of particular, patented shutter disks, rotating on the same axis. Six different orifice sizes are available according to the operating conditions.



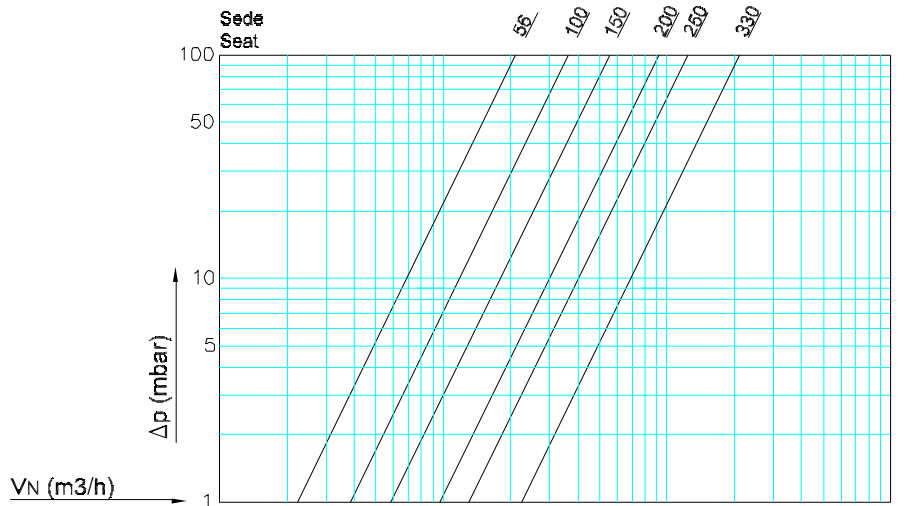
## TECHNICAL FEATURES

<b>Valve and actuator body</b>	Die-cast aluminium	<b>Supply voltage</b>	230V, 115V or 24V/50-60 Hz
<b>Rating feature</b>	linear	<b>Nominal load</b>	7 VA
<b>Control ratio</b>	25:1	<b>Enclosure</b>	IP 54 according to IEC 529
<b>Operating pressure</b>	max 1 bar	<b>Duty cycle</b>	Continuous 100%
<b>Ambient temperature</b>	-10 ÷ +60 °C	<b>Potentiometer/s</b>	150; 1000; 2500 ohm
<b>Opening/closing time</b>	30 s or 60 s / 90°	<b>Input signal</b>	4÷20 mA or 0-10V dc
<b>On request</b>	7.5s or 15 s / 90°	<b>Output signal (on request)</b>	4÷20 mA or 0-10V dc
<b>Flanged connections</b>	PN 16 According to ISO 7005	<b>Rating of auxiliary switches</b>	0,50 A / 48V dc and ac

## FEATURES

- Sturdy, compact construction, especially suitable for industrial applications
- Installation in any position
- Low internal leakage with valve in closed position
- Mechanical position indicator
- Adjustable rotation angle
- Manual/automatic control station
- Wide range of accessories on request:
  - 1 or 2 potentiometers ranging from 150 ohm to 2,5 kohm
  - 2 adjustable auxiliary microswitches with free electric contacts
  - input control signal: 4÷20 mA or 0÷10V dc
  - output signal: 4÷20 mA or 0÷10V dc

# FLOW CHART



Gas	dv	Scale 1	Scale 2	Scale 3
Aria Air	dv=1	10 2 3 4 5 6 8 100	2 3 4 5 6 8 1000	2 3 4 5 6 8 10000
Metano Methane	dv=0,64	10 2 3 4 5 6 8 100	2 3 4 5 6 8 1000	2 3 4 5 6 8 10000
Gas di città Town gas	dv=0,45	10 2 3 4 5 6 8 100	2 3 4 5 6 8 1000	2 3 4 5 6 8 10000
Propano Propane	dv=1,56	10 2 3 4 5 6 8 100	2 3 4 5 6 8 1000	2 3 4 5 6 8
Butano Butane	dv=2,09	10 2 3 4 5 6 8 100	2 3 4 5 6 8 1000	2 3 4 5 6
G.P.L. L.P.G.	dv=1,70	10 2 3 4 5 6 8 100	2 3 4 5 6 8 1000	2 3 4 5 6 8

## CODE

### D1= Valve body

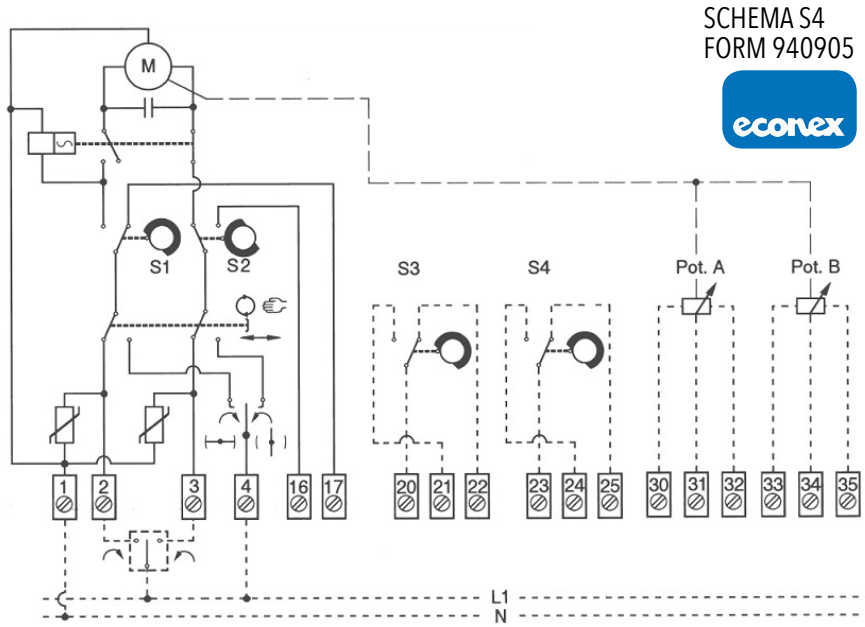
Orifice mm <sup>2</sup>	Flange DN
<b>56</b> = 560	<b>P</b> = DN50
<b>100</b> = 1009	<b>Q</b> = DN65
<b>150</b> = 1485	<b>P</b> = DN50
<b>200</b> = 2003	<b>Q</b> = DN65
<b>250</b> = 2500	<b>R</b> = DN80
<b>330</b> = 3300	<b>Q</b> = DN65
	<b>R</b> = DN80
	<b>S</b> = DN100
	<b>S</b> = DN100

### AR2= Rotary gear motor

<b>Supply voltage at 50 - 60 Hz</b>	
<b>A</b> = 24 V ac / 50 - 60Hz	
<b>B</b> = 110 V ac / 50 - 60Hz	
<b>C</b> = 230 V ac / 50 - 60Hz	
<b>Rotation time at 50 Hz</b>	
<b>2</b> = 30 s	
<b>3</b> = 60 s	
<b>Feedback potentiometer</b>	
<b>00</b> = no pot	
<b>11</b> = 1 pot. 150 ohm	
<b>13</b> = 1 pot. 1000 ohm	
<b>15</b> = 1 pot. 2500 ohm	
<b>25</b> = 2 pot. 2500 ohm	
<b>Auxiliary microswitches</b>	
<b>0</b> = no	
<b>2</b> = 2 (standard)	
<b>Accessories</b>	
<b>S</b> = Control station Auto/Man. (standard)	
<b>A1</b> = Auxiliary shaft $\varnothing$ 8 mm	
<b>A2</b> = Auxiliary shaft $\square$ 9,5 mm	
<b>E2</b> = In 4 $\div$ 20 mA or 0 $\div$ 10V dc, Out 0 $\div$ 10V dc	
<b>E4</b> = In 0 $\div$ 10V dc	
<b>E5</b> = In 4 $\div$ 20 mA	
<b>E7</b> = In 4 $\div$ 20 mA Out 0 $\div$ 10V dc	
<b>E8</b> = In 4 $\div$ 20 mA Out 4 $\div$ 20 mA	
<b>Z</b> = Version IP65	

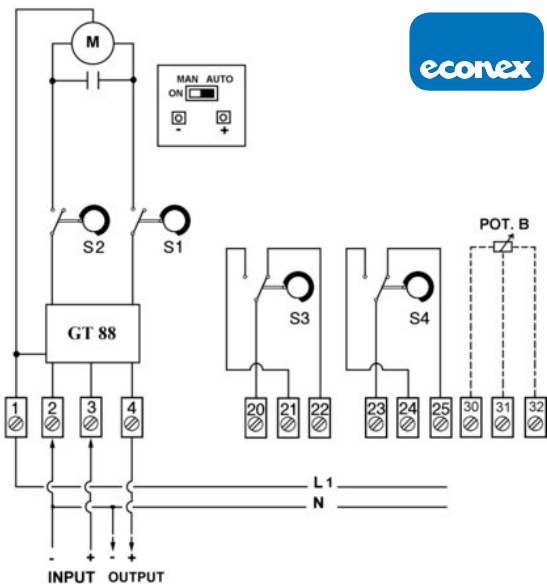
P.S. The maximum torque on the auxiliary shaft is 3 Nm

ELECTRIC FLOATING VERSION



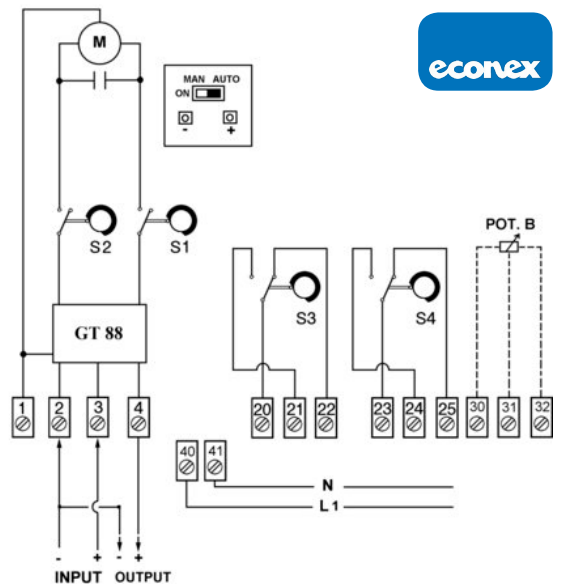
ELECTRONIC ANALOGIC VERSION 24V

SCHEMA GT 88 CG/2  
FORM 07/13

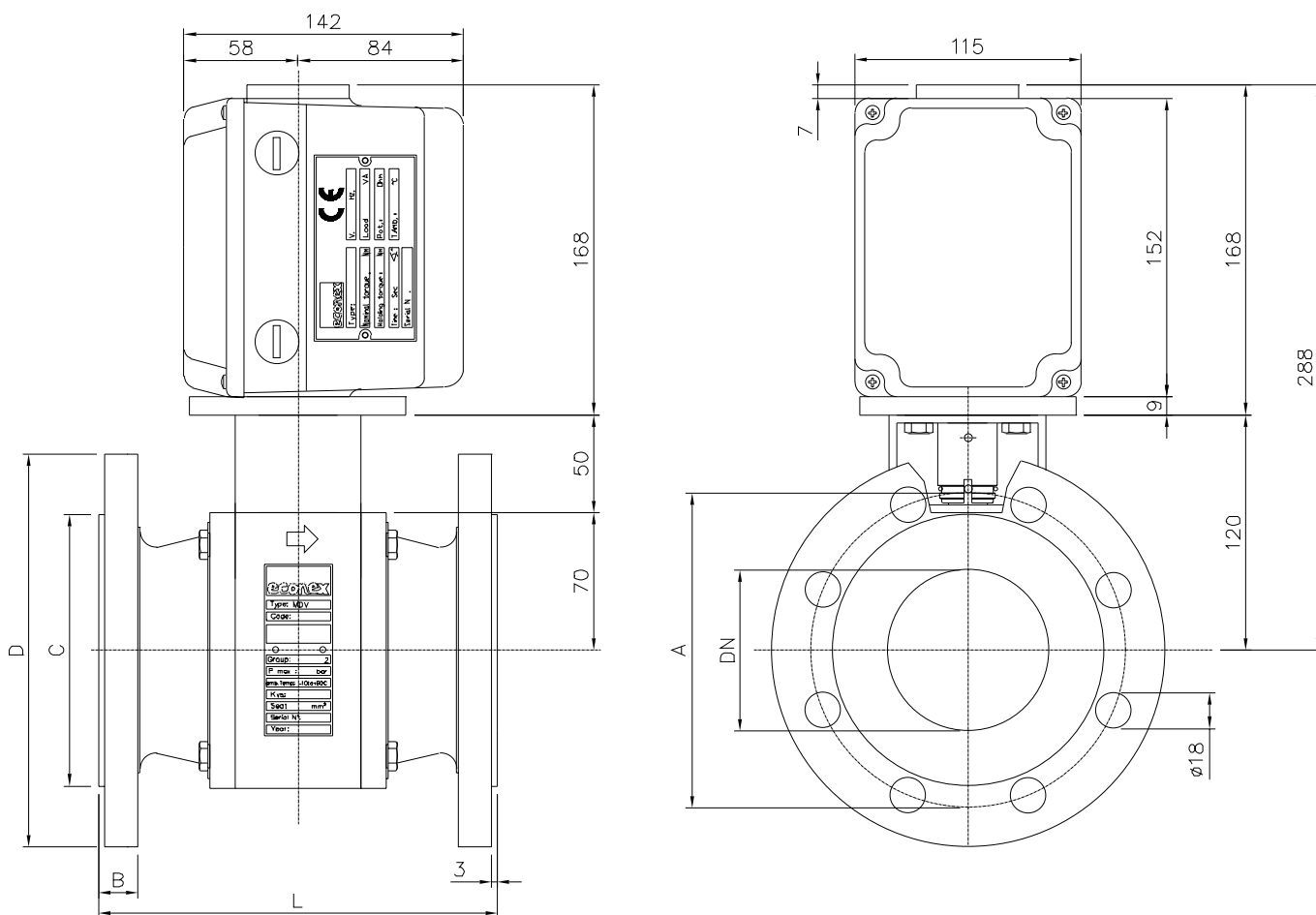


ELECTRONIC ANALOGIC VERSION 115 - 230V

SCHEMA GT 88 CG/2 - 1  
FORM 14/14



# DIMENSIONS



DN	PN	A	B	C	D	L	Holes n°	Weight Kg
50	16	125	18	102	165	191	4	7,5
65	16	145	18	122	185	191	4	8
80	16	160	20	138	200	203	8	9
100	16	180	20	158	220	229	8	11

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

form140918

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