

### MULTI GAUGE CONTROLLER MG12-8 CH

#### Description

Vacuum Gauge MG12-8CH is a versatile, microprocessor controlled device, that is able to support the operation of 8 vacuum gauges simultaneously. Device handles almost every gauge type on market, that are based on 0-10V or 4-20mA DC standard. As a standard, all following Oerlikon-Leybold and MKS instruments gauges are implemented : TTR90, TTR100, TTR211, CTR90 , ITR90, ITR100, DI200, DI 2000, PTR 225, MKS870. Any others can be implemented optionally, with the exception of extractor gauge. Controller can display simultaneously every combination between 1 and 8 channels, font size adapt itself according to number of displayed channels. As a big advantage of this instrument it is possible to set up to 16 setpoints, that can trigger up to 16 relays. Every one could be programmed independently of each other, for any measurement channel , using hysteresis and switch logic „above” and „below” setpoint. Any of those setpoints can control any of given relays, there are 16 relays :

- 8 ( 2-contact) items NO („normally opened”), and
- 8 ( 3-contact) items NO/NC („normally opened” or „normally closed”).

Measurement channels are active instantly after power up. Device has also feature of automatic gauge type recognition. User can either scan for a implemented gauge type or choose type manually. There is also possibility to choose one of 7 predefined gases, or user defined one, for every channel separately. Gas type has considerable influence on readings, case MG12-8CH operates with for example, ionisation gauge. User can control emission (unlimited time), and degas (limited time) on particular channel. Controller has also feature of automatic broken cable or damaged gauge head recognition, in that case , warns user about failure.

All active parameters are displayed on the screen, device status is additionally indicated through LED diodes. User can also put 4 analog input channels on output (signal mirroring), and use them for any other purpose.

Specification	
Measurement chanel	8
Display range	1x10 <sup>-10</sup> - 2x10 <sup>5</sup> mbar
Measurement range:	
Channels 1-4	1x10 <sup>-10</sup>
Channels 5-8	1x10 <sup>-9</sup>
(all 8 channels can handle standard inputs: 0-10V DC and 4-20mA DC)	
Display	Graphic LCD Display 240x128 pixels , with regulated contrast and backlight
Setpoints (individually programmed – every single channel could control from 1 to 16 setpoints)	16 Setpoints
Suitable Gauges in standard	TTR90, TTR100, TTR211, CTR90, ITR90, ITR100, DI200, DI 2000, PTR 225, MKS870
Hysteresis	adjustable individually for each setpoint
Supply	90-240 VAC
Operating temperature	5-50°C
Communication Interface* (option)	RS232/485/422, USB, Profibus DPV1, Modbus, EtherNet/IP, Bluetooth
Dimention [mm]	210 x 110 x 258
Weight	3 kg
Relative humidity	max. 80% (up to 31°C), decreasing to max. 50% (above 40°C)

\* Only one communications interface can be used at once. Please specify at time of order.



## Advantages

- Small enclosure dimensions – only 3U and 42 HP (19" rack standard)
- Pressure measurement range from  $1 \times 10^{-10}$  mbar -  $2 \times 10^5$  mbar
- Self adapting font size (according to adjustable number of displayed channels) allows reading particular channels on distance
- Device can handle almost every gauge head present on market\* (\*that give output signal within range 0-10V or 4-20mA DC)
- Degas function with adjustable timer (0:00 – 15:00 min/sec)
- Possibility of set up 16 setpoints, therefore 16 triggers with hysteresis, also adjustable logic „above“ and „below“. Each of them may control any of present 16 relays. Every channel may control any trigger.
- Communication interfaces RS232/485/422, USB, Profibus DPV1, Modbus, EtherNet/IP, Bluetooth (other standard on demand)
- Overpressure protection – automatic switch off (Degas and Emission- B-A gauges)
- Selectable pressure units: mbar, Torr or Pascal
- Gas type correction factors for ionisation gauges, for majority of popular gases, additionally user defined factor
- Channel name defined by user (for easy orientation)
- Save and restore all settings feature
- Versatile Power Supply: 90÷240 VAC, 50÷60 Hz

## Applications

- Every low, high and ultra high vacuum systems – vacuum measurement
- Every high pressure system – pressure measurement
- Measurement both bakeable and non-bakeable systems
- Pressure measurement within range of Ultra High Vacuum till high pressures (3000 psi)
- Vacuum Pump (Forevacuum and Turbo) steering - controlled by any channel and setpoint
- ON/OFF (relay based) steering for any other device - controlled by any channel and setpoint