

## VGC094

### Vacuum Gauge Controller

The Vacuum Gauge Controller VGC094 is a prestigious solution for vacuum process measurement, control and data log. Compatible to the wide range of INFICON passive gauges, VGC094 is able to monitor the entire vacuum pressure range from  $1 \times 10^{-11}$  to 1000 mbar. VGC094 can be user-configured to control up to 4 passive gauge heads (Pirani gauges, inverted magnetron gauges) by two sets of measurement boards. VGC094 is the ideal solution for applications with demanding performance, such as operation from long distance, high temperature or high ionizing radiation exposure. The controller provides latest digital communication interfaces (USB, RS485, Ethernet) and can be customized with user's specific communication standards thanks to individual communication boards (RS232, RS422, Profibus, Profinet).



#### ADVANTAGES

- Complete solution for vacuum monitoring and control monitor from  $1 \times 10^{-11}$  to 1000 mbar
- Bright and clear screen, 4 channel display
- Bar graph display with set-point or pressure vs. time views
- Simple operation with intuitive and guided menus for parameter, sensor or general settings
- Data and parameter log function with USB port (rear side) and USB flash drive (front side)
- High resolution – 16 bit A/D converter
- 4 programmable 0 to 10 V chart recorder output
- Four freely definable setpoints per channel with adjustable hysteresis
- RS485, Ethernet, optional RS232, RS422 and fieldbus communication interfaces
- Firmware upgrade available online or by USB stick

## VGC094

### ORDERING INFORMATION

Type	VGC094
Vacuum Gauge Controller	398-401

Accessories Pirani cables to VGC094 <sup>1)</sup>	PSG010 80°C	PSG017 / 018 80°C	PSG017 / 018 250°C
Cable connectors (controller side / sensor side)	Amphenol / Amphenol	Amphenol / Push-pull self-latching	Amphenol / Push-pull self-latching
3 m (9.9 ft)	BG548402-T	BG548308-T	BG548414-T
6 m (19.8 ft)	BG548403-T	BG548309-T	BG548465-T
10 m (33 ft)	BG548450-T	BG548456-T	BG448047-T
15 m (49 ft)	BG548451-T	BG548457-T	BG448043-T

Extensions cables <sup>1)</sup>	PSG010 / 017 / 018
Cable connectors (controller side / sensor side)	Amphenol / Amphenol
10 m (33 ft)	BG548466-T
20 m (65 ft)	BG548468-T
30 m (99 ft)	BG548470-T

Cold cathode cables to VGC094 <sup>1)</sup>	MAG050/060/084 80°C	MAG050/060/084 250°C	MAG070 80°C
Cable connectors (controller side / sensor side)	Bayonet, SHV / SHV	Bayonet, SHV / SHV	Push-pull self-latching, Triax / Triax
3 m (9.9 ft)	BG548406-T	BG548542-T	BG548306-T
6 m (19.8 ft)	BG548407-T	BG548543-T	BG548317-T
10 m (33 ft)	BG548419-T	BG448045-T	BG548490-T
15 m (49 ft)	BG548483-T	BG548989-T	BG548491-T

<sup>1)</sup> Other/longer lengths on request

### Measurement Boards

Double Pirani measurement board, PI 300 D	IG546920-T
Double Pirani measurement board, PI 300 DL	IG549212-T
Double Pirani measurement board, PI 300 DN	IG549214-T
Double cold cathode measurement board, PE 300 DC9	IG441375-T
Pirani/Cold cathode measurement board, CP 300 C9	IG441000-T
Pirani/Cold cathode measurement board, CP 300 C10	IG441114-T
Pirani/Cold cathode measurement board, CP 300 T11	IG441080-T
Pirani/Cold cathode measurement board, CP 300 T11L	IG441120-T

### Interface Boards

Interface and relay board, IF300A RS232C, 45 W, 75 VA	IG441130-T
Interface and relay board, IF300B RS232C, 120 W, 1000 VA	IG441250-T
Interface and relay board, IF300C RS422, 45 W, 75 VA	IG441390-T
Interface and relay board, IF300P Profibus, 45 W, 75 VA	IG441395-T
Interface and relay board, IF301P Profibus semi-relays, 15 W, 25 VA	IG441396-T
Interface board, IF500PN Profinet	398-421

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<b>Pirani Gauges</b>	<b>DN 10 ISO-KF</b>	<b>DN 16 ISO-KF</b>	<b>DN 16 CF-F</b>	<b>DN 40 CF-F</b>
PSG010	350-400	-	-	-
PSG017	-	350-430	350-431	-
PSG018	-	350-420	350-424	350-423

<b>Cold cathode Gauges</b>	<b>DN 25 ISO-KF</b>	<b>DN 40 ISO-KF</b>	<b>DN 40 CF-F</b>
MAG050	399-840	399-841	399-842
MAG060	-	399-845	399-846
MAG070	-	399-847	399-848
MAG084	-	399-849	399-850

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## SPECIFICATIONS

Type	VGC094
Measurement channels	4
Display	LCD, LED backlight
Measurement rate	100 s <sup>-1</sup>
Display rate	10 s <sup>-1</sup>
Measurement range	1×10 <sup>-11</sup> ... 1000 mbar   7.5×10 <sup>-12</sup> ... 750Torr
Connectable gauges with display range	
PSG010 / 017 / 018	8×10 <sup>-4</sup> ... 1000 mbar   6×10 <sup>-4</sup> ...750 Torr
MAG050	2×10 <sup>-9</sup> ... 5×10 <sup>-3</sup> mbar   1.5×10 <sup>-9</sup> ... 3.75×10 <sup>-3</sup> Torr
MAG060	1×10 <sup>-10</sup> ... 5×10 <sup>-3</sup> mbar   7.5×10 <sup>-11</sup> ... 3.75×10 <sup>-3</sup> Torr
MAG070	1×10 <sup>-11</sup> ... 5×10 <sup>-3</sup> mbar   7.5×10 <sup>-12</sup> ... 3.75×10 <sup>-3</sup> Torr
MAG084	1×10 <sup>-9</sup> ... 1×10 <sup>-2</sup> mbar   7.5×10 <sup>-10</sup> ... 7.5×10 <sup>-3</sup> Torr
Measurement unit (selectable)	mbar, Torr, Pa, hPa, Micron, V
Slots for plug-in boards	2 measurement boards 1 interface board
Setpoints	
Setpoint relays	4
Error relay	1
Channel assignment	freely assignable
Adjustment range	sensor dependent
Hysteresis	adjustable
Relay contact	floating changeover contact
Contact rating	30 V (dc, ac) / 1.5 A 60 V (dc) / 0.6 A 40 V (ac) / 1 A
Connector	D-Sub, 25-pin, female
Analog output	4
Range	0 ... 10 V / 4...20 mA
Interface (digital)	USB slave, master, RS485, Ethernet USB Type A (flash drive), USB Type B, M12 5-pin FCC68/RJ45
Power	
Supply	100 ... 240 V (ac)
Frequency	50 ... 60 Hz
Consumption	≤65 W
Temperature	
Operation (ambient)	+5 ... +50 °C
Storage	-20 ... +60 °C
Relative humidity	max. 80% (up to 30 °C) max. 50% (from 40 °C)
Weight	1.45 kg   3.2 lb

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Measurement Boards	PI 300 D	PI 300 DL	PI 300 DN	PE 300 DC9	CP 300 C9	CP 300 C10	CP 300 T11	CP 300 T11L
Measurement channels	2 Pirani	2 Pirani	2 Pirani	2 Cold cathode	1 Pirani 1 Cold cathode	1 Pirani 1 Cold cathode	1 Pirani 1 Cold cathode	1 Pirani 1 Cold cathode
Gauge type								
Pirani	PSG010 PSG018	PSG010 PSG018	PSG017	-	PSG010 or PSG018	PSG010 or PSG018	PSG010 or PSG018	PSG010 or PSG018
Cold cathode	-	-	-	MAG050 MAG060	MAG050 or MAG060 or MAG084	MAG050 or MAG060	MAG070	MAG070
Max. operating distance								
Pirani	<100 m	<500 m	<100 m	-	<100 m	<100 m	<100 m	<500 m
Cold cathode	-	-	-	<100 m	<100 m	<100 m	<500 m	<500 m

Measurement plug-in board	Pirani			Cold Cathode	Pirani / Cold Cathode		
	PI 300 D	PI 300 DL	PI 300 DN	PE 300 DC9	CP 300 C9	CP 300 C10	CP 300 T11 CP 300 T11L
Compatible gauges							
	PSG010	●	●			●	●
	PSG017			●			
	PSG018	●	●			●	●
	MAG050				●	●	
	MAG060				●	●	
	MAG070						●
	MAG084					●	

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## DIMENSIONS

[mm]

