IRC081

Ion Reference Gauge Controller

The Ion Reference gauge Controller IRC081 and its User Interface are an operating and display interface to the standardized Ion Reference Gauge IRG080. IRC081 delivers, in combination with IRG080, precise and reference total pressure measurement in the range of 10^{-8} mbar (10^{-6} Pa) to 10^{-4} mbar (10^{-2} Pa).
IRC081 provides local control for the IRG080 gauge parameters set. Read-out and switch on/off functionality are available remotely via an USB computer interface. Thanks to the intuitive included "IRC081 User Interface" software, selected settings and measured pressure value can be conveniently graphically displayed.
The IRC081 operating unit is offered with different sets of cable lengths.

ADVANTAGES

- Operating and display solution for accurate vacuum pressure measurement
- User control on all IRG080 gauge parameters set
- Simple manual operation with 5 potentiometers
- User Interface connection via USB-B port to PC
- PC Software in LabVIEW™
- Data log and parameter log functionality
- External port for status and vacuum interlock

APPLICATIONS

- Metrology, transfer standards to national and calibration laboratories
- Advanced scientific and industrial applications requiring precise vacuum pressure measurement for quality assurance
- Calibration of other vacuum gauges and mass spectrometers, pump speed measurement

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ORDERING INFORMATION

Type	IRC081
Ion Reference gauge Controller, USB 2.0 incl. 2x measuring lines CAT III (1 m, red/black), USB Type-A/B cable, USB stick with software and instructions, D-sub 9-pin port	**399-880**

Accessories	
Heat resistant gauge head cable set to IRG080, with contact protection	
5 m (16.4 ft)	**399-883**
10 m (32.0 ft)	**399-884**
15 m (49.5 ft)	**399-885**
Shockproof measuring line, CAT III, 1 m	
black	**399-887**
red	**399-888**

Gauge	
Ion Reference Gauge IRG080, DN 63 CF-R	**399-874**
Ion Reference Gauge IRG080, DN 63 CF-F, with mu-metal intermediate piece	**399-875**

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SPECIFICATIONS

Type	IRC081
Measurement channel	1
Measurement rate	1 s^{-1}
User interface	Front panel, PC-software
Manual control	5 knobs
Remote control	via USB 2.0 with PC software "IRC081 user interface"
Installation	Tabletop
Connectable gauges with display range	
IRG080	<1 × 10^{-8} … 1 × 10^{-4} mbar <1 × 10^{-6} … 1 × 10^{-2} Pa
Measurement unit (selectable)	mbar, Torr, Pa
Sources (accuracy: 0.1%)	
Cathode bias	20 … 60 V (dc)
Wehnelt	20 … 60 V (dc) / ≤1 mA
Anode	200 … 400 V (dc) / ≤1 mA
Deflector	20 … 60 V (dc) / ≤1 mA
Faraday	200 … 400 V (dc) / ≤1 mA
Emission range	100 µ, 1 mA
Heater	controlled by emission current
Controller connections	
to gauge ion collector	Bayonet (BNC)
to gauge control interface	Push-pull self-latching, 7-pin
Measuring sockets	7 (2x filament, Wehnelt, anode, deflector, Faraday, GND)
Min. measurable current	<0.1 pA
Accuracy	0.5% in the 50 pA range <0.1% elsewhere
Connection type	CAT III, 4 m
Vacuum interlock / status port	1 × D-sub 9-pin
Available input / output signals	1 × sensors status, 1 × external vacuum interlock
Interface (digital)	USB 2.0
to user computer	USB Type-A
to controller	USB Type-B
Power supply	
Required connector	IEC 320 C14 plug
Voltage	100 … 240 V (ac)
Frequency	50 … 60 Hz
Consumption	≤20 W
Temperature	
Operation (ambient)	+5 … +40 °C
Storage	-20 … +60 °C
Relative humidity	max. 80% (up to 30 °C) max. 50% (from 40 °C)
Use	indoors, max. altitude 3000m above sea level
Ingress protection	IP40
Weight	2.2 kg

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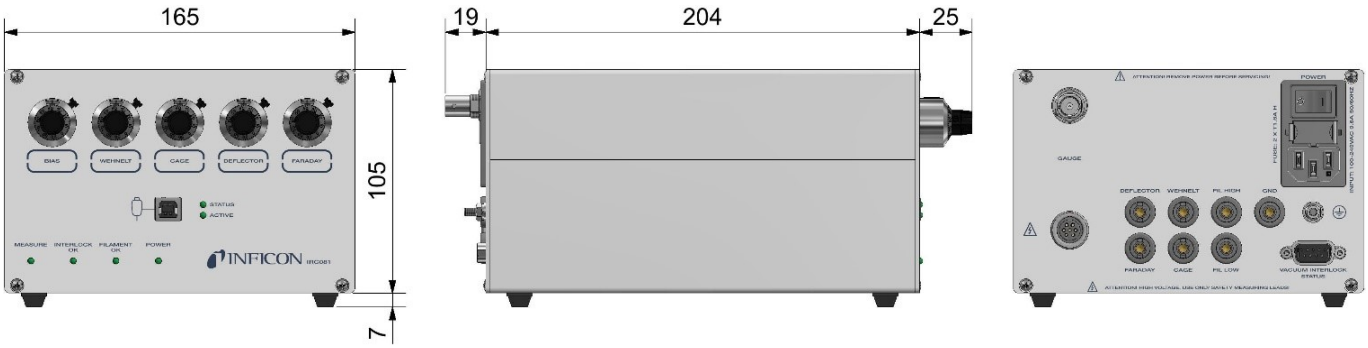
DIMENSIONS

[mm]



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