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Instrukart Holdings

India Toll Free : 1800-121-0506 | Ph : +91 (40)40262020

Mob +91 7331110506 | Email : info@instrukart.com

#18, Street-1A, Czech Colony, Sanath Nagar, Hyderabad -500018, INDIA.



INSTRUKART

YOUR WORLDWIDE INSTRUMENT PARTNER



Flameproof Process Instruments

Flameproof Temperature Indicator(Model AI-01F)

- Microcontroller Based Rugged Industrial Design
- Large & Clear 1" High 7 Segment LED Display
- Double Chamber Enclosure Certified by CIMFR, Dhanbad for use in Gas Groups I, II, IIA & IIB
- Extended Temperature Range from -100.0 to +400.0 Deg. C
- Accuracy of ± 0.1 Deg. C ± 1 count
- 3 Wire RTD Pt-100 Input
- 4-20mA Retransmission Output for Data Logging
- Optional RS485 Modbus Communication for SCADA/Data Logging/PLC connection
- Calibration Certificate traceable to National Standards



Flameproof Temperature Controller(Model AI-01-FC)



- Microcontroller Based Rugged Industrial Design
- Large & Clear 1" High 7 Segment LED Display
- Double Chamber Enclosure Certified by CIMFR, Dhanbad for use in Gas Groups I, II, IIA & IIB
- Upto 2 Relay Outputs (2 Sets of NO/CO/NC) freely programmable from front push buttons
- Extended Temperature Range from -100.0 to +400.0 Deg. C
- Accuracy of ± 0.1 Deg. C ± 1 count
- 3 Wire RTD Pt-100 Input
- 4-20mA Retransmission Output for Data Logging
- Optional RS485 Modbus Communication for SCADA/Data Logging/PLC connection
- Calibration Certificate traceable to National Standards

Flameproof RPM Indicator Station (Model AI-BOC-1F)

- Microcontroller Based Rugged Industrial Design
- Large & Clear 1" High 7 Segment LED Display
- Double Chamber Enclosure Certified by CIMFR, Dhanbad for use in Gas Groups I, II, IIA & IIB
- Input Field Programmable between 4-20mA or 0-10 VDC
- Accuracy of ± 1 RPM ± 1 count
- Choice of Helipot/Selector Switch for RPM Feedback Control from VFD
- Programmable from 0 to 9999 RPM from keypad inside
- Optional RS485 Modbus Communication for SCADA/Data Logging/PLC connection
- Calibration Certificate traceable to National Standards



Flameproof RPM + Temperature Indicator (Model AI-BOC-2F)

- Microcontroller Based Rugged Industrial Design
- Large & Clear 2 Line Display
- Line 1 : RPM 0.8" High 7 Segment LED Display
- Line 2 : Temperature 0.5" High 7 Segment LED Display
- Double Chamber Enclosure Certified by CIMFR, Dhanbad for use in Gas Groups I, II, IIA & IIB
- Input 1 RPM : 4-20mA , field Programmable Range from 0 to 9999 RPM
- Input 2 Temperature : RTD Pt-100 , 3 Wire fixed range from -100.0 to +400.0 Deg. C
- Accuracy RPM : ± 1 RPM ± 1 count
- Temperature : ± 0.1 Deg. C ± 1 count
- Choice of Helipot/Selector Switch for RPM Feedback Control from VFD
- Optional RS485 Modbus Communication for SCADA/Data Logging/PLC connection
- Calibration Certificate traceable to National Standards



Flameproof Dual Point Temperature Indicator(Model AI-02F)

- Microcontroller Based Rugged Industrial Design
- Large & Clear 2 Line Display
 - Line 1 : Temp. Input 1 : 0.8" High 7 Segment LED Display
 - Line 2 : Temp. Input 2 : 0.5" High 7 Segment LED Display
- Double Chamber Enclosure Certified by CIMFR, Dhanbad for use in Gas Groups I, II, IIA & IIB
- Inputs : 2 Nos. RTD Pt-100 , 3 Wire Sensor Inputs
- Extended Temperature Range from -100.0 to +400.0Deg. C
- Accuracy of +/-0.1 Deg. C +/- 1 count for each input
- Optional RS485 Modbus Communication for SCADA/Data Logging/PLC connection
- Calibration Certificate traceable to National Standards



Flameproof Dual Point Batch Operation Controller(Model AI-BOC-02F)

- Microcontroller Based Rugged Industrial Design
- Large & Clear 2 Line Display
 - Line 1 : Universal Input 1 : 0.8" High 7 Segment LED Display
 - Line 2 : Universal Input 2 : 0.5" High 7 Segment LED Display
- Double Chamber Enclosure Certified by CIMFR, Dhanbad for use in Gas Groups I, II, IIA & IIB
- InputType :
 - Input 1 : Universal Field Programmable between RTD Pt-100 , 4-20mA, J Type T/C, K Type T/C
 - Input 2 : Universal Field Programmable between RTD Pt-100 & 4-20mA
- Input Ranges : RTD Pt-100: -100.0 to +400.0Deg. C
 - 4-20mA : Range programmable from -999 to +9999
 - J Type T/C : 0 to 750 Deg. C
 - K Type T/C : 0 to 1200 Deg. C
- Accuracy:
 - RTD Pt-100 : +/-0.1 Deg. C +/- 1 count for each input
 - 4-20mA : +/- 0.1% F.S. +/- 1 count
 - Thermocouples : +/- 0.3% F.S.
- Relay Output : Upto 4 Relays , field selectable for any Channel
- Analog Outputs : Optional 4-20mA Output for Each of the 2 Channels
- Optional RS485 Modbus Communication for SCADA/Data Logging/PLC connection
- Calibration Certificate traceable to National Standards



Flameproof Vacuum Indicator (Model AI-VACF)

- Microcontroller Based Rugged Industrial Design
- Integrated Stainless Steel Wetted Parts Sensor
- Single Chamber Enclosure Certified by CIMFR, Dhanbad for use in Gas Groups I, II, IIA & IIB
- Standard Measurement Range of 0...760 mm.Hg.
- Optional Measuring Range of 760 to 0 Torr for High Vacuum Applications
- Accuracy of +/- 0.5% F.S. +/- 1 count
- 4-20mA Retransmission Output for Data Logging
- Calibration Certificate traceable to National Standard
- Optional RS485 Modbus Communication for SCADA/Data Logging/PLC connection





Flameproof RTD Pt-100 Sensor (Model AI-RTD-F)

- Class A Element for highest accuracy
- Stainless Steel Pipe
- Accuracy of ± 0.15 Deg. C ± 1 count
- Thermocouple Head Certified by CIMFR, Dhanbad for use in Gas Groups I, II, IIA & IIB
- Design as per DIN EN 60751:2009
- Option of 3 Wire Simplex, 4 Wire Simplex, 6 Wire Duplex Sensors



Flameproof Digital Synchronized Clocks

- Flameproof clocks available in 2 Models - Wired RS 485 Communication & Wireless RF Communication
- Sizes available - 4 Digits 2.5" High Display (HH:MM)
 - 6 Digits 2.5" High Display (HH:MM:SS)
 - 6 Digits 4" High Display (HH:MM:SS) Seconds in 2" display size
- Flameproof Aluminium LM-6 Body certified by Central Institute of Fuel & Mining Research(CIMFR), Dhanbad for use in Gas Group Areas I, II, IIA & IIB
- Optionally available with overall Stainless Steel 304/316 Enclosures for Pharma Areas



8 Channel Temperature Scanners & Data Loggers

- Microcontroller Based Rugged Industrial Design
- Integrated Stainless Steel Wetted Parts Sensor
- Single Chamber Enclosure Certified by CIMFR, Dhanbad for use in Gas Groups I, II, IIA & IIB
- Standard Measurement Range of 0...760 mm.Hg.
- Optional Measuring Range of 760 to 0 Torr for High Vacuum Applications
- Accuracy of $\pm 0.5\%$ F.S. ± 1 count
- 4-20mA Retransmission Output for Data Logging
- Calibration Certificate traceable to National Standard
- Optional RS485 Modbus Communication for SCADA/Data Logging/PLC connection



16 Channel Temperature Scanners & Universal Input Data Loggers

- INPUT :USER PROGRAMMABLE INPUTS OF RTD PT-100 , J, K , R, S Thermocouples, 4-20mA selectable from front key pad
- MEMORY: UPTO 3000 RECORDS for all 16 Channels
- FEATURES :4 COMMON RELAY OUTPUTS ; RS232 / RS485 COMMUNICATION / DIRECT PRINTING PORT
- Certified by CIMFR ,Dhanbad for use in Gas Group Areas I, II, IIA & IIB
- 21CFR PART 11 COMPLIANT FULL FEATURED SOFTWARE



Clean Room Instruments

Clean Room Monitor Measure Temperature, Humidity & Diff. Pressure in a single monitor Model AI-CRM1

- Sensors : Integrated Temperature & R.H. Sensor Flushed to Front Plate, Differential Pressure Sensor built-in with hose nipple connection at back-side
- Temperature Range : -30.0 ...+50.0 Deg.
- Humidity Range : 0.0 ...100.0% R.H.
- Diff. Pressure Range : -100 to +100 Pascals/-10.0 to+10.0 mm.W.C
- Display (Model AI-CRM1): 3 Line 4 Digit 0.4" High ,7 segment , red LED Display
- Display (Model AI-CRM1-1): 3 Line 4 Digit 1" High,7 segment , red LED Display
- Accuracy
 - Temperature : +/-0.5 Deg. C
 - Humidity : +/-1.8% R.H. for 10% to 95% R.H.
 - Differential Pressure : +/-0.5% F.S.
- Buzzer Alarm : In-built common buzzer alarm for Process violation alert with acknowledgment function
- Relay Output(Optional): 3 Relays Outputs , 1 Each for temperature, humidity & Diff. Pressure
- Analog Outputs(Optional): 3 x 4-20mA Outputs, 1 Each for temperature, humidity & Diff. Pressure
- Communication : RS 485 Modbus Protocol Communication for SCADA/BMS/PLC Integration
- Calibration Certificate traceable to National Standards



Measure Temperature & Humidity in a single monitor (Model AI-RHT)



- Sensors : Integrated Temperature & R.H. Sensor Flushed to Front Plate (Standard)
Optional Model AI-RHT-SPE External Sensor in Clean Room Fitment with Stainless Steel Front Plate with upto 10m.Extension Cable
- Temperature Range : -30.0 ...+50.0 Deg.
- Humidity Range : 0.0 ...100.0% R.H.
- Display (Model AI-RHT): 2 Line 4 Digit 0.4" High ,7 segment , red LED Display
- Display (Model AI-RHT-1): 2 Line 4 Digit 1" High,7 segment , red LED Display
- Accuracy
 - Temperature : +/-0.5 Deg. C
 - Humidity : +/-1.8% R.H. for 10% to 95% R.H.
- Communication : RS 485 Modbus Protocol Communication for SCADA/BMS/PLC Integration Calibration Certificate traceable to National Standards

Clean Room Differential Pressure Indicator (Model AI-DP1)

- Sensor : Built-in Differential Pressure Sensor with hose nipple connection at back-side
- Diff. Pressure Range : -100 to +100 Pascals/-10.0 to+10.0 mm.W.C.(Optional Anyother customized range)
- Display (Model AI-DP1): 4 Digit 0.4" High ,7 segment , red LED Display
- Display (Model AI-DP1-1): 4 Digit 1" High,7 segment , red LED Display
- Accuracy : +/-0.5% F.S.
- Buzzer Alarm : In-built buzzer alarm for process violation alert with acknowledgment function
- Relay Output(Optional): 1 Relay Output (NO/CO/NC)
- Analog Outputs(Optional) : 4-20mA Retransmission
- output
- Communication : RS 485 Modbus Protocol
- Communication for SCADA/BMS/PLC Integration
- Calibration Certificate traceable to National Standards





Digital Differential Pressure Gauge (Model AI-DDPG)

Measure Diff. Pressure in Rooms, AHU, Bio-safety Cabinets, Pharma Machinery- Fits into Standard Gauge Cutouts- Buzzer Alarm in-built

- Sensor : Built-in Differential Pressure Sensor with hose nipple connection at back-side
- Diff. Pressure Range : -10.0 to +10.0 mm.W.C./-100 to +100 Pascals
to 6.0 mm.W.C./0 to 60 Pascals
to 10.0mm.W.C./0 to 100 Pascals
to 50.0 mm.W.C./ 0 to 500 Pascals
(Optional any other customized range)
- Display: 4 Digit 0.56" High , 7 segment ,red LED Display
- Accuracy : +/-0.5% F.S.
- Buzzer Alarm : In-built buzzer alarm for process violation alert with acknowledgement function
- Relay Output(Optional): 1 Relay Output (NO/CO/NC)
- Analog Outputs(Optional) : 4-20mA Retransmission output
- Communication : RS 485 Modbus Protocol Communication for SCADA/BMS/PLC Integration
- Size : Standard Diameter 4 1/2" (114.3mm.) with only 30 mm. Depth
- Calibration Certificate traceable to National Standards



Clean Room Synchronized Clocks



- Synchronized Clocks are a network of clocks which show uniform time all across the network of clocks. There is a Master Clock (GPS Clock or Ethernet Server Clock), which is synchronized with upto 108 slave clocks. The Slave Clocks communicate with the Master Clock either over wires(RS 485) or wirelessly (Wireless RF).
- GPS Master Clock
Display Size : 2.5" High, 7 Segment Red LED Display
Power Supply : 24 VDC, 1 Amp. Or 230 VAC , Single Phase 50 Hz.
GPS Synchronization : Protocol NMEA Standard , Active Antenna, Accurate to 500 milisecs.
- Slave Clocks
1" Display Clock
2.5" Display Clock
4" Display Clock

Clean Room Scanners With 1" & 0.49" Display

The Clean Room Analog Input Scanner is designed to measure vital parameters for Temperature Humidity & Differential Pressure in a single instrument

- Sensor Type: Selectable Input for each of the 3 channels. Jumper Field Selectable input between 4...20mA or 0...10V DC
- Range : Programmable between -999 to 9999 with selectable decimal point
- Accuracy: +/- 0.1% FSD ; +/- 1 count
- Display: Standard 3 Line 7 Segment 0.4" High Red LED Display
Optional 3 Line 7 Segment Large 1" High Red LED Display
Also Available with 1 Line or 2 Line Displays
- Setting: By 4 Keys on the front stainless steel front plate
- Power Supply: 24V DC, 500mA
- Enclosure: MS Powder Coated body with front stainless steel plate
- Communication: RS485 MODBUS Communication

Air Velocity Transmitter



- AVT Series Air velocity transmitter for measuring air flow for ranges 0...2 / 5/10m/sec (MODEL: AVT)
Air Flow Range: 0...2/5/10m/sec
Output : 4-20mA / 0...10VDC
- Accuracy : +/- 2% of the reading
- Power Supply : 10...19V.D.C.
- Available with Display also
- Enclosure Available in ABS Plastic / Certified Flameproof Housings

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Duct Mounting Humidity & Temperature Transmitter

- Range : Temperature : 0...50Deg.C IMAGE-20
Humidity : 0...100%
- Output: 4...20mA
- Accuracy: Temp. : +/-0.25
Humidity : +/- 1.8% R.H.
- Available in Standard Duct Mounting Enclosure and Stem Length



Oxygen Indicator Transmitter



- Oxygen Measuring Range : Standard 0.0 to 25.0% volume
- Accuracy : +/- 1% of Full Scale
- Sensor Type : Electrochemical with Expected life of 5 Years
- Display: 0.56" High Super Bright Red L.E.D.
- Output : 4-20mA Output
- Relay: Optional 2 Relay Outputs (NO/CO/NC)
- Communication : RS 485 Modbus Communication
- Programming : By 4 Keys on the instrument
- Power Supply : 24 V.D.C. , 650mA
- Enclosure : Available in Wall Mounting / Flameproof Certified Enclosure
- Also available Gas Transmitters for Other Gases - Carbon Dioxide, Carbon Monoxide, Nitrogen Dioxide, Ammonia, etc.

Transmitters

Pressure Transmitter

Pressure Transmitters are stainless steel transmitters available for pressure ranges from -1 to 0, 0 to 0.1, 0.25, 0.5, 1, 2, 3, 4, 6, 10, 16, 20, 25, 40, 60, 100 upto +700 Bar.

- Connections available 1/2" or 1/4"
- Regular or Front Flush Diaphragm or Tri-Clover Clamp Connections
- Accuracy of +/- 0.5% or +/-0.25%
- Industry Standard 4-20mA or Optionally 0-5 VDC or 0-10 VDC Output
- Stainless Steel 316 MOC with Stainless Steel 316 L Wetted Parts
- Also available VACUUM RANGE TRANSMITTERS FOR 0 TO 760 mm.Hg.



Temperature Transmitters

- Temperature Transmitters are 2 Wire Loop Transmitters and are industry standard devices used with RTD Pt -100 Sensors & all thermocouples for signal transfer over long distance using a pair of normal copper wires without EMI/RFI Interference over distance.
- Customizable Ranges Available from -100Deg.C ...+400Deg.C
- Output : 4...20mA, 2 Wire
- Housing : Compact Head Mounting Type / Also available in DIN RAIL Mounting



Indicators & controllers

Jumbo Display

- Universal input selectable from keypad inside between inputs of 4-20mA, 0-10 V.D.C., RTD Pt-100, All Thermocouples. Also available with RS 485 Modbus Communication for Data Display.
- These indicators are useful for indoor as well as outdoor applications for temperature, pressure, humidity, air velocity, vacuum, level & flow indication, etc.
- Jumbo Display Indicators are available from Ace Instruments with variety of Display Sizes available in 1", 2.5" & 4" High 7 Segment Super Bright Red LED Displays
- Options of 1 or 2 relays with 4-20mA Retransmission are also available
- Power Supply option of 230 VAC or 24 VDC
- Wall Mounting M.S. Powder Coated Enclosure
- Excellent visibility over distance



Digital Temperature Indicators / Controllers



- INPUT TYPE: UNIVERSAL INPUT SELECTABLE FROM FRONT KEYS BETWEEN RTD Pt-100, THERMOCOUPLES, 4...20mA
- ACCURACY: $\pm 0.1\%$ F.S ; ± 1 COUNT
- FEATURES: 1 or 2 RELAY OUTPUT, 4...20mA RE-TRANSMISSION , RS485 MODBUS COMMUNICATION
- SIZES AVAILABLE : 96 x 96mm. ; 96 x 48mm. ; 48 x 48 mm

Data Loggers

8 Channel Data Loggers

- INPUT : FACTORY SET RTD Pt-100 3WIRE, THERMOCOUPLES, 4...20mA
- MEMORY: UPTO 5000 RECORDS
- FEATURES : COMMON RELAY OUTPUTS ; RS232 / RS485 COMMUNICATION / DIRECT PRINTING PORT
- 21CFR PART 11 COMPLIANT FULL FEATURED SOFTWARE



16 Channel Data Loggers

- INPUT : FACTORY SET RTD Pt-100 3WIRE, THERMOCOUPLES, 4...20mA
- MEMORY: UPTO 3000 RECORDS
- FEATURES : COMMON RELAY OUTPUTS ; RS232 / RS485 COMMUNICATION / DIRECT PRINTING PORT
- 21CFR PART 11 COMPLIANT FULL FEATURED SOFTWARE

Calibrators

Pneumatic Hand Pump For Pressure & Vacuum

- RANGE : -0.85...+35Kg./Cm2
- Also available with Digital Master Gauges

Portable Low Pressure Magnahelic Gauge Calibrator

- Screw Type Hand Pump with Fine & Coarse Setting
- Extremely suitable for calibration of Low Pressure Magnahelic Gauges & Differential Pressure
- RANGE: -999...+1400mm.W/c
- Also available with Digital Master Gauges

Table Top Pressure Calibrators

- RANGE : 0...400 BAR
- ALSO AVAILABLE WITH DIGITAL MASTER GAUGES

