

## IntelliMaster - Intelligent Monitoring System



**Weatherproof**



**Flameproof**

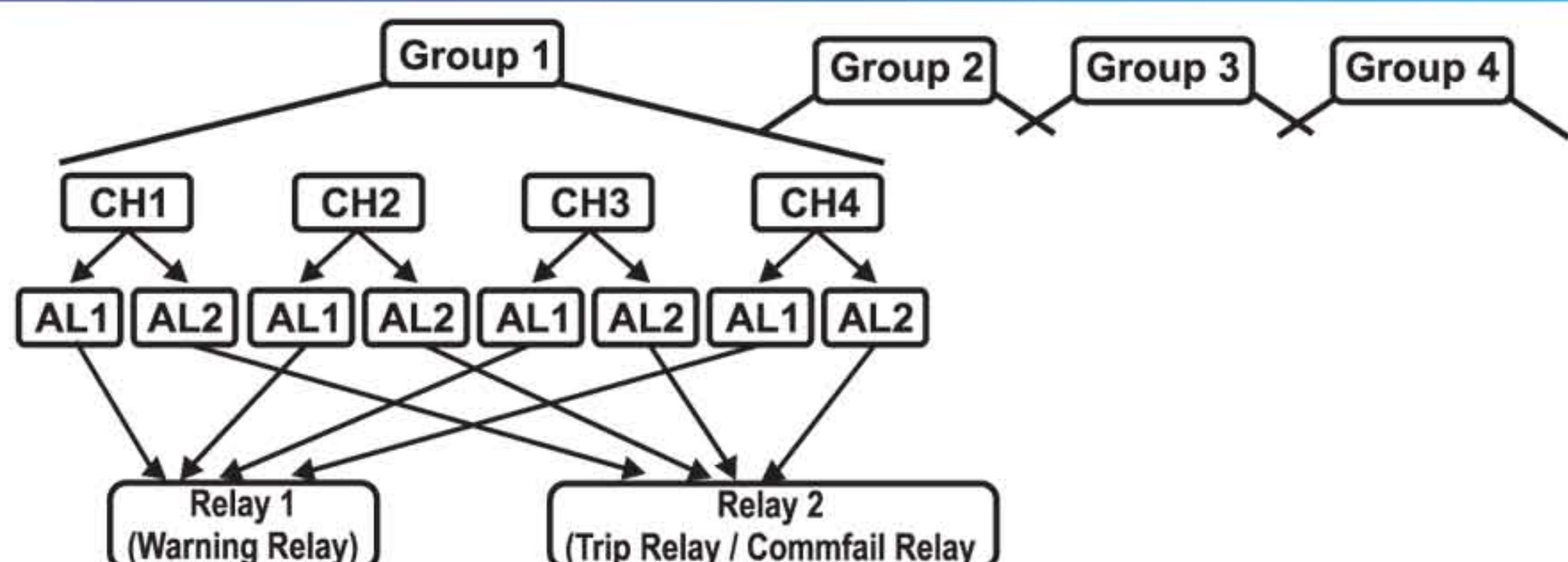
### Features

- IntelliMaster is a 16/32 Channel Modbus ID Monitoring System for Transmitters are having RS-485 Modbus RTU Network Connectivity.
- IntelliMaster has one more RS - 485 Modbus RTU Port for Remote Repeater Panel called as IntelliRepeater which will repeat all readings & Alarm conditions.
- Multidrop RS - 485 Port eliminates separate cabling to each Transmitter and Monitor Panel.
- Modbus - RTU Network can be connected in Ring Topology for Redendency.
- Scan time for 16 Transmitter < 5 sec. & for 32 Transmitter < 10 sec.
- Large 16 x 4 line Display with Configurable Backlit Option.
- Auto Page Changing Facility available for easy viewing of Data, Relay & Fault Condition of each Transmitter.
- Optional 8 Relays (SPDT) rated "10A/250VAC, 10A/30VDC" as Warning / Trip Relay with 1 no. Failsafe Relay which activates for UNDER / OVER / OPEN Condition of Transmitter.
- Separate Alarm Setting for each Transmitter with Logic High / Low & Latching Facility.
- Password Protected Menu with Password Changing Facility.
- Easy Handling & Programming with 3 keys on Front Panel.

### Applications

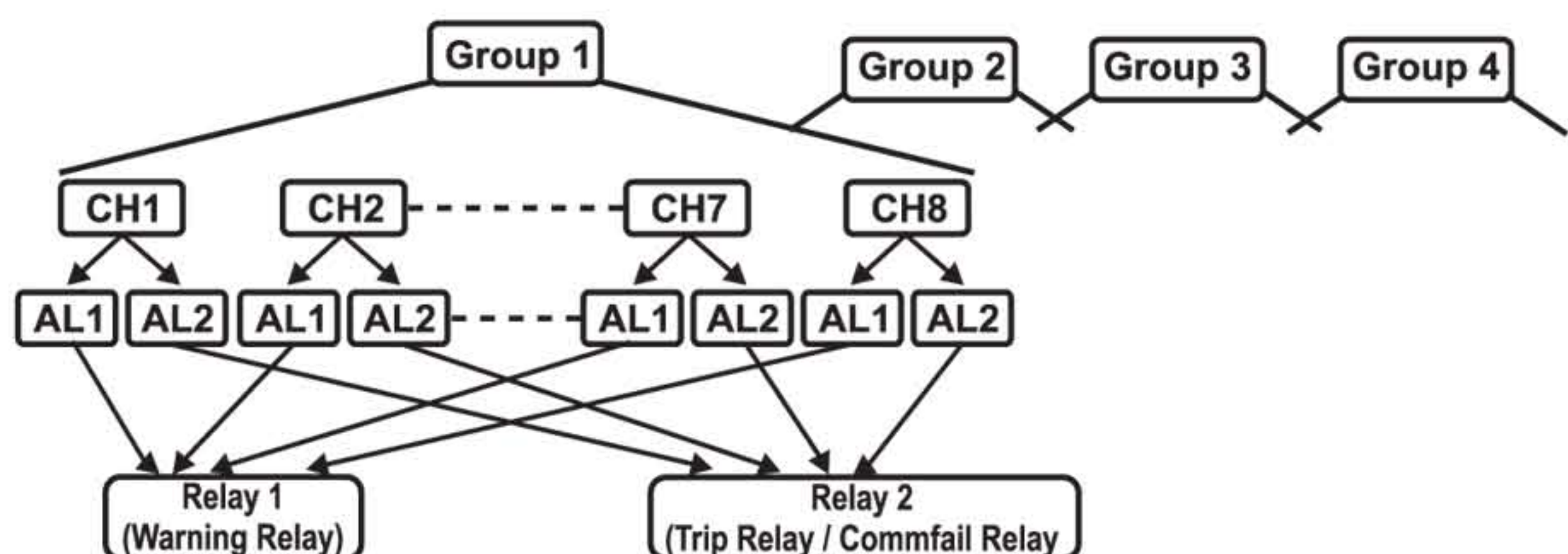
- Clean Room Monitoring & Validation in Pharmaceutical, Laboratories, Bioscience
- Room Mapping in Pharmaceutical
- Pharmaceutical process validation with graph & scale report in Autoclave
- Healthcare, Hospitals, Shopping Malls
- Breweries, Steel Plants, Gas Turbines,
- Leak detection, Solvent Vapors,
- Personal Monitoring, Compressor Stations,
- Emergency response, Equipment Maintenance
- Pulp & Paper Industry, Fuel Loading Facilities
- Waste Water Treatment Plants,
- LNG / LPG Processing & Storage Facilities
- Refineries & Petrochemical Plants Including Offshore
- Drilling & Plant Shut-downs
- ISO Certification Records, Validation process certifying,
- Chemical & Hazardous area where data monitoring is essential
- Food Processing
- Cold Storage & Chilling Plant
- Building Management & Energy Saving Systems
- Meteorological, Weather Forecast Applications
- Remote Indication location on tank taps as used in liquid level sensing & control

### RELAY CONFIGURATION FOR 16 CHANNEL VERSION



Sr. No.	Group Number	Channel in the Group	Relay Assigned
1	1	1 to 4	Relay 1 (Warning Relay) is assigned for AL1 only. Relay 2 (Trip Relay / Communication fail Relay) is assigned for AL2 only.
2	2	5 to 8	Relay 3 (Warning Relay) is assigned for AL1 only. Relay 4 (Trip Relay / Communication fail Relay) is assigned for AL2 only.
3	3	9 to 12	Relay 5 (Warning Relay) is assigned for AL1 only. Relay 6 (Trip Relay / Communication fail Relay) is assigned for AL2 only.
4	4	13 to 16	Relay 7 (Warning Relay) is assigned for AL1 only. Relay 8 (Trip Relay / Communication fail Relay) is assigned for AL2 only.

### RELAY CONFIGURATION FOR 32 CHANNEL VERSION



Sr. No.	Group Number	Channel in the Group	Relay Assigned
1	1	1 to 8	Relay 1 (Warning Relay) is assigned for AL1 only. Relay 2 (Trip Relay / Communication fail Relay) is assigned for AL2 only.
2	2	9 to 17	Relay 3 (Warning Relay) is assigned for AL1 only. Relay 4 (Trip Relay / Communication fail Relay) is assigned for AL2 only.
3	3	18 to 25	Relay 5 (Warning Relay) is assigned for AL1 only. Relay 6 (Trip Relay / Communication fail Relay) is assigned for AL2 only.
4	4	23 to 32	Relay 7 (Warning Relay) is assigned for AL1 only. Relay 8 (Trip Relay / Communication fail Relay) is assigned for AL2 only.

**MUST FOR YOUR PROCESS**



# TECHNICAL SPECIFICATIONS

## General

Input	: 16/32 Transmitters having RS-485 Modbus RTU Port.
Display	: 16 x 4 Alphanumeric LCD with Configurable Backlit option. 8 LEDs to indicate status of IntelliMaster. 48 LEDs to indicate Alarm status of Transmitters in Group Function.
Control Action	: i) 2 independent Alarm set points for each Transmitter with Latch & Non-Latch Facility. ii) User selectable Hysteresis & Logic Operation.
Setting	: By using 3 keys on the front panel for WP & FLP models.

## Performance

Scan Time	: Less than 5 Sec. for 16 Transmitters having RS-485 Modbus RTU Port. Less than 10 Sec. for 32 Transmitters having RS-485 Modbus RTU Port.
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## Electrical

Supply Voltage	: 190 to 270 VAC; 20%, 50Hz.
Power Rating	: Approx 20W.
Transmitter	: 24VDC, 4A for 16 Transmitters.
Supply	: 24VDC, 7A for 32 Transmitters.
Cable	: 1.5mm <sup>2</sup> 2 Core Shielded Cable for 24 VDC Power Supply. 1.0mm <sup>2</sup> 2 Core Twisted Pair Cable for RS-485 Modbus RTU Communication.

## Environmental

Storage Temp.	: -20 to 60°C
Operating Temp.:	-30 to 70°C
Humidity	: Below 95% Non-Condensing

## Weatherproof Housing

Protection Class	: IP-65
Cabinet Material:	Polycarbonate, Grey Colour.
Cable Entry	: Thermoplastic (IP-68) for Weatherproof
Dimension	: 305 mm (H) x 325 mm (W) x 170 mm (D)
Mounting	: Wall Mounting / Stand Mounting
Weight	: Approx 3.7 kg.

## Output Signal (Optional)

Relay Output	: 9 SPDT Relays of rating "10A/250VAC, 10A/30VDC". 4 No. Relay for Warning & 4 No. for Trip & 1 no. for Failsafe Operation for UNDER / OVER / OPEN condition of Transmitter.
Open Collector	: Open Collector output with 100mA current capacity instead of Relay.
RS-485 Port	: Separate RS-485 Modbus RTU Port for IntelliRepeater or PC Communication at a time one Function is possible.

## Error Monitoring

- During Sensor Break / Open in the Transmitter connected to it, IntelliMaster shows 'SENSOR OPEN' & Failsafe Relay activates.
- During Over Range in the Transmitter connected to it, IntelliMaster shows 'OVER RANGE' & Failsafe Relay activates.
- During Under Range in the Transmitter connected to it, IntelliMaster shows 'UNDER RANGE' & Failsafe Relay activates.
- If communication fail occurs with any Transmitter then IntelliMaster shows 'SLAVE NOT RESPONDING' for that Transmitter.

## Accessories (Optional)

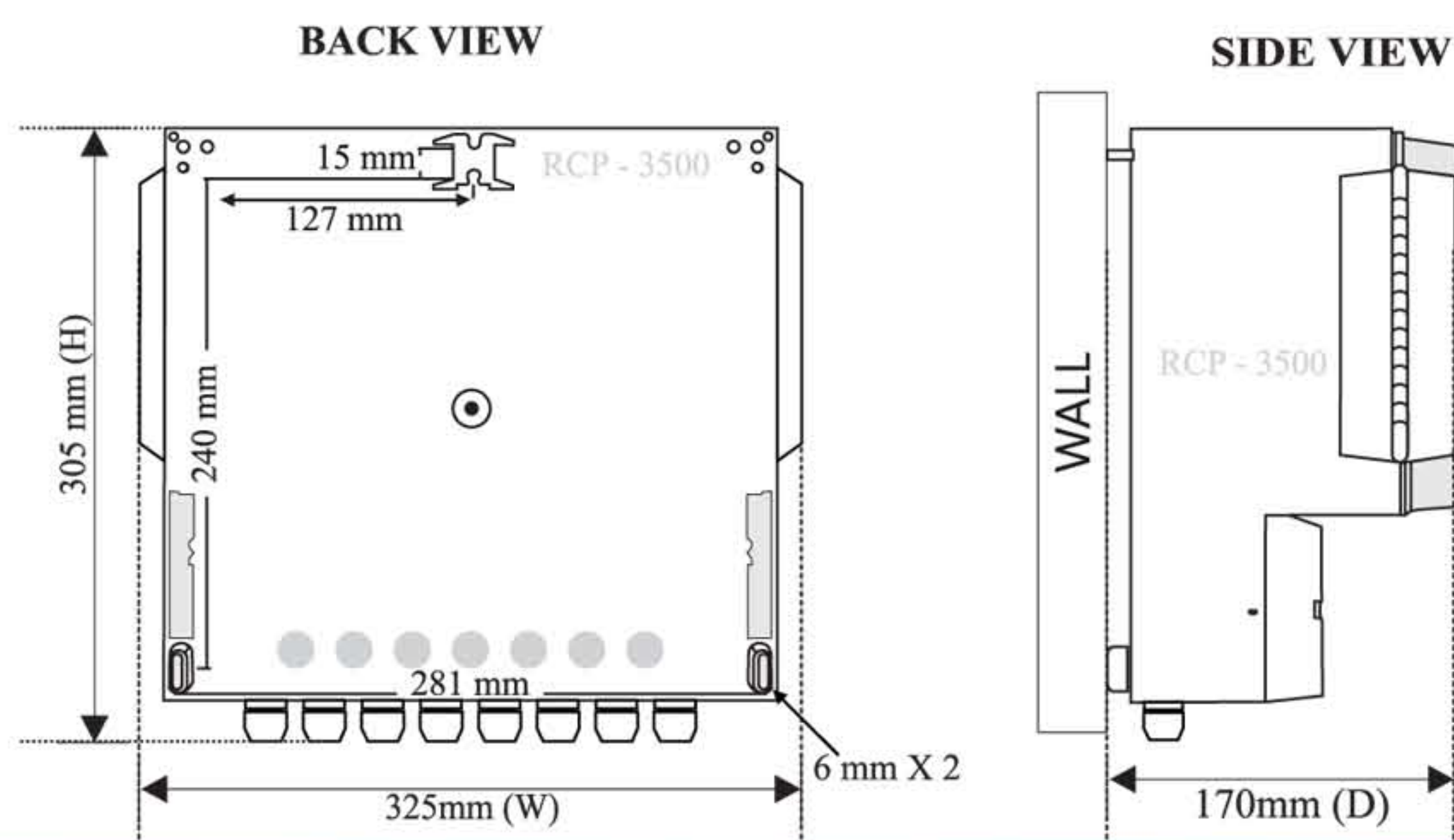
- FLP / WP Junction Box Enclosure for Inter Connection between Transmitters & IntelliMaster for easy maintenance.
- IntelliRepeater Slave Monitor for Remote Display.
- Hooter cum Flasher works on 24VDC or 230VAC.
- RS-485 to USB OR RS-232 convertor.

## Flameproof Housing

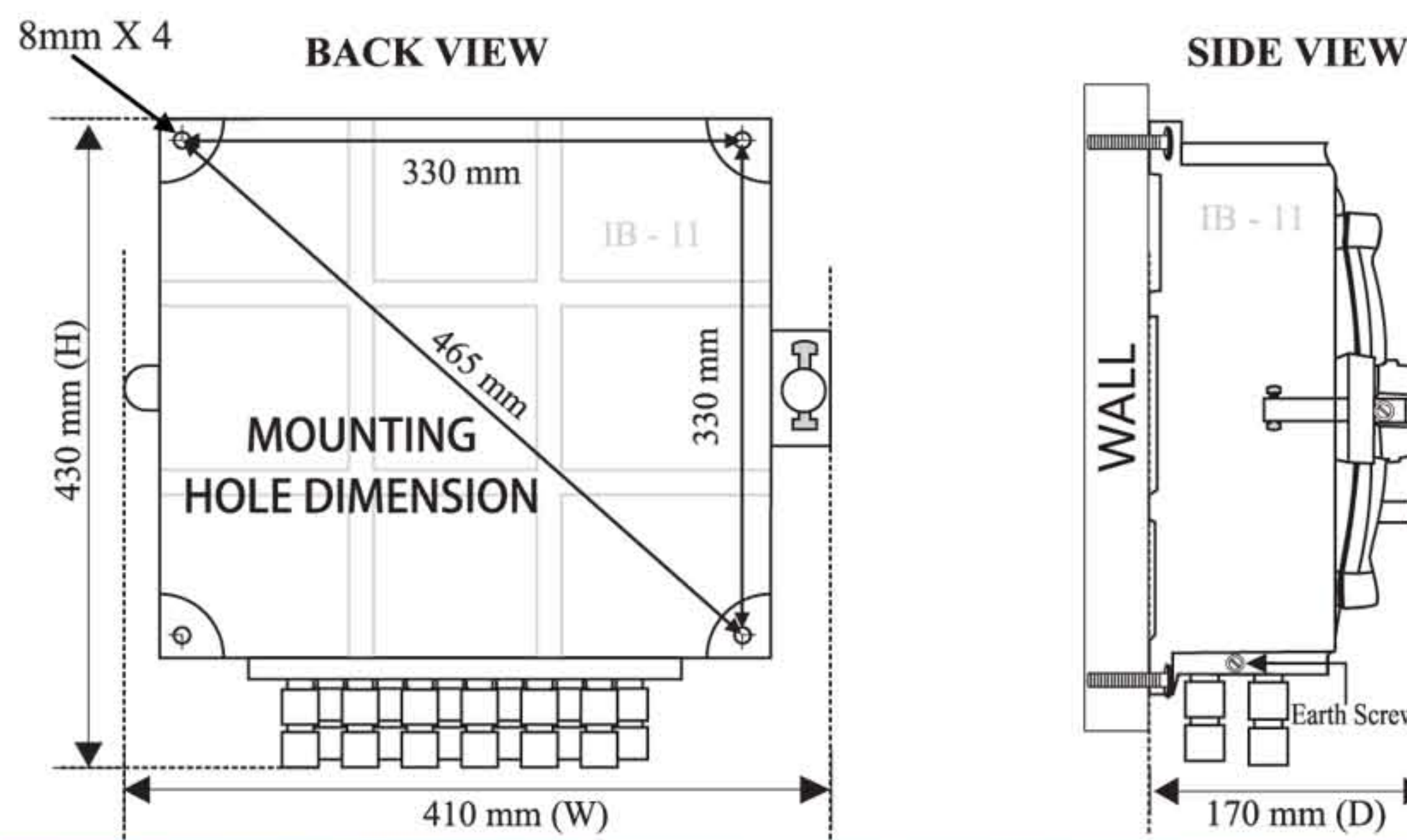
Protection Class	: IP-65 for Gas Gr.IIA & IIB, CMRI approved enclosure & CCOE (optional).
Cabinet Material:	Cast Aluminium alloy, LM-6
Cable Entry	: 3/4" ET-Type for Flameproof
Dimension	: 430 mm (H) x 410 mm (W) x 170 mm (D)
Mounting	: Wall Mounting / Stand Mounting
Weight	: Approx 13 kg.

# ENCLOSURE DIMENSIONS

## Weatherproof



## Flameproof



# ORDERING INFORMATION

IM - 77

A

B

C

D

E

### A) Model No.

- 1) 11 (16 Transmitter 1PV)
- 2) 12 (16 Transmitter 2PV)
- 3) 13 (16 Transmitter 3PV)
- 4) 21 (32 Transmitter 1PV)
- 5) 22 (32 Transmitter 2PV)
- 6) 23 (32 Transmitter 3PV)

### B) Enclosure

- 1) FLP (Flameproof)
- 2) WP (Weatherproof)

### C) Output

- 1) None
- 2) 8 Relay Contact
- 3) Open Collector O/P

### D) IntelliRepeater

- 1) None
- 2) One
- 3) Two

### E) Junction Box for Inter Connection

- 1) None
  - 2) IB-1000 - (Flameproof)
  - 3) IB-1000 - (Weatherproof)
- \* Please specify the quantity

\* Before placing order please Refer the above ordering information or Contact us for assistance.

Manufactured by :

**AMBETRONICS ENGINEERS PVT. LTD.**

17-B, Tarun Industrial Estate, Mogra Pada, New Nagardas Road, Andheri (E.) Mumbai - 69, India.  
Mob.: 9320619646 • 9320621646 • Tel.: +91-22-66995525, 28371143 • Fax : +91-22-28226570  
E-mail : project@ambetronics.com • gas@ambetronics.com • Web : www.ambetronics.com



Dealers:

