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An ISO 9001, EMS 14001, OHSAS 18001 Company



# LIE-LIR

Standard Enclosure & Rack



control your future

## Introduction

In any process activity involving the measurement of process variables like pressure, flow and level of gas, steam or fluid and temperature of static and dynamic elements, transmitters are used. These measurements are extremely critical for satisfactory and trouble free operation of a plant. The transmitter converts these physical parameters to electrical signals which is further fed into the plant DAS or DCS. Since the transmitters are housed in the fields near the source of origin of signal, special provision for their mounting has to be provided. As per the field location, the transmitters and related equipment may be housed in racks or in enclosures.

Enclosures are cubicles which, besides providing proper support for mounting of local instruments, provide protection against ingress of dust and water. These are put in places where the presence of moisture and impurities may impede the proper functioning of the equipment. On the other hand, racks are free standing structures for supporting local instruments. These are placed at locations where the atmosphere is clean and free from impurities.



### Instrument Enclosure

- Standard Enclosure without NTPC
- Standard Enclosure with NTPC

### Instrument Rack

- Standard Rack without NTPC
- Standard Rack with NTPC

### Instrument Enclosure ▶

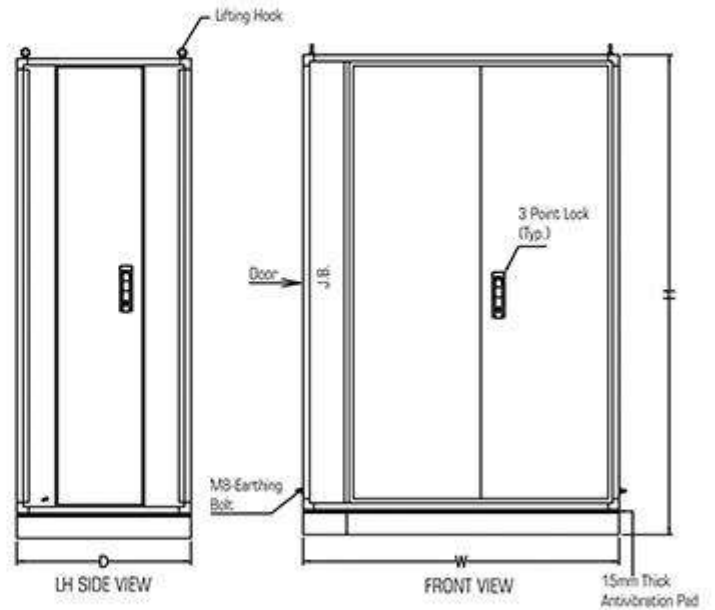
#### Construction Features:

- LIE are normally constructed of 3mm CRCA and are made in our standard ALCOSY -30 system.
- Enclosures have access doors both on the front and the back sides.
- Double interlocking doors are provided and are arranged for maximum possible access to the module interior.
- IP- 65
- Lifting bolt provided as standard for higher load carrying capacity.
- Standard paint shade are RAL 7032, RAL 7035
- Processed from 9 tank procedures high quality powder coating / paint for excellent finish & durability.
- 3 point locking arrangement.

#### Electrical Connections:

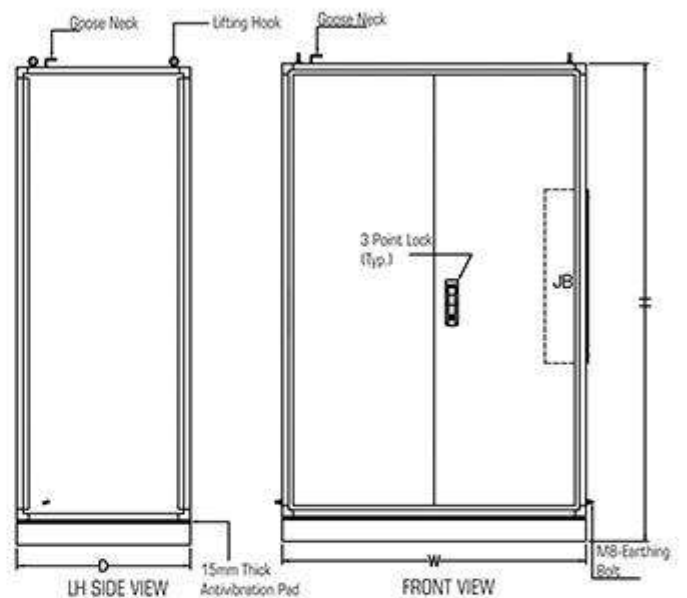
The interiors are illuminated with rapid start fluorescent fixtures. The lighting switches are door actuated. Power receptacles with disconnect switch are installed within the enclosure. These connections serve for power tools, portable hand lamp and other equipment and calibration of transmitter at field. All enclosures are provided with grounding facility.

- Standard **Enclosure** without NTPC



S.NO.	HEIGHT	WIDTH	DEPTH	NO. OF TRANSMITTERS
1	2200	1450	800	6
2	2200	1100	800	4
3	2200	700	700	2

- Standard **Enclosure** with NTPC



S.NO.	HEIGHT	WIDTH	DEPTH	NO. OF TRANSMITTERS
1	2200	1400	800	6
2	2200	1000	800	4
3	2200	700	800	2

### Salient Features :

#### Bulkhead

Specially designed bulkheads which provide junction between impulse pipe and rack/enclosure impulse pipe, are mounted on a bulkhead plate . All entries of impulse piping into the enclosure or rack is through these bulkheads. The internal layout and bulkhead terminations of the enclosures are so arranged that all impulse piping and blow down lines with headers run in one end of the enclosure and transmitters are mounted in the other end. This ensures that impulse piping/blow down lines are accessible from the back doors and transmitters are accessible from the front side for easy maintenance.

#### Purge Air

Continuous and intermittent purging is provided with necessary pressure regulator, pressure gauge ,3 way valve fittings , SS tubing and individual purge rotameter. This is generally provided for flue gas and coal mill impulse piping.

#### Instrument piping and tubing

All piping and tubing material used is hydrostatically tested at one and a half times the maximum design pressure . However , for lower pressure and vacuum conditions, the testing is done as per piping standards.

#### Junction Box

IP 65 boxes in MS/FRP are provided with all enclosures / racks for termination of power supply and signal wiring .

### Advantages :

- Ease of maintenance.
- Durability and improved aesthetics.
- Time consuming assembly work at site is greatly reduced.
- Improves quality since it is made in factory controlled environment.
- Reduces the cabling work & thus reduces the cost .

### Instrument Rack ►

#### Construction Features:

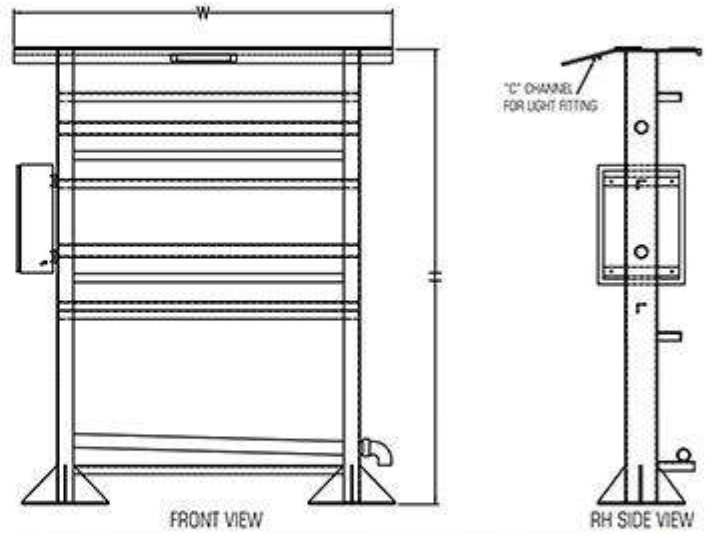
- Instrument Rack are free standing type .
- LIR are normally constructed of suitable 6mm thick channel frame of steel.
- The canopy is constructed of 3mm CRCA sheet.
- The racks also comply to the other requirements of the enclosure.
- Lifting bolt provided as standard for higher load carrying capacity.
- Standard paint shade are RAL 7032, RAL 7035
- Without NTPC Rack Constructed by ISMC 150 mm Channel
- With NTPC Rack constructed by 50x50x6mm angle with 4 legs

Enclosure & Rack along with Standard JB size

S.NO.	HEIGHT	WIDTH	DEPTH
1	500	350	150
2**	800	200	200

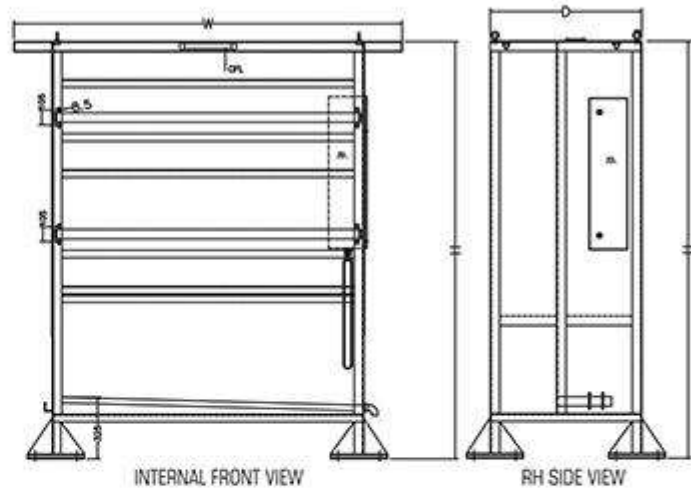
\*\* Optional

• Standard **Rack** without NTPC



S.NO.	HEIGHT	WIDTH	DEPTH	NO. OF TRANSMITTERS
1	2100	200+1400+150	650	6
2	2100	200+1100+150	650	4
3	1600	200+800+150	650	2

• Standard **Rack** with NTPC



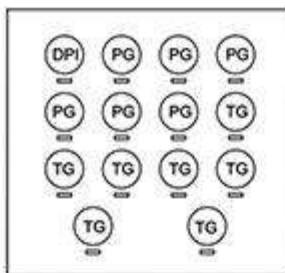
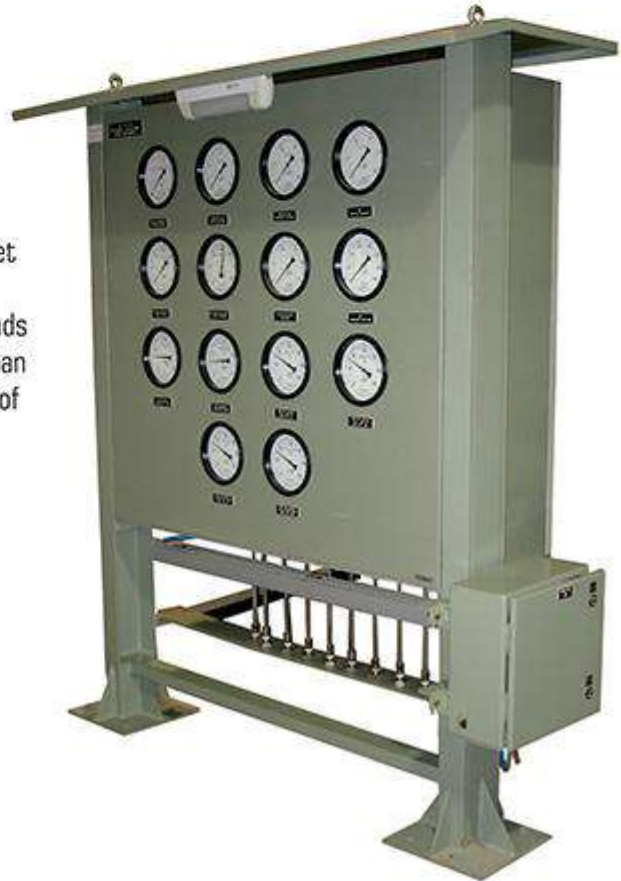
S.NO.	HEIGHT	WIDTH	DEPTH	NO. OF TRANSMITTERS
1	2200	200+1650+200	800	8
2	2200	200+1330+200	800	6
3	2200	200+1010+200	800	4

## Local Gauge Board ▶

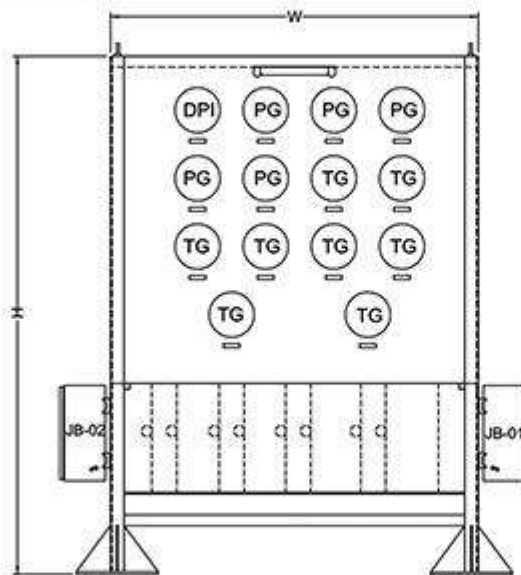
S.NO.	HEIGHT	WIDTH	DEPTH
1	1900	1350	450

### Construction Features:

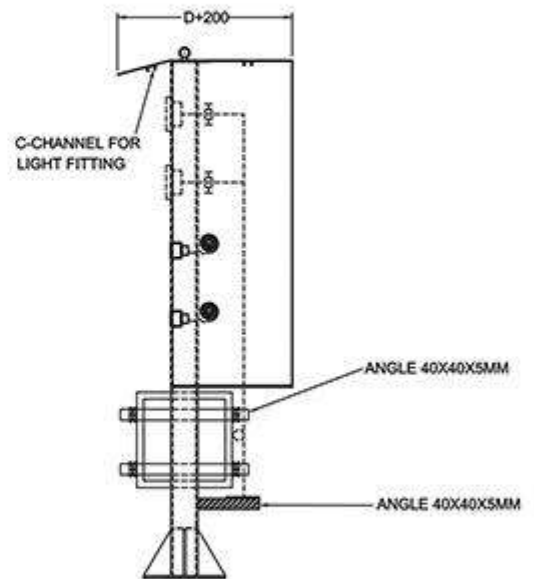
- Instrument Board shall be made of CRCA sheet 3 mm thickness.
- A Continuous canopy extending beyond the ends of the rack shall be constructed of not less than 3mm thick sheet and it is to be bolted to top of the gauge rack as shown in the drawing .
- Side and top covers shall be supported by 40 X 40 mm angles.
- The entire gauge board shall be mounted on 2 nos of 100 X 50 mm channels.
- Gauge rack shall have grounding termination facility.



DETAILS OF INSTRUMENT

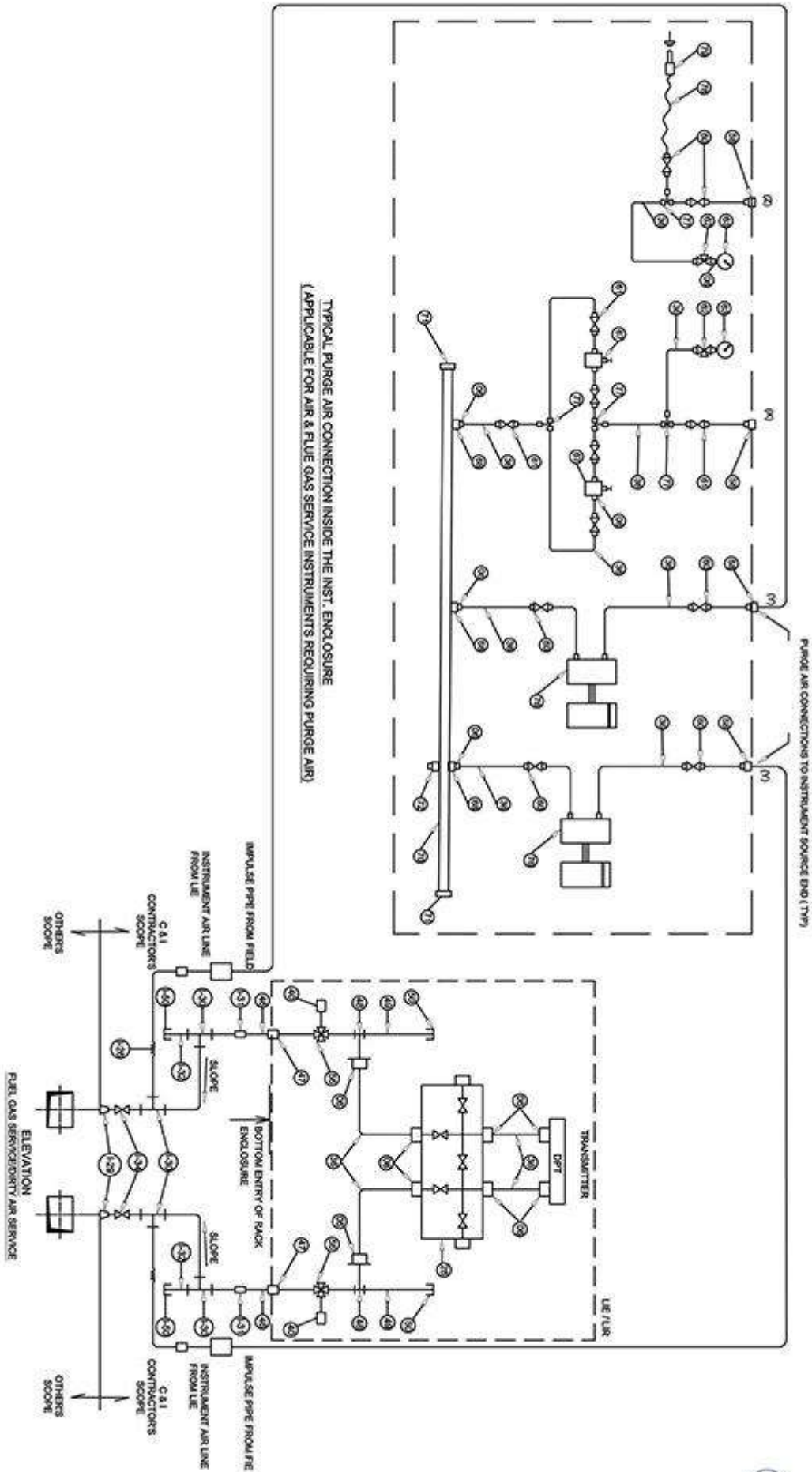


FRONT VIEW



RIGHT HAND SIDE VIEW

**Critical Hookup Scheme for Power Plant**



- Dirty Air / Fuel Gas Pressure Measurement

## Our Other Products Range



- Shelter • Mosaic Desk • Console Desk • Bare Panel IP-65 • PLC Panel • Mosaic Mimic Panel • Local Control Station
- FRP Box • LIE - LIR • Power Distribution Box • Purge & Ex-proof • Acrylic Mimic • NG / LAVT Cubicle • Generator Control Panel
- MCC / PCC / IMCC • CT Box • APFC Panel • Bus Duct (NSPD) • Soft Starter Panel • Synchronization Panel • HT Panel
- Videowalls • Networking Panel • Bare Panel IP-55 • Junction Box • Control & Relay Panels • Alcosy Control Desk
- Metering Panel • Metering Box • Marshalling Panels • EMI/RFI Compliant Panel • Universal Test Bench • Push Button Station
- 19" Racks • Control Room Interiors

### Clients who believes in us....



**HEAD OFFICE AND FACTORY:**  
E-329, Road No.12, Mewar  
Industrial Area, Udaipur-313003  
Rajasthan, India  
Ph:+91-294-2492122/31/34  
Fax:+91-294-2492130  
E-mail: [pyrotech@pyrotechindia.com](mailto:pyrotech@pyrotechindia.com)  
[marketing@pyrotechindia.com](mailto:marketing@pyrotechindia.com)

**NOIDA OFFICE:**  
C-140, Sector 63,  
Nodia-201301 (Uttar Pradesh)  
Mobile : +91-88004 88792  
E-mail: [pmppl@pyrotechindia.com](mailto:pmppl@pyrotechindia.com)  
[electricals@pyrotechindia.com](mailto:electricals@pyrotechindia.com)

**BANGALORE OFFICE:**  
**Pyrotech Electronics Pvt. Ltd.**  
(Southern Regional Office)  
No. 22, 13th Main, NHCS Layout  
Vijaynagar, Bangalore - 560 040  
Ph.:+91-80-23509680  
Fax:+91-80-23509680  
E-mail: [bangalore@pyrotechindia.com](mailto:bangalore@pyrotechindia.com)

**OTHER OFFICES:**  
Ahmedabad 093761 26045  
Bangalore 093428 16887  
Bhopal 094250 16016  
Hyderabad 093913 57063  
Kolkata 093391 99881  
Mumbai 093226 76597  
Chennai 093641 87225



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**PYROTECH ELECTRONICS PVT. LTD. UNIT-II**  
Mewar Industrial Area, Madri, Udaipur-313003, Rajasthan, India

Pyrotech Electronics Pvt. Ltd was established in 1976 at Udaipur, Rajasthan having more than 38 years experience in Turnkey control room interiors, Mosaic Panels & Desks, Control Panels & Desks, other Industrial Panels, Junction Boxes & Racks and more than 10 years experience of Supply, Installation & Commissioning in video wall market. We have our reach to the Power, Energy G/D/T, Oil & Gas, Metal, Transport, Defense & Cement industries etc. .