



A Joint Venture of SAIL and DVC

**Bokaro Power Supply Company (P) Limited**  
(A Joint Venture of SAIL & DVC)  
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Ref : BPSCL/MM/23-24/PUR-185/NIT-003/Corrigendum-01

Date: 22.04.2024

**Corrigendum/ Addendum**

<b>Tender Notice No.-</b> BPSCL/MM/23-24/PUR-185/NIT-003 dated 13.04.2024
<b>Subject -</b> Procurement of Carbon Monoxide (CO) Gas Leakage Warning System and Data Logging System.
<b>Annexure-IV "Detailed Specifications for Carbon Monoxide (CO) Gas Leakage Warning System" is being added to the referred Tender Document.</b>

For and on behalf of BPSCL

  
22/4/24

(S. Choudhuri)  
DGM (MM)

**Specifications for Carbon Monoxide (CO) Gas Leakage Warning System**

The CO Gas Leakage Warning System should consist of the following items.

**A.1. 8 CH. SMART CONTROLLER with Inbuilt Datalogging**

- Display: **7" color LCD touchscreen** Display. Clear indication in case of instrument fault. Should display all channels simultaneously.
- Buttons: Smart keys, 1 audible alarm accept/reset button
- Operating temperature: 0°C to +50°C
- Humidity: 5 to 95% RH
- Input Power: 220 V AC, 50 Hz / 24 V DC
- Analog Channels: 8 Channel minimum (4 to 20 mA reserved for measurement)
- Output Voltage Supply: 21 to 28V DC. The power supply for transmitter, hooter, flasher and sensor is to be provided from controller unit; accordingly, the Controller unit should be capable of providing requisite power.
- Communication: Modbus Communication
- Alarms Per Channel: 5 levels (A1, A2, A3, Over Scale, Under Scale) + Fault Alarm
- Data Storage: Inbuilt Data storage (At least Peak Value, Duration with Time) minimum for one week with facility to retrieve storage data by using Pen drive or suitable serial link to connect with Laptop/PC.
- Cable entries (wall-mounted version): Suitable gland for stranded armored copper cables for Power supply for each channel.
- A separate provision for continuous data logging with necessary hardware and software (as required).
- Protection Class: **IP65 & Nema 4X**

**A.2 Fixed type Carbon Monoxide (CO) Gas Detector with inbuilt Display**

- All detectors should be pre-configured and include 2 programmable alarm relays as well as an Industry standard 4-20 mA output (sink or source selectable) with Modbus connectivity.
- Range: CO (0 - 1000 PPM) Selectable with resolution of 1 ppm., System response time (T90): 30 Sec
- Accuracy/ Repeatability of the system: +/- 3% of Span
- Alarm Function: Alarm for CO gas as per user set limits, the setting should be adjustable.
- Mounting bracket as per site requirement
- Sensor Service Life: 4 - years (Minimum) to be replaced free of cost in case of any failure within this period.

**A.3 Flameproof Hooter + Flasher**

- Operating voltage - 24 VDC
- Sound output: 95 - 105 Db
- Input: 2 nos. (1 no. for Hooter & 1 no. Flasher), Separate input for Hooter & Separate input for flasher.
- Cable entries - 2 nos. - M20, Explosion proof type Exd.IIC as per IS/IEC: 60079-1
- Construction: Cast Aluminum Alloy LM-6, Type of Enclosure: Ex-d, Zone 1, Zone 2 (Exd.IIC T6 Gb)
- Area Classification: Gas Group IIA, IIB & IIC
- Protection: IP 65, Gasket: Neoprene
- Flameproof Flasher Rate: 60 flashes per minute
- finishing: Epoxy powder coated.
- Mounting bracket as per site requirement.

S. D. Dhandhni  
22/4/24



**NOTE:**

1. Calibration Kit (01 no. zero gas and 01 no. 1000 ppm canister with Cap, Rotameter, PVC tube etc.) have to be provided.
2. The supplier must carry out free of cost Post-delivery calibration of the sensors at our site for the minimum service life of the sensors (i.e., 04 years) at an interval as recommended by the manufacturer and issue a calibration certificate.
3. Supervision of Erection and Commissioning of the system will be in Supplier's scope.
4. O & M manual, wiring Drawing and calibration procedures have to be provided.

*S. Chandran*  
22/11/24