



SECTION 13852 (28 42 00)

INDUSTRIAL GAS DETECTION AND ALARM

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. [TXP-SDA Sample Draw Accessory](#)

1.2 RELATED SECTIONS

- A. Division 16 - Electrical.

1.3 REFERENCES

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data:
 - 1. Manufacturer's data sheets on each product to be used.
 - 2. Preparation and installation instructions and recommendations.
- C. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum five years documented experience.
- B. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
- C. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.
- D. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
 - 1. Intent of mock-up is to demonstrate quality of workmanship and visual appearance.
 - 2. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
 - 3. Retain mock-up during construction as a standard for comparison with completed work.
 - 4. Do not alter or remove mock-up until work is completed or removal is authorized.

1.6 PRE-INSTALLATION CONFERENCE

- A. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
- B. Protect from damage due to weather, excessive temperature, and construction operations.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.9 WARRANTY

- A. Manufacturer's standard limited warranty unless indicated otherwise.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Macurco Inc., which is located at: 1504 W. 51st Street, Sioux Falls, SD 57105, USA; Toll Free Tel: 877-367-7891; Fax: 605-951-9616; Email: quotes@macurco.com; Web: <http://macurco.com/products/tracxp/>.
- B. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 TXP-SDA Sample Draw Accessory

- A. Basis of Design: [TXP-SDA Sample Draw Accessory](#)
 - 1. Fixed sampling accessory for pulling gas samples from compact or hostile environments.
 - 2. Dedicated calibration port allows for demand-flow based calibrations to ensure maximum accuracy.
 - 3. Flow interruption indication and dedicated fault relay.
 - 4. Non-intrusive set-up and calibration interface for hazardous locations.
 - 5. Long-life diaphragm pump with brushless motor provides an average sample rate of .5 LPM
 - 6. Integrated flowmeter ensures continuous gas sampling.
 - 7. Suitable for Class 1, Division 1 or Division 2 applications.
 - 8. Factory assembled with TXP-T40 Transmitter.
 - 9. TXP-T40 Relay/Modbus board is included with TXP-SDA.
 - 10. TXP-T40 transmitter is ordered separately.
- B. Basis of Design: [Model TXP-T40 Fixed Gas Transmitter](#)
 - 1. Highly configurable fixed gas detector for applications in Class 1 Division 1 or Class 1 Division 2 environments.
 - 2. Intelligent sensors transfer sensor information to transmitter including sensor type, measurement range, calibration span values, last calibration date, serial number, sensor life and manufacture date.
 - 3. Status indicating color display and LEDs provide visual verification of safe or unsafe conditions.
 - 4. Setup and Programming: Intuitive non-intrusive magnetic interface
 - 5. Transmitter Housing: Cast Aluminum (LxWxH): 5 x 5.4 x 8 inch (127 x 137 x 203 mm).
 - a. Explosion-Proof: Cl.1 Div.1 Gr ABCD.
 - b. IP Rating: Cast Aluminum Enclosure: IP65 w/88-C200-0002-00 or 88-C200-

0003-00.

6. Sensor Housing: Stainless steel (LxWxH): 5 x 5.4 x 8 inch (127 x 137 x 203 mm).
7. Power Supply: 10 to 30 VDC at less than 10 watts with relay board; all relays energized.
8. Input: Electrochemical, Catalytic Bead or Infrared sensor.
9. Output:
 - a. Dual 3-wire 4 to 20 mA current source; Max loop Resistance 600 ohms at 24 VDC.
 - b. Three programmable relays plus dedicated FAULT relay.
 - c. Dual programmable master / slave Modbus RS-485 serial interfaces.
10. Display: QVGA backlit color TFT 320 x 240.
 - a. Displays gas values, units of measurement, trend graphs and alarm levels.
11. Temperature Range: Minus 40 to 140 degrees F (Minus 40 to 60 degrees C).
12. Humidity Range for IR Sensor: 95 percent RH Non-condensing.
13. Humidity Range for Electrochemical Sensor: 85 percent RH Non-condensing.
14. Gas Options – For a list of gas sensor options, please refer to the TracXP Specification found at <https://www.macurco.com/?ddownload=4766>.
15. Accessories:
 - a. Calibration Equipment
 - 1) 31-0006-4603-2 - Gas Regulator (Male), Demand Flow 0-3 LPM, Stainless Steel
 - 2) 82-C000-0000-00 - Calibration Kit Soft Case
 - 3) 82-2900-0000-00 - Teflon Tubing, 3ft
 - 4) Consult local TracXP sales representative or factory for zeroing and span calibration gas cylinder information.
 - b. Filters
 - 1) 97-8000-0050-00 - TXP-SDA Inlet Filter and Element
 - 2) 97-8000-0070-00 - TXP-SDA Inline Hydrophobic Filter
 - 3) 97-8000-0080-00 - TXP-SDA Inlet Filter Element
 - 4) 97-8000-0090-00 - TXP-SDA Inline Hydrophobic Filter Element

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly constructed and prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.

3.4 FIELD QUALITY CONTROL

- A. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

- B. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.

3.5 CLEANING AND PROTECTION

- A. Clean products in accordance with the manufacturers recommendations.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION