

# MINI-ICS XP CART SYSTEM

PRODUCT DATA SHEET – 405

Mobile XP oxygen monitoring system (OMS)  
For process O<sub>2</sub> monitoring and inert gas control

## Introduction

The Mini-ICS XP cart system combines the convenient mobility of a portable cart with a complete oxygen monitoring and inert gas control system. Designed for use in hazardous areas, the system provides all of the components required to quickly and safely connect the cart to a process vessel and start monitoring and controlling oxygen levels. Robust design innovations in the sample conditioning package allow the system to withstand harsh conditions in solvent-based or powder processing applications and to efficiently remove damaging contaminants from the sample stream. A wide range of available options allow for configuration flexibility.

## Mini-ICS oxygen analyzer

The Mini-ICS analyzer provides reliable measurement of oxygen levels and automatically maintains oxygen levels within specified limits by controlling the flow of inert gas into the process. It includes user-adjustable alarms and setpoints with relay outputs. The oxygen alarm may be configured for the highest level or lowest oxygen level allowable. The high and low limit setpoints are provided for process control, allowing the user to set the levels for activation and deactivation of the inert gas control valve.

An easy-to-read LED display shows the oxygen concentration and guides the user through system setup, calibration, and diagnostic procedures. The front panel features a pushbutton key pad and LED indicators for normal, alarm, low flow, and fault conditions.

The Mini-ICS includes options for communicating with a DCS. Two analog outputs are available: 4-20mA and 0-1, 0-5, or 0-10VDC. An RS-232 digital interface gives the user access to all settings including the “factory restore” option which resets the analyzer to the factory delivered configuration settings.

## Sample conditioning

The Mini-ICS XP cart systems can be configured with either the



## Features

- Mobility – portable cart mounted system includes all components needed to safely monitor and control oxygen levels in process vessels
- Safety – designed for hazardous locations, the analyzer is housed in an explosion proof enclosure; the sample conditioning package is intrinsically safe
- Robust design – SS cart with all welded construction, bolt-on swivel casters, and tubular handle with smooth radius bend for comfort and uniform appearance; 1,200 lb. capacity
- Precise control – the Mini-ICS analyzer automatically maintains oxygen levels within specified limits by controlling the inert gas flow to the process
- Reliability – designed for solvent-based and powder processing, the intrinsically safe sample conditioning packages are built to withstand harsh processing conditions and remove harmful contaminants from the sample stream
- Low maintenance – high quality components with few replacement parts minimizes maintenance costs and unplanned downtime

## Applications

Centrifuges

Conveyors and material handling systems

Dryers

Mixers

Process vessels

Reactors

Solvent recovery systems

Solvent wash-down tanks

Storage tanks

Waste gas vent headers

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Model 31 or Model 21 series sampling packages. The Model 31 series samplers, suitable for process pressures between -25inH<sub>2</sub>O and 5 psig, use a pneumatically driven aspirator to extract the sample from the process. The Model 21 Series uses continuous positive pressure in the process vessel or system to provide the force that pushes the sample gas from the process to the sensor. Suitable for applications with process operating pressures between 5 and 300 psig, the Model 21 series sampler includes a pressure reducing regulator to control the pressure and flow of the sample gas through the system.

The Neutronics sample conditioning packages are designed to ensure that the oxygen sensor always has a clean, dry sample gas for accurate measurement. Process conditions that include solvents, corrosive chemicals, and temperature extremes present significant challenges. To deliver accurate and reliable gas measurement, oxygen sensors require a sample that is free of contaminants.

## Operation

The Mini-ICS XP cart system is designed for stand-alone operation. Standard configurations include a coalescing prefilter, inert gas solenoid valve, purge flow control valve, and mains power cord. Optional items include stainless steel or brass hoses with quick disconnect couplers, an XP on/off rotary switch, and XP indicator lights for normal and alarm conditions.

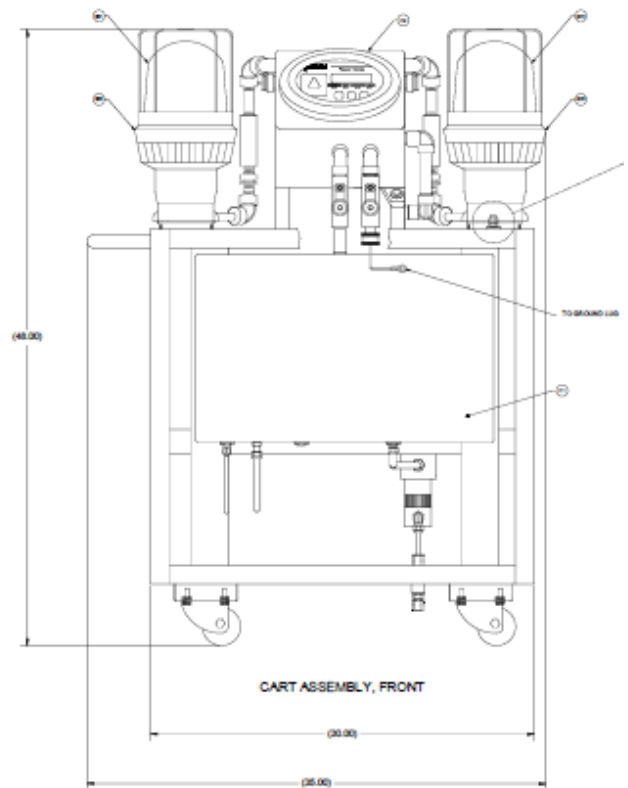


Fig. 1, front view, XP cart system with indicator lights

## Technical specifications

Measurement range	0.1 to 25% oxygen (0-1, 0-10, 0-25% fixed or auto range)
Display	0.75 inch (19.05mm) digital LED display with color coded LEDs for system status
Status indicators	Color coded LEDs for normal, fault, low flow, and O <sub>2</sub> alarm conditions
Analyzer user interface	Soft-key multi-function pushbuttons
Accuracy	±1% of range
Materials of construction	304 Stainless Steel cart
Wheels	Conductive caster wheels, swivel type
Operating temperature range	0-40°C (32-104°F)
Area classification	Explosionproof for Class I, Division 1, Groups C, D
Power requirements	220VAC or 115VAC, 50-60 Hz
On/off switch	Explosion proof switchbox with rotary on/off switch
Mains power cord	Factory supplied; mains power seal fitting potted by the factory
Dimensions	48" (1219mm) height x 35" (889mm) width x 18" (457mm) depth
Weight	200 lbs. (90.7 kg)
Warranty	12 months from date of shipment



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