SmartWireless MCX-32

Alarm & Control System

Description

SmartWireless® MCX-32 is a flexible and expandable multi-channel control system compatible with a wide range of wired and wireless gas detectors, transceivers, alarms, and other field devices. The advanced control system can include up to 64 channels of any combination of wired and/or wireless field devices.

Real time status of each active field device is displayed on a large backlit LCD Touch Screen that also serves as a user interface. Command functions can also be displayed on the touch screen and include alarm reset, alarm acknowledge, alarm test, and radio silence. During normal operation the screen shows real time gas concentrations or the status of field devices to include battery charge level, network RF signal quality, and any number of fault conditions affecting either an individual device or the entire network. Display formats include field device function, tag name, current reading, and alarm status. Each input can be configured for up to 3 alarm levels with a fourth-alarm output dedicated to fault diagnostics of field devices and internal operating systems. Each system application can include either a common or a limited number of discrete alarm relays.

Among the SmartWireless MCX-32's specialized features is "auto-configuration" of addressable devices that are located in a device library within the unit. This provides a unique combination of "auto configuration" simplicity and ease, with customizable expansion capabilities. The control system is also fitted with a 10/100 BaseT Ethernet Port, allowing users to safely monitor a network remotely with the convenience of a desktop PC, or handheld device with internet connection. An addressable RS-485 Modbus RTU slave port is available for communication with higher level automation and control systems such as PLC's, PC's and Distributed Control Systems. The SmartWireless MCX-32 offers standard datalogging of alarms, calibrations, comm errors and faults, as well as 15-minute peak and average readings for each channel using Type I or Type II compact flash cards.

Wired devices with either a 4-20mA DC or serial RS-485 output can be interfaced with the control system individually or by using Detcon's stackable din-rail mounted I/O modules. Detcon I/O modules include a 4-channel 4-20mA input module (DA-4), a 4-alarm relay output module (RL-4), a 4-channel 4-20mA output module (AO-4), and a 4-relay contact input module (DI-4). The I/O modules may be mounted within the main system enclosure or in separate enclosures suitable for the area classification where installation will occur. All I/O modules are individually addressable and operate on 11.5-30VDC. The SmartWireless MCX-32 is available in either fiberglass or stainless steel NEMA 4X enclosures and can be powered by 110-230 VAC or 24 VDC. The control system is intended for installation inside buildings or under cover avoiding direct sunlight.

Additional ordering options include audio alarm, visual alarm, external alarm port, alarm reset switch, 10-meter separation antenna, and battery backup.

Features

- Compatible with Model RXT-320 Transceivers
- 64 channel capacity
- Large LCD with touch-screen user interface
- Wireless, analog, or Modbus input capability
- Comprehensive integral data logging
- Non-intrusive operator interface

Applications

- Oil and Gas Drilling Rigs
- Oil and Gas Production Sites
- Wastewater Treatment Plants
- Food and Beverage Processing
- Pulp and Paper Mills
- Refining and Petrochemical

Systems Specifications

Input/Output
2.4Ghz DSSS Radio Transmission
Wired device inputs: 4-20mA (using DA-4 Modules)
RS-485 Modbus™ RTU * (Only compatible with other Detcon product)
Contact closure (using RL-4 Modules)

Capacity
Up to 64 Input Devices

Display
5.8" Monochrome Backlit LCD (sunlight readable)
Resistive analog touch-screeen
Brightness 165 cd/m2
Backlight MTBF: 20,000 hour typ.

Warranty
One Year

Mechanical Specifications

Dimensions
SmartWireless MCX-32-N4X, 16"W x 27.9"H x 9.5"D
SmartWireless MCX-32-SS, 14"W x 26"H x 8.2"D

Optional Visual Alarm

Light Output
1.75 Joules per flash

Lamp Type
Xenon strobe lamp

Flash Rate
60 to 80 flashes per minute

Optional Audio Alarm

Mode of Operation
Continuous Tone

Frequency
2900 Hz ± 500 Hz

Loudness
80 - 90 dB(A) min. @ 2 FT @ 6 - 28 Vdc

Electronical Specifications

Power Input
110-230 VAC: 24VDC nominal (20 - 28VDC)
Optional battery backup

Power Consumption
Base MCX-32 Controller: 14 Watts @ 24 VDC
Total power dependent on:
Number of I/O Modules
Number of Gas Sensors not to exceed 80 watts

Electrical Classification
Model SmartWireless MCX-32-N4X, NEMA 4X
Model SmartWireless MCX-32-SS, NEMA 4X

Performance
Transmit Power Output: 18dBm

RF
Outdoor RF Line of Sight (with standard antenna): 1.5 Miles
Interface Data Rate: 9,600bps
Throughput Data Rate: 19,200bps
RF Data Rate: 250,000bps
Transceiver Sensitivity: -102dBm
Frequency: 2.40-2.48GHz
RF Channels: 16, each 5Mz Wide
Output Power: 100mW (20.5dBm) EIRP
Spread Spectrum: DSSS (Direct Sequence Spread Spectrum)
Modulation: 0-QPSK
Supported Network Topologies: Mesh, Point-to-Point

Antenna
5db Flex Whip; Screw on Radome Whip Antenna Guard Included
Optional 7db omnidirectional 10 meter separation antenna

I/O Protection
Over-voltage, Miswiring, EMI/RFI Immunity

Environmental Specifications

Operating Temperature Range
0°C to +50°C; 32°F to +122°F

Storage Temperature Range
-20°C to +70°C; -4°F to +158°F

Specifications subject to change without notice

Order Guide

Part Number
954-MCX_ _ _-_ _ _-_0_

Description
SmartWireless MCX-32 control system in NEMA 4X enclosure 110/220VAC, 24VDC power supply.

To complete the part number please select from the options below.   9 5 4 - M C X _ _ _ - _ _ _ - _ 0 _

Position "7" Alarm Options
0 - None
1 - Audible Only
2 - Red Strobe
4 - Amber Strobe
5 - Green Strobe
6 - Blue Strobe
7 - Purple Strobe
9 - Clear Strobe

A - Red Strobe & Audible
C - Amber Strobe & Audible
D - Green Strobe & Audible
E - Blue Strobe & Audible
F - Purple Strobe & Audible
G - Clear Strobe & Audible

Enclosure Option
0 - NEMA 4 Fiberglass
2 - NEMA 4, 4X Stainless Steel

Position 10-13 I/O Modules
Number of DI-4 modules installed
Number of DA-4 modules installed
Number of AO-4 modules installed
Number of RL-4 modules installed

Position "15" Antenna Separation Option
0 - none
1 - 7db 10 Meter Separation Antenna

Position "13" Wireless Transceiver Option
Contact factory to complete part number

www.teledynegasandflamedetection.com