



FDS

BARNEL FIRE DETECTION SYSTEM

FIRE DETECTION APPLICATION

With the flexibility of the BarNel FDS (Fire Detection System) control panel, it can be custom configured to deploy a vast array of environmental monitoring sensors.

This includes toxic and flammable gases, smoke, air velocity, temperature, humidity etc. To put this in a nutshell, the BarNel FDS can handle almost any fixed installation sensor that is required. Localized alarming and indication is also possible and can be configured according to requirements. Additional ventilation door monitoring is also possible.

Where long distances are required, the system can be retro-fitted to handle industrial rated RS-485 communication that can allow for the addition of FDS panels where there is not any Ethernet infrastructure available. Once again, this is all communicated on industry standard protocols and can be incorporated into existing SCADA system as well as form part of the BarNel FDS.

FEATURES & TECHNICAL SPECS

- > Communication: 10/100 Base-T Ethernet, RS-485
- > Supports Protocols: Modbus TCP/IP, TCP/IP, UDP, HTTP, Modbus RTU

Inputs / Outputs:

- > 8 x Analog Inputs (differential)*
 - Current (0-20mA, 4-20mA)
 - Voltage (3150mV, 3500mV, 31V, 35V, 310V)
- > 6 x Digital Inputs*
 - Dry Contacts - Logic 0 : Close to Ground, Logic 1: Open
 - Wet Contacts -Logic 0 : 0 ~ 3VDC, Logic 1: 10 ~ 30VDC
- > 6 x Relay Outputs*
 - AC Rating 120V @ 0.5A
 - DC Rating 30V @ 1A
- > Accuracy: +/- 0.1% or better
- > Max Sensor distance: <= 2000m*
- > Resolution: 16-bit
- > Audible and Visual local alarm indication*
- > Isolation Protection: 2000VDC
- > Power Input: Unregulated 10 - 30VDC
- > Power Reversal Protection
- > Operating Humidity: 20 - 95%RH (non-condensing)
- > Operating Temperature: -10 - 70 Degree Celsius
- > Enclosure Rating: IP65 *Expandable and dependent on configuration requirements



FIRE SUPPRESSION APPLICATION

Configured for a Fire Suppression system, the controller caters for 2 Flame detectors (UV/IR or IR3), 2 Carbon Monoxide (or Smoke) sensors, 2 Temperature scanners for belt surface monitoring as well as 6 additional bearing temperature sensors. It also has the capability to monitor a linear heat cable installation. Since the controller is Ethernet based, it is also capable of adding an IP camera which will enable live video feeds on surface. Local audio and visual indications are also present on the controller as well as an emergency activation switch which is installed in a safe area and can be manually activated in the case of an emergency. A maintenance key switch is available to prevent accidental activation of the sprinkler system whilst maintenance work is being carried out in close proximity. The sprinkler activation period of the controller is configurable ensuring adequate extinguishing functionality.



CUSTOMISED SCADA



The SCADA (Supervisory Control and Data Acquisition) forms an integral part of any monitoring or control system since it enables the control room operator to see an overview of current system conditions and status. The system can be customized to suit the individual's requirements while standard features like trending and alarming are already available. This enables the user to make the correct decisions as well as to guide him/her in the correct procedure to follow. With the addition of a camera to the system, it even further enhances the critical decisions that needs to be made when danger is imminent and with lives at stake.

FEATURES & TECHNICAL SPECS

- > Communication: 10/100 Base-T Ethernet
- > Supports Protocols: Modbus TCP/IP, TCP/IP, UDP, HTTP Sensor Inputs:
- > 2 x Flame Detectors (UV/IR, IR3)*
- > 2 x Carbon Monoxide / Smoke sensors*
- > 2 x Temperature Scanners (13:1, -20 - 500 Deg Celsius)* 6 x Bearing sensors (PT100, PT1000, Balco 500, Ni 518)* 1 x Linear Heat cable monitoring
- > 1 x Manual Activation Point
- > Accuracy: +/- 0.1% or better
- > Resolution: 16-bit
- > RTD Wire Burn-out Detection
- > Audible and Visual local alarm indication
- > Output for Suppression Control Valve activation and Belt Trip Local display: Power, Fire, Fault, Battery Maintenance, System Test Isolation
- > Protection: 2000VDC
- > Power Input: Unregulated 10 - 30VDC
- > Power Reversal Protection
- > Operating Humidity: 20 - 95%RH (non-condensing) Operating Temperature: -10 - 70 Degree Celsius Enclosure Rating: IP65
- > *Expandable and dependent on configuration requirements