

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

3500 SYSTEM

3500/65 136188-02

MACHINERY MONITORING COMPONENT

Used with the applicable 3500 System configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Bently Nevada 3500/65 136188-02 manufacturer documentation

3500/65 16-Channel Temperature Monitor

Bently Nevada* Asset Condition Monitoring

Description

The 3500/65 monitor provides 16 channels of temperature monitoring and accepts both resistance temperature detector (RTD) and isolated tip thermocouple (TC) temperature inputs. The monitor conditions these inputs and compares them against user-programmable alarm setpoints.

The monitor is programmed using the 3500 Rack Configuration Software. You can configure the 16-Channel Temperature Monitor to accept isolated tip thermocouples, 3-wire RTD, 4-wire RTD, or a combination of TC and RTD inputs.

In Triple Modular Redundant (TMR) configurations, you must install temperature monitors in groups of 3 adjacent monitors. In this configuration the monitor uses 2 types of voting to ensure accurate operation and to avoid single-point failures.



imagination at work

Specifications and Ordering Information
Part Number 172930-01
Rev. D (11/2/11)

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Specifications

Inputs

Signal

Accepts from 1 to 16 RTD or isolated tip TC transducer signals.

Input Impedance

Greater than 1 M Ω for each lead input.

Power Consumption

3 watts nominal.

Transducers

TCs

Type E

-100 °C to +1000 °C,
(-148 °F to +1832 °F).

Type J

0 °C to +760 °C
(32 °F to +1400 °F).

Type K

0 °C to +1370 °C
(32 °F to +2498 °F).

Type T

-160 °C to +400 °C,
(-256 °F to +752 °F).

RTDs

100 Ω 3-wire and 4-wire platinum RTD
($\alpha = 0.00385$)

-200 °C to +850 °C
(-328 °F to +1562 °F).

100 Ω 3-wire and 4-wire platinum RTD
($\alpha = 0.00392$)

-200 °C to +700 °C
(-328 °F to +1292 °F).

120 Ω 3-wire and 4-wire nickel RTD.

-80 °C to +260 °C
(-112 °F to +500 °F).

10 Ω 3-wire and 4-wire copper RTD.

-100 °C to +260 °C,
(-148 °F to +500 °F).

Note: Platinum RTDs with $\alpha = 0.00385$ are the worldwide industrial standard and are the recommended RTDs for all applications.

Outputs

Front Panel

LEDs

OK LED

Indicates when the temperature monitor is operating properly.

TX/RX LED

Indicates when the temperature monitor is communicating with other modules in the 3500 rack.

Bypass LED

Indicates when the temperature monitor is in Bypass Mode.

RTD Current-Source Value

913 $\pm$ 7 μ A @ 25 °C per transducer (1 supply for the 4-wire RTD and 2 supplies for the 3-wire).

Signal Conditioning

Specified at +25 °C (+77 °F). Full-scale range for each channel is set in the field via 3500 Configuration Software. No calibration is required.

RTDs and TCs

Resolution

1 °C or 1 °F.