Sentry Intrinsically Safe Card Reader

Access Control

Security

EEx ia IIC T4

FM Approval

Safe area version available

The Sentry card reader is designed for hazardous and non-hazardous harsh area use and can be configured to read a range of different card technologies.

Certified to EEx ia IIC T4, the Sentry is intrinsically safe and therefore suitable for use in the most hazardous of areas, including those classified as Zone 0, where there is a constant risk of an explosive atmosphere.

The Sentry has CENELEC European approval and also has the equivalent F.M. approval and is therefore suitable for use in the U.S.A.

The Sentry comprises a weatherproof box housing the electronics required to format the card data for transmission to a host computer and a card reader head. One of several card reader head options may be fitted to this box. This determines the card media type which can be decoded, which can be any of the following:

Proximity card ; a non-contact technology where a card is read by passing it within a few centimetres of a plastic window on the front of Sentry. As the proximity technology is non-contact, the identification media can take a number of different formats & a key fob device is available as an alternative to the standard proximity card.

Weigand card ; a swipe card where data is encoded on wires embedded securely within the card.

Barcode and Magnetic stripe card technologies are also under development taking advantage of the Sentry's modular design.

OPERATION

The intrinsically safe Sentry communicates via the barrier & communications interface (R007-IS) in the safe area, where the signal becomes available as RS-232, RS-422 or RS-485 serial data. The Sentry can be multi-dropped at the RS-485 serial data point whereby up to 64 Sentry barriers can be chained together and connected to a single control port on the host. The Sentry can also communicate via a Mercury terminal.

The safe area version of the Sentry has RS-422 and RS-485 directly available and does not need the R007 barrier.

For maximum flexibility and ease of use, all communications between the Sentry and its host are ASCII, and are derived from the VT-100 standard. Commands are a sub-set of those used by the Mercury terminal.

A successful read is indicated by the L.E.D. & the card data is then transmitted to the safe area when requested by the host other visual indicators are provided as detailed below.

A bi-colour L.E.D. is provided to indicate that the Sentry is powered. This changes briefly from green to red on each successful card read.

A second L.E.D. is under full control of the host computer and its application is therefore user defined.

An additional L.E.D. is fitted to Sentries equipped with a proximity card reader head. This remains illuminated whenever a proximity card is in range of the sensing window.

The format of this data transmission is determined by the links inside the Sentry & also by the set up process which involves downloading options from a PC or terminal. The card reader's internal links determine the type of card reader used and allow remote configuration to take place.

Advanced settings include data format, multi-drop settings and communication parameters.

All other options are set using the remote configuration mode.

The Sentry also provides two isolated digital outputs, two digital inputs, and two inputs for proximity switches suitable for card present detection. These are directly controlled and read by the host computer.
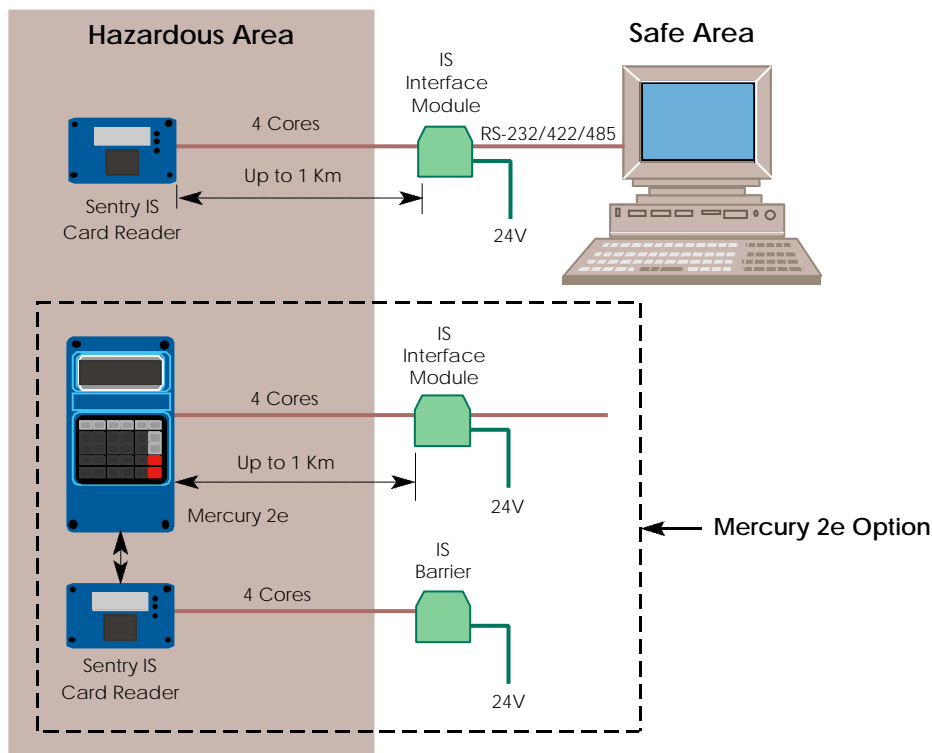
DANIEL

FISHER-ROSEMOUNT

FEATURES

- **Cenelec Eex ia IIC T4 approval**

- **F.M. approval to Class 1 Division 1**

- **IP65 waterproof enclosure**

- **Suitable for Zone 0 use**

- **Variety of card technologies:**

    Proximity

    Weigand

    Magnetic stripe   (Future development)

    Barcode   (Future development)

- **Simple 4 wire connection**

- **Digital input/outputs**

SENTRY SPECIFICATION

Certification EEx ia IIC T4, Zone 0 Certificate
No. 99ATEX2138X FM Class 1 Division 1

Supply voltage:	20 - 32Vd.c
Operating Current:	Approx 40 mA (dependant on reader used)
Operating Temperature:	–20 to +60° C
Storage Temperature:	–20 to +60° C
Ingress Protection:	IP65
Enclosure:	Aluminium Alloy
Data Protocol:	Based on VT 100 (compatible with Mercury 2e terminal)
Inputs:	2 proximity inputs for card present detection, 2 digital inputs
Outputs:	2 isolated digital outputs
Multi drop:	Up to 64 Sentry card readers
Baud rate:	1200 to 19,200 baud (1200 to 9600 baud for I. S.)
Interface:	Requires R007-IS interface for hazardous area applications.
Mechanical:	Height 120.00mm Width 220.00mm Depth 80.00mm

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