

The **Smith Meter® Card Reader** is an RF-based proximity reader interfaced to a microprocessor-based device capable of interpreting multiple card formats and transmitting card data to the AccuLoad III's KDC computer board or directly to an automation system.

Reader Features

- Mounts to front of AccuLoad III-N4 or Split Architecture MMI for Division II approved areas
- LED (red, green, yellow), buzzer, and relay, all of which can be controlled remotely by an automation system
- Interfaces directly with AccuLoad III or the automation system
- Card authorization valid until programmable timeout expires (1 - 99 minutes)
- Uses serial communications port (EIA-232 / 485) and Smith protocol communications
- Available for N4 (Division II approved areas) or hazardous locations (Division I approved areas)
- Captive Card Optional

Card Features

- Universal compatibility with HID Readers
- External number for easy identification and control
- Custom pre-printed artwork available
- Meets ISO standards for thickness
- Approved for hazardous locations operation

Applications

The Smith Meter Proximity Card Reader provides a high performance and reliable method of identifying drivers and users to either the AccuLoad III or directly to an automation system. The Card Reader has the ability to communicate either directly to an automation system or through the AccuLoad III. It is ideal as either a gate reader or an island reader.

Specifications

Electrical Inputs

DC Instrument Power:

- 24 Vdc, 35 mA
- 12 Vdc, 70 mA



Electrical Outputs

DC Output:

Type: Optically-isolated solid state output. User-programmable as to function.

Polarity: Programmable (normally open or normally closed).*

Switch Blocking Voltage: 30 Vdc maximum

Load Current: 150 mA maximum with 0.9 volt drop (6 Ω typical)

*Note: *Power-down normally open.*

Card Interface

Excite Frequency: 125 kHz

Typical Read Range: Within up to 2" (5.08 cm) of glass

Environment

Ambient Operating Temperature

-40°F to 140°F (-40°C to 60°C)

Humidity:

0 to 95% non-condensing

Enclosure:

Explosion-proof (NEMA 7, Class I, Groups C and D) and watertight (NEMA 4X), IP65.

Reader Approvals

North America UL/CUL - XP Housing

Class I, Division 1, Groups C & D, Class II, Groups E, F and G; UNL-UL Enclosure 4X, CNL-CSA Enclosure 4, IP66.

Class I, Zone 1, Group IIB.

Class I, Zone 1, AEx d IIB T6.

Exd IIB T6.

UL/CUL File E23545.

European CENELEC - XP Housing

EEx d IIB T6, IP66.

DEMKO 03 ATEX 0252381.

North American UL/CUL - N4 Housing

Class I, Division 2, Groups C&D, Class I, Zone 2, Group IIB, UNL-UL ENCL. 4X, CNL-CSA ENCL. 4

Electromagnetic Compatibility

Complies with the European Community Electromagnetic Capabilities (CE Mark) Requirements as per European Directive 89/336/EEC.

Communications

General

Configuration: EIA-485 four wire (or two-wire) Multi-drop network or EIA-232 three-wire communications link.

Data Rate: Programmable asynchronous data (baud) rate of 2400, 4800, 9600 or 19,200 bps.

Data Format: Fixed at one start bit, one stop bit, eight data bits, no parity

Line Protocol: Half-duplex, full-duplex, no character echo.

Protocol: Smith ASCII LRC.

EIA-232

Type: Interfaceable with EIA-232 data communication standards. Data transmitters are tri-state design.

Up to 8 devices can be connected to the same transmit and receive data lines.

EIA-485

Type: Interfaceable with EIA-485 data communication standards.

Number of Units per Communication Line: Up to 16 devices can be connected to the same transmit and receive data lines.

Card Specifications

Typical Read Range: Within 2" (5.08 cm) of glass

Dependent on installation conditions

Dimensions:

2.1" (5.4 cm) x 3.4" (8.6 cm) typical

Operating Temperature:

-40°F to 160°F (-40°C to 70°C)

Weight:

0.24 oz. (6.8 gm)

ID Numbers:

Five digits

Options:

Custom Artwork, one side only (text or graphics).
Contact factory for details

Approvals:

Approved/Certified/Listed Hazardous Location Cards only available from SMI

European:

EEx ib IIB T6

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North America:

Intrinsically safe card for use in Class I, Division 1, Groups C and D, Class II, Groups E, F and G; Class I, Zone 1, AEx ib IIB T6; Class I, Zone 1, Ex ib II B T6.

Key Fob Specifications

Typical Read Range: Within 2" (5.08 cm) of glass

Dependent on installation conditions

Dimensions:

1.9" (4.8 cm) x 0.9" (2.3 cm) x 0.34" (0.9 cm)

Operating Temperature:

-40°F to 160°F (-40°C to 70°C)

Weight:

0.26 oz. (7.4 gm)

ID Numbers:

Five digits

Approvals:

Approved/Certified/Listed Hazardous Location Key fobs only available from SMI

European:

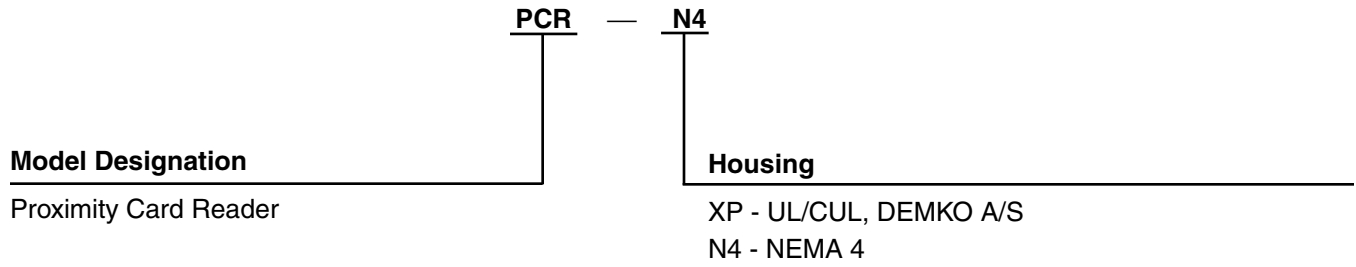
EEx ib IIB T6

DEMKO 03 ATEX 0252381

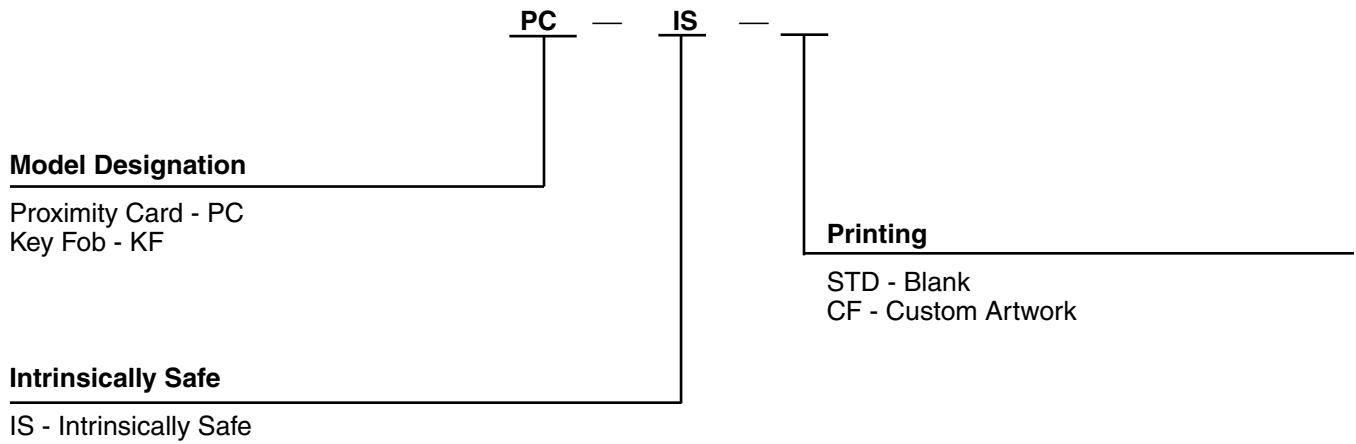
North America:

Intrinsically safe Key fob for use in Class I, Division 1, Groups C and D, Class II, Groups E, F and G; Class I, Zone 1, AEx ib IIB T6; Class I, Zone 1, Ex ib IIB T6.

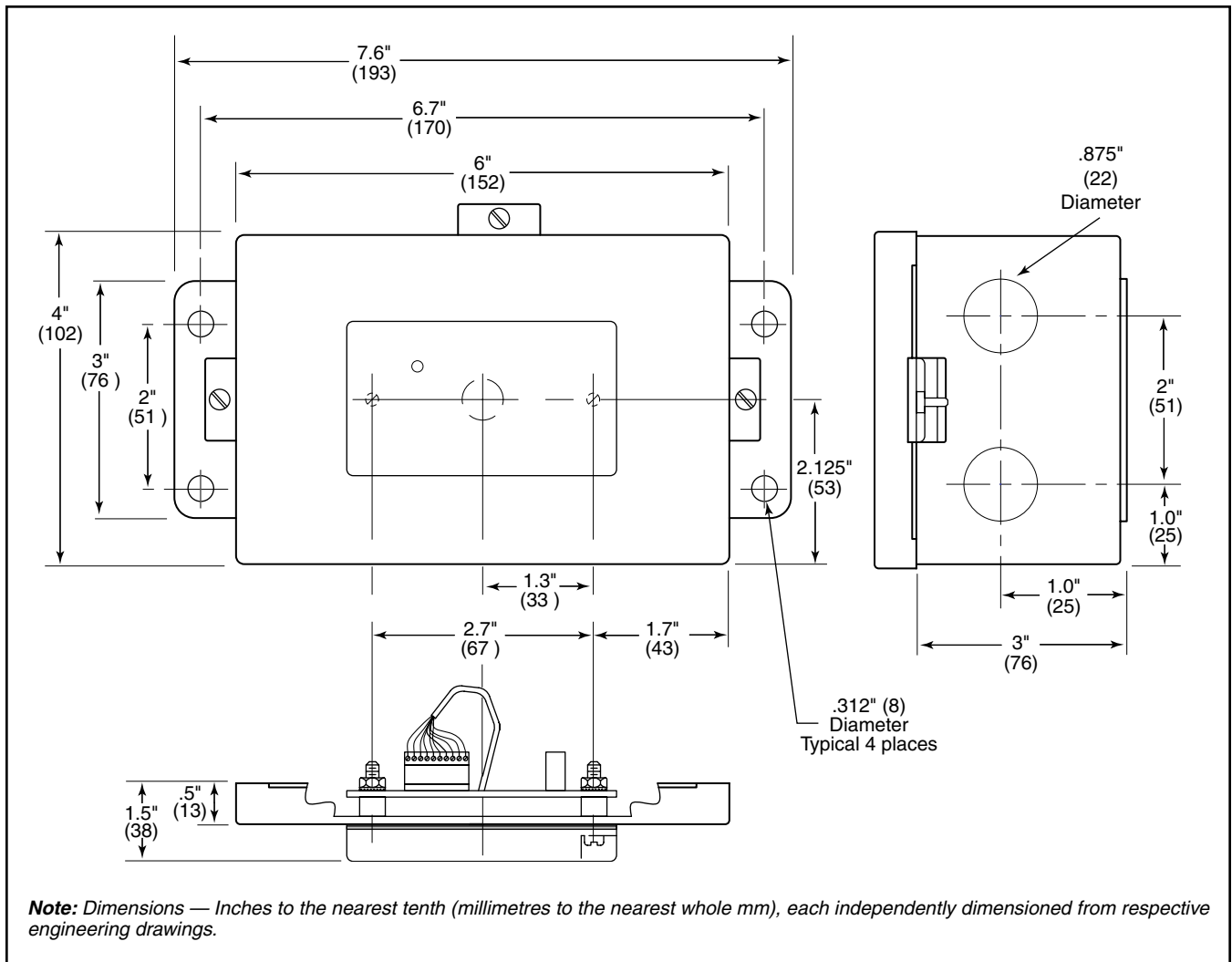
Card Reader Modeling



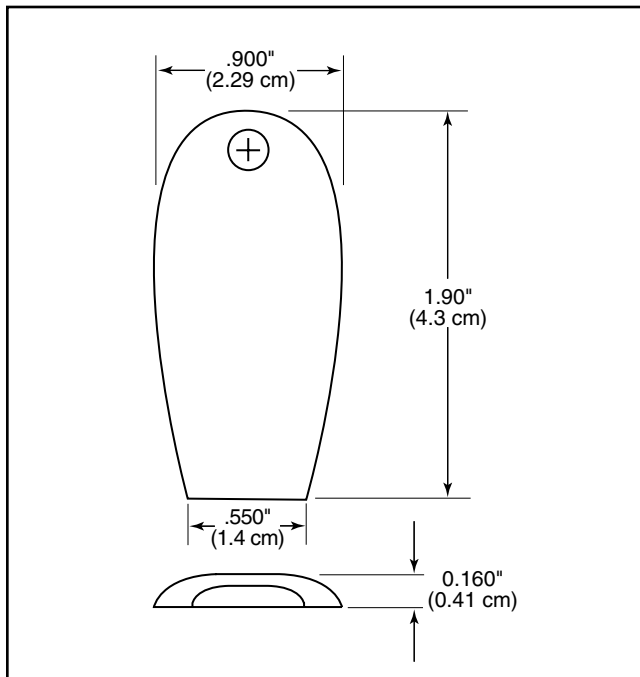
Proximity Card/Key Fob Modeling

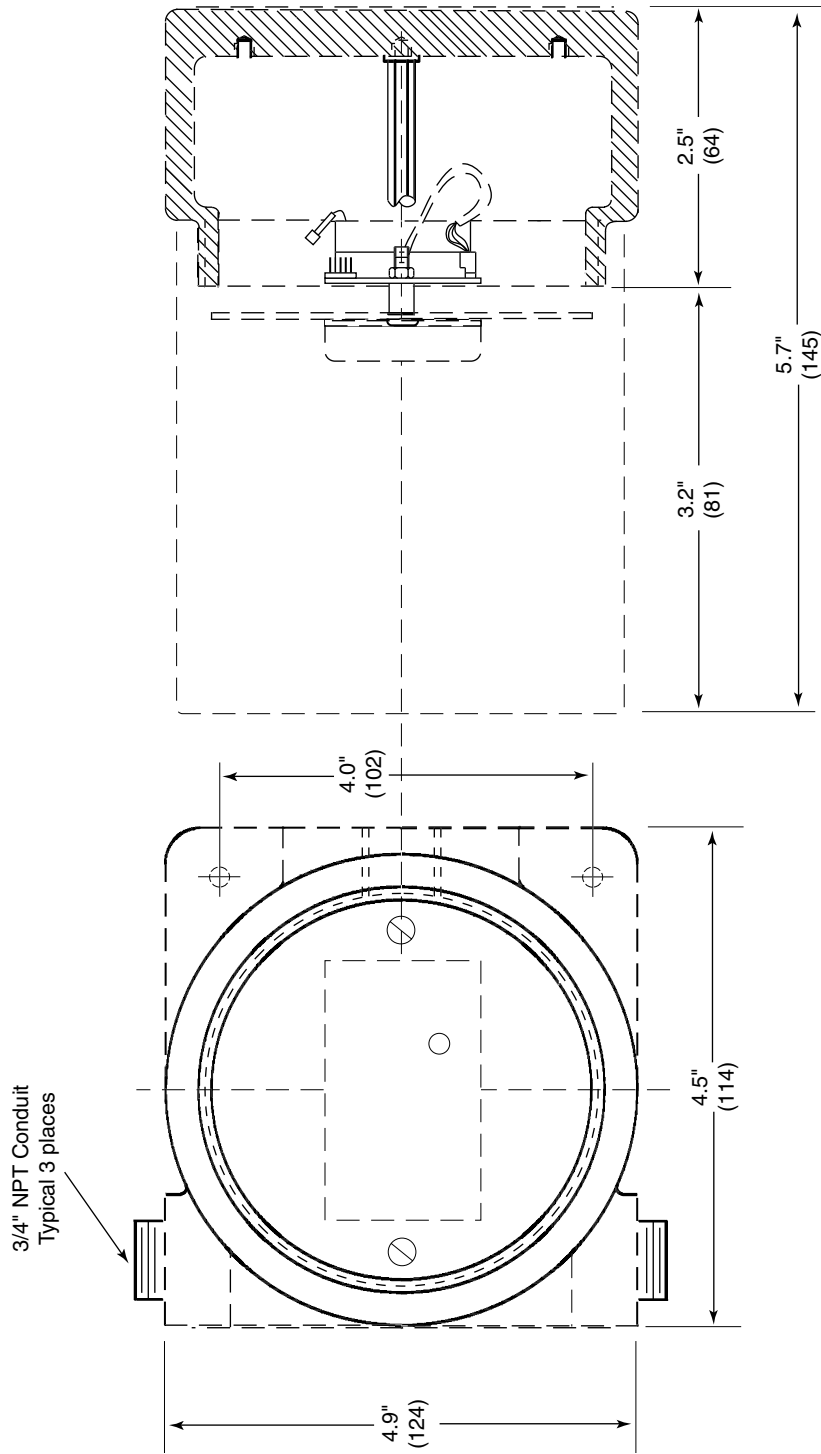


Dimensions — General Purpose Card Reader



Dimensions — Key Fob





Note: Dimensions — Inches to the nearest tenth (millimetres to the nearest whole mm), each independently dimensioned from respective engineering drawings.

Figure 1 — Explosion-Proof Card Reader

Revisions included in SS06044 Issue/Rev. 0.3 (12/05):
Updated Card Reader features. Updated and added North American UL/CUL approvals. Updated the Card Reader Modeling.

The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specifications are currently in effect. Otherwise, the manufacturer assumes no responsibility for the use of specifications which may have been changed and are no longer in effect.

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