



Controller Module WIEGAND READER

The **Impro Wiegand Reader Module (WRM)** is one of the new, 3rd-generation, Access Portal Cluster Modules from Impro Technologies.

This Cluster Extension Module may be plugged into an existing Cluster (or connected to a Cluster Controller Module via S-Bus) to add full Anti Pass-back (APB) control of one door, or Single Entry Access Control of two doors.

The Module has two full-featured Wiegand Reader Terminals with their associated Relays, Door Open Sense and Request To Exit digital inputs.

The Wiegand Reader Module is presently available as a Cluster Module in a black ABS plastic Housing - and a PCB Card version for installation into an IPS (Integrated Power Supply) Housing.

Product specification
CATALOGUE



Key Features

- Cost effective, modular solution that offers:
 - **Scaling** to the size requirement of the application
 - **Expansion** - Quick and convenient (plug-in) should needs increase
 - **Zero System Downtime** - (When plugged into the Cluster Controller)
 - Replacing a WRM only requires downtime on the doors associated with the Expansion Modules that are disconnected (the Tag memory and Transaction Buffer reside in the Cluster Controller).
 - **Hot Swappable** - No need to power down when plugging, unplugging and wiring of modules.
- 3-Year Warranty on Hardware
- A Software utility to upgrade Firmware while installed on-site, without removal of the WRM (WRM must be clustered with its CCM.)
- The WRM Interfaces to the following Impro Readers:
 - Impro Multi-discipline Readers
 - Impro Wiegand Reader
 - Impro Multi-mode Readers
- Each WRM:
 - Offers full Wiegand Support
 - Connects up to two Readers or Third-party Devices
 - Allows Relaxed or Full Anti-passback (APB) access on a single Door or single entry on two Doors
 - Has end-of-line (EOL) Sensing on Door Open Sensor (DOS) Inputs
 - Has eight status LEDs, (two visible with the housing closed) providing concise diagnostic indication
 - Interfaces to Third-party Wiegand Readers as well as to legacy devices, such as the UHF Receiver
- Two 10 A independent single-pole, double-throw (SPDT) Relay Outputs that allow you to interface to door strikes, magnetic locks and other third party devices (for example alarm panels or lighting).
- Four Dry Contact Digital Inputs including two Door Open Sensor (DOS) and two Request to Exit (RTE) Inputs. *(When used in Access Portal Pro or IXP220 Systems, these inputs may be configured for other uses, including: Scanner Inhibit, Alarm interface and Action Request)*

Impro (WRM) Wiegand Reader Module

HML900-0-0-GB-XX HML901-0-0-GB-XX

Physical Specifications

HML900: Wiegand Reader Module in plastic housing

| | |
|--------------------|-------------------|
| Length | : 186 mm (7.3 in) |
| Width | : 99 mm (3.9 in) |
| Height | : 57 mm (2.3 in) |
| Approximate Weight | : 280 g (9.9 oz) |
| Housing Material | : ABS Plastic |
| Colour | : Black |

Environmental Specifications

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|-----------------------|---|
| Operating Temperature | : -25°C to +60°C (-13°F to +140°F) |
| Storage Temperature | : -40°C to +80°C (-40°F to +176°F) |
| Humidity Range | : 0 to 95% relative humidity at +40°C (+104°F) non-condensing |

Approvals

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|-----------------------------------|--|
| Dust & Splash Resistance (XRT910) | : Designed to work in an indoor (dry) environment similar to IP20. The WRM is not sealed against water |
| Drop Endurance | : 1 m (3.28 ft) drop (in packaging). |

Electrical Specifications

Power

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|--|--|
| Input Voltage | : 12 V DC to 15 V DC, polarity sensitive. |
| Power Requirements | Current (mA) Power (W) |
| 12 V DC with no peripherals connected and relays off | : 37 0.44 |
| Power Input Protection | : Reverse polarity, over-voltage and over-current protection are provided on the Terminal. |
| Relay Power Requirements | : An additional ~0.4 W per Relay used |

Communications

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|----------------------------|--|
| Direct (Baud Rate 115 200) | : When the WRM is plugged (side-by-side) directly into a Cluster Controller Module (CCM), or installed as a PCB Card in an IPS housing or 19" Rack |
| S-Bus (Baud Rate: 9600) | : S-Bus allows for the remote installation of the WRM, up to 150m away from its CPU. |
| Module Status | : Slave |

Digital Inputs

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|----------------------------|---|
| Input Type | : 2 Dry-contact inputs with End-of-line (EOL) Sensing and 2 Dry-contact inputs without End-of-line (EOL) Sensing. |
| Detection Resistance Range | : < 2 kΩ |
| Protection Range | : +15 V continuous. |

Relays

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|-------------------------------|--|
| Relay Output | : 2 Relays, Form C, each with NO, COM and NC contacts. |
| Contact Ratings | : 10 A at 28 V DC, 5 A at 220 V AC, 10 A at 120 V AC |
| Operations | : 100 000 Minimum. |
| Power Consumption (per Relay) | : ~ 0.4 W. |

Processor

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| Type | : ARM Cortex M0 operating at 45MHz |
| Total RAM | : 4 K Byte |
| Flash | : 48 K Byte |

Other

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|--------------------|------------------------------------|
| Anti-tamper Switch | : 1 PCB Mounted Micro-lever Switch |
|--------------------|------------------------------------|

Reader Options

Reader 1 Wiegand and Reader 2 Wiegand allow connection to the following hardware:

- ImproX Multi-discipline Readers
- ImproX Multi-mode Remotes
- Wiegand Readers
- ImproX (IR) Infrared Receiver
- ImproX RF 4-channel UHF Receiver

The function is selectable via the DIP-switches.

| | |
|-------------------------|---|
| Power Output | : 12 V DC OR 5 V DC (selectable) at maximum 200 mA. |
| Modes Supported | : Tag + PIN-code or Reason Code. |
| Baud Rate | : 9 600. |
| Data Format | : 8 data bits, no parity, 1 stop bit. |
| Electrical Interface | : TTL Full Duplex. |
| Communications Protocol | : ImproX Proprietary Protocol. |

Factory Defaults

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|-----------|--------------------------|
| Baud Rate | : Factory-set to 38 400. |
| Mode | : Receive (Slave Mode). |

User Interfaces

LED Status and Diagnostic Indicators

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|---------------|--|
| Status LED | : Continuous Red, flashing during fault (Visible through closed housing) |
| Data LED | : Flashes green During Communication (Visible through closed housing) |
| Relay 1 | : Continuous Red on activation of the Relay |
| Relay 2 | : Continuous Red on activation of the Relay |
| Reader 1, RTE | : Continuous Green on detected contact closure |
| Reader 1, DOS | : Continuous Green on detected contact closure |
| Reader 2, RTE | : Continuous Green on detected contact closure |
| Reader 2, DOS | : Continuous Green on detected contact closure |

Related Information

For extra information relating to this product refer to the:

- Wiegand Reader Module Installation Manual (HMW300-0-0-GB-XX)

Ordering Information

Order the Wiegand Reader Module using the following Part Numbers:

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|-----------------|--|
| HMW900-00-GB-XX | : Module in plastic Cluster Module Housing |
| HMW901-00-GB-XX | : PCB Card on base for IPS Housing |

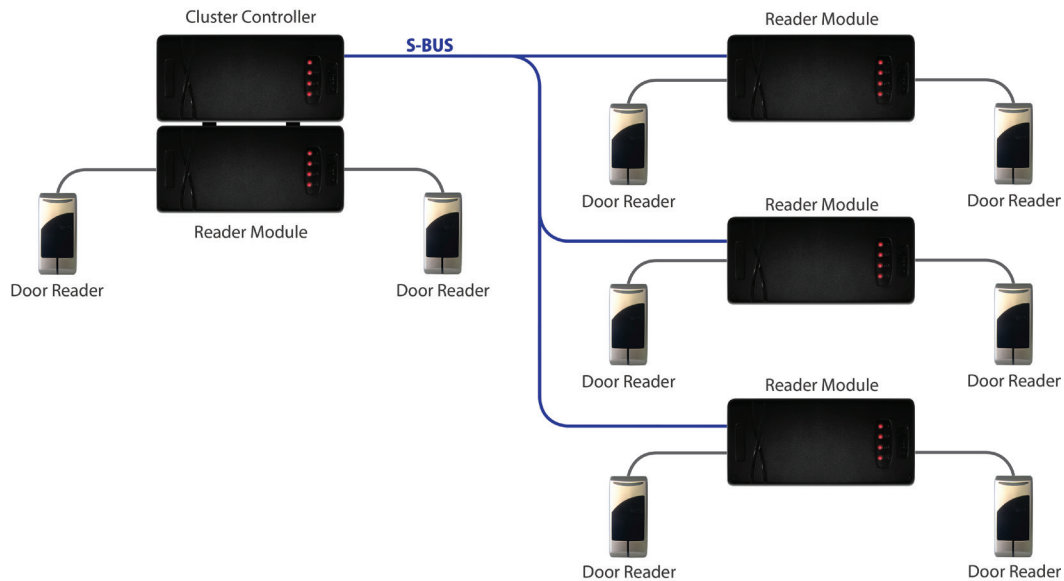


Figure 1 – System layout showing how Wiegand Reader Modules may be connected to a Cluster Controller Module

| | | | |
|--|---------|--------------|---|
| This Product Specification Catalogue applies to the Impro (WRM) Wiegand Reader Module, HMW900-00-GB-01 & HMW901-00-GB-00 (The last two digits of the Impro stock code point to the issue status of the document or product). | | | |
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