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ACCESS CONTROL

Controller Module
WIEGAND READER

Product specification
CATALOGUE

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.

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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

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

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

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

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

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

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

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

Other

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

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

User Interfaces

LED Status and Diagnostic Indicators

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:

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

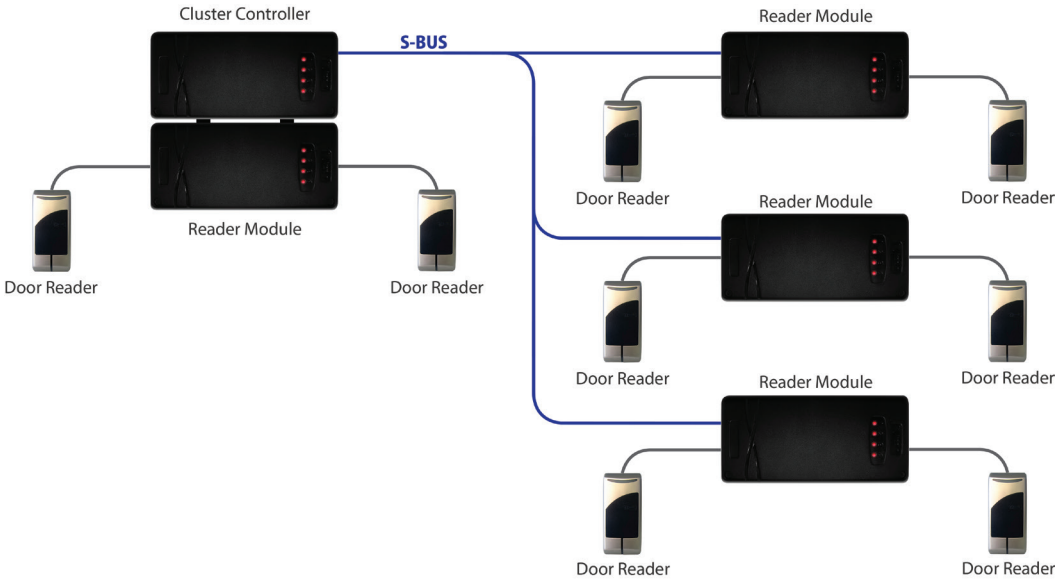

Figure 1 – System layout showing how Wiegand Reader Modules may be connected to a Cluster Controller Module

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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