



# Intelligent Twin Reader TERMINAL

- **Control:** manage entrances such as gates, turnstiles and doors
- **Integration:** uses the globally accepted Wiegand protocol
- **Diagnostics:** 14 LED diagnostic indicators

2 reader ports | 2 relays | 4 digital inputs



## WHO SHOULD USE THE ITRT?

The iTRT was released over a decade ago and has been installed in thousands of sites worldwide - from small premises all the way through to multi-site enterprise sites.

## PRODUCT BENEFITS:

- Operates on older Impro systems, such as the IXP ranges, and the class-leading Access Portal suite
- Offline validation
- User configurable relay functions
- Four digital inputs for tasks such as door open sensing as well as scanner inhibit, alarm interface and more
- 14 diagnostic LEDs
- Anti-tamper switch
- 32-bit ARM7 processor
- Available in plastic housing or metal enclosure

The Intelligent Twin Reader Terminal (iTRT) works on both the IXP and Access Portal ranges of access control systems.

The unit is compatible with a variety of Impro hardware, including the multi-discipline and Wiegand reader ranges, due to full Wiegand support.

This also enables third-party Wiegand readers to be connected to the iTRT.

Each iTRT can be used with two readers and allows for relaxed and full anti-passback (APB) access on a single door, or single entry on two doors.

For sites requiring extended range the iTRT can be connected to the Impro infrared receiver and RF four-channel receivers.

## Inputs and outputs

Each device comes standard with four digital inputs, including two Door Open Sensor (DOS) and two Request To Exit (REX) inputs.

Added security is assured through end-of-line (EOL) sensing on the Door Open Sensor (DOS) inputs.

Meanwhile, the two 10A independent single-pole, double-throw (SPDT) relay outputs allow for interfacing to door strikes, magnetic locks and other third party devices such as alarm panels or lighting.

## Capacity

The iTRT is able to store up to 10,000 credentials and 10,000 buffered transactions per channel, whilst also providing offline validation.

## Diagnostic support

The 14 LED diagnostic indicators provide a comprehensive interface, while the software utility tool enables the iTRT to be upgraded while installed on site with zero down-time.

## Product options

The iTRT is available in two housing options - an ABS plastic housing or a metal enclosure with built-in IPS (integrated power supply).

## Communication

Communication to the controller can be via ethernet or RS485.

# Specifications

## INTELLIGENT TWIN READER TERMINAL (iTRT)

| Model name                                     | iTRT plastic   | iTRT metal housing                       |
|--|--|--|
| <b>Product description</b>                     | iTRT in plastic housing  | iTRT in metal housing with IPS           |
| <b>Part number</b>                             | XRT920   | IPS921                                   |
| <b>Colour</b>                                  | Black  | Black                                    |
| <b>Dimensions (d-w-h)</b>                      | 12.8cm x 16.6cm x 5.5cm [5" x 7" x 2"]   | 30.5cm x 29.5cm x 7.7cm [12" x 11" x 3"] |
| <b>Approximate product weight</b>              | 314g [11 oz]   | 3kg [7lb]                                |
| <b>Material</b>                                | ABS  | Mild steel                               |
| Electrical specifications                      |  |  |
| <b>Input voltage</b>                           | 10 V DC nominal, 30 V DC max, polarity sensitive   |  |
| <b>Power requirements at 12 VDC relays off</b> | 75 mA current<br>0.90 W power  |  |
| <b>Relay power requirements at 12 VDC</b>      | An additional ~0.4 W per relay used  |  |
| <b>Power input protection</b>                  | Reverse polarity, over-voltage and over-current protection   |  |
| Wiegand port specifications                    |  |  |
|  | Minimum  | Maximum                                  |
| <b>Pulse width range</b>                       | 21 uS  | 8 mS                                     |
| <b>Pulse interval range</b>                    | 42 uS  | 19 mS                                    |
| Input specifications                           |  |  |
| <b>Digital inputs</b>                          | Four   |  |
| <b>Input type</b>                              | 2 dry contact inputs with end-of-line (EOL) sensing and 2 dry contact inputs without end-of-line (EOL) sensing |  |
| Output specifications                          |  |  |
| <b>Number of relay outputs</b>                 | Two  |  |
| <b>Output type</b>                             | Relay output: 2x independent, single-pole, double-throw (SPDT) dry contact relays                              |  |
| <b>Relay contacts</b>                          | NO • COM • NC  |  |
| <b>Contact ratings</b>                         | 10 A at 28 V DC<br>5 A at 220 V AC<br>10 A at 120 V AC<br><br>100,000 operations minimum                       |  |
| Environmental specifications                   |  |  |
| <b>Operating temperature</b>                   | -25° to +60° C [-13° to +140° F]   |  |
| <b>Storage temperature</b>                     | -40° to +80° C [-40° to +176° F]   |  |
| <b>Operating humidity</b>                      | 0 to 95% relative humidity non-condensing (at +40° C / +104° F)  |  |
| <b>Environmental rating</b>                    | IP40   | IP20 in closed IPS box                   |
| Certifications                                 |  |  |
| <b>CE (EU)</b>                                 | ✓  |  |
| <b>RoHS</b>                                    | ✓  |  |
| <b>SABS (RSA)</b>                              | ✓  |  |



**Impro Technologies**  
has over 30 years' experience  
in the access control industry