APPLICATION NOTE # 26

Comparing the 5455/8 PROXPRO® II PROXIMITY READER
With the 5355 PROXPRO® PROXIMITY READER

General

The ProxPro II is a general-purpose, medium-range proximity reader that takes advantage of recent advances in RF circuit design. It is compatible with all HID 125 kHz proximity cards, tags and keyfobs, except for the ProxPass active tag, and offers standard or long format capabilities. The design has been field-proven and tested, and is highly reliable.

The ProxPro II is offered in two models: the 5455, which provides Wiegand output, and the 5458, which provides Clock and Data output.

While the 5455 ProxPro II can be used for most applications now served by the 5355 ProxPro, the ProxPro offers some unique features for special applications, and will continue to be available for customers who need those features.

Use the chart below to determine which reader works best with your access control hardware and field installation conditions.

Feature	ProxPro	ProxPro II
Multilingual installation manual	No	Yes
Glass mounting kit (optional)	Yes	Yes
Supply Voltages	12V and 24V	5V and 12V
Voltage Range min/max	10 / 28.5VDC	5 / 16VDC
Current Draw avg/peak	100 / 120 mA	25 / 125 mA
Read Range at 12VDC (Proxcard^{fi} II/ISOProx^{fi} II)	8" (20 cm) / 7" (17 cm)	9" (22 cm) / 8" (20cm)
IP Rating	IP55	IP65
European/Asian mounting holes	No	Yes (vertical)
Weatherproofing method	Rubber O ring	Fully potted electronics
Cover installation method	4 screws, then snap in bezel	Snap on cover
Custom molded logo	No	Available (one-time tooling charge)
Termination method	Screw Terminals	Wire Pigtail
Metal compensation	Jumper	No, but provides equivalent performance on metal
LED/Beeper configuration	DIP Switch or Command Card	Command Card
Custom Firmware	Socketed Processor, change part	Order from factory
Tamper Switch	Yes	No, but electronics are potted to prevent tampering
Keypad Version available	Yes	No
Wiegand Pullup Select 5 or 12V	DIP Switch	No
Serial Version available	Yes	No

Basic Construction

The ProxPro II has a two-piece Lexan® housing, consisting of an epoxy-potted back plate containing the electronics and antenna, and a cover that snaps over the back plate. The epoxy potting provides a weather-proof seal for the electronics and the wire pigtail that exits the unit from the back.

The ProxPro has a three-piece Lexan housing, consisting of a back plate containing the electronics and antenna, a cover that attaches with four screws, and a faceplate, which snaps into place. The cover is sealed to the back plate with an O-ring, and a pressure fitting is provided to seal the customer-supplied data cable to the back of the unit. A terminal strip is provided inside the housing for field wire connections

The ProxPro II's two-piece housing is easier to install, and the potting provides superior weather resistance. Some installers will prefer the ProxPro's terminal strip connector to the wire pigtail.

Power Input and Current Consumption

The ProxPro II requires a minimum of 5VDC for operation and will accept up to 16 VDC input. It draws an average of 35 mA at 12VDC and has a peak current draw of 125 mA.

The ProxPro requires a minimum of 9VDC for operation, and will accept up to 28.5VDC input. It draws an average of 100mA at 12VDC and has a peak current draw of 120 mA.

Many installers will prefer the lower average current draw and 5VDC operation of the ProxPro II. Installers who use 24VDC supplies for heavy-duty magnetic locks may prefer the ProxPro.

Read Range

The ProxPro II offers an additional inch of read range, when compared to the ProxPro at 12VDC. Although it does not contain a metal tuning jumper like ProxPro, when mounted on metal, ProxPro II gets comparable read range to the ProxPro.

The ProxPro offers superior read range at 24VDC because it uses unregulated power for the antenna drive circuit, so that the read range increases with input voltage, while the ProxPro II uses regulated power for the antenna drive circuit so that read range is consistent regardless of input voltage.

Most installers will choose the ProxPro II for the best read range. 24VDC users will prefer the ProxPro.

Field Configurability

The ProxPro II is field configurable by using configuration cards. All the basic LED and beeper combinations can be achieved, and a Wiegand output reader can even be converted to or from Clock and Data.

The ProxPro is configurable in the field using an on-board DIP switch. The DIP switch allows the same options as the configuration cards, as well as selection of 5V or 12 V Wiegand pull-up voltages.

While both models can be ordered pre-configured from the factory in any configuration required, some installers will prefer the ProxPro, because they can order a generic reader and set it up as required with DIP switches. Installers who are connecting to 12-Volt panels, such as some CASI panels, will require the ProxPro. ProxPro II can also be field-configured, but installers must order the proper configuration cards from tech support. .

Custom Firmware

ProxPro II is available with custom firmware for backward compatability with older HID cards that required card number range offsets to be done in the reader firmware. These custom firmware versions must be special ordered from the factory and cannot be changed in the field because the processor is soldered in place, and the electronics are potted.

ProxPro has a socketed processor. Some installers order generic readers and additional processors with custom firmware, so that they can change firmware in the field when required.

Installers who frequently have custom firmware requirements may prefer the ProxPro, or they can custom order the ProxPro II for their special requirements.

Serial Output and Keypad Models

These model variations are not offered in the ProxPro II. Customers requiring RS 232/422 output, and/or PIN keypads must order the appropriate ProxPro model.

European/Asian Mounting Holes

ProxPro II offers slotted holes for European and Asian J-boxes in the vertical orientation only.

ProxPro only offers mounting holes for U.S. j-boxes.

European and Asian installers will prefer the ProxPro II, although they may need to install an adapter if their j-box only has horizontally oriented holes.

Housing Colors

ProxPro II is offered in Grey, Beige, White and Black. The snap-on design allows the housing color to be changed in the field

ProxPro is offered in Grey and Beige.

Installers who need a wider variety of colors will choose ProxPro II.

Tamper Switch

ProxPro II does not include a tamper switch

ProxPro includes a tamper switch that actuates if the cover is removed from the back plate. It also has a jumper allowing either an NC or NO switch to be used.

Customers requiring a tamper switch may prefer ProxPro, although it is relatively easy to mount an aftermarket magnetic reed switch on the back of the ProxPro II.

Conclusion

Many current ProxPro users will switch to the new ProxPro II because of its advantages, or because of its more favorable pricing. Some ProxPro users will stay with the ProxPro, because they are comfortable with the product, or because they need some of its unique features or configurations for special applications.