ESSEX ELECTRONICS INCORPORATED
1-800-KEYLESS keyless.com

RII 72
PIEZOPROX SPECIFICATIONS

Part Number (s):	PPH-103-SN, PPH-103-BN, PPH-103-KN, PPH-163-SN, PPH-163-BN, PPH-163-KN, PPH-983-SN, PPH-983-BN, PPH-983-KN, PPH-PRO (Proximity Reader Only)
Proximity Output:	Wiegand Open Format (All Models)
Keypad Output:	26 Bit Wiegand (PPH-103-SN, PPH-103-BN, PPH-103-KN) 8 Bit Word (PPH-163-SN, PPH-163-BN, PPH-163-KN) Serial ASCII (PPH-983-SN, PPH-983-BN, PPH-983-KN)
Voltage (s):	5 VDC, +/- 0.1V (65mA with Illumination), (30mA without Illumination) 12 VDC, +/- 3.0V (70mA with Illumination), (30mA without Illumination)
Temperature:	-40 C to +70 C (-40 F to +160 F)

This PiezoProx reader is selectable for 5 or 12 Volts. There are two pins next to the connector. A jumper plug is not installed on the pins. This is the default setting for 12 Volt operation. If 5 Volt operation is required, locate the jumper plug in the hardware kit and install on both pins. DATA 1 and DATA 0 signals are open collector outputs with 2.2K pull-ups to the internal +5V. The data is sent at 1 msec per bit with a pulse duration of 50 usec. An annunciator beeps with each key press and each prox activation. The PiezoProx is illuminated with Blue LEDs. If no illumination is desired (blue LEDs), cut the blue wire loop to turn it OFF. An output is generated with each key press which can be used to drive a CCTV or Security light. Available through the blue wire (see connector wiring), this is an open collector output capable of sinking 1/4 A, 30 second on time.

The following output is sent each time the proximity is activated with a 26 Bit Wiegand card:

P SSSSSSSS NNNNNNNNNNNNNNNN P

NOTE: Prox reader will send any Wiegand format presented to it. BIT 1 9 10 25 26

BIT 1 is an even parity for the following 12 bits. The sum of bits 1-13 is even. BITS 2-9 are the SITE CODE. BITS 10-25. This is the number (PIN) encoded in the prox card or key fob. Leading 0's are added as required. Bit 10 is the most significant bit. BIT 26 is an odd parity over the previous 12 bits. The sum of bits 14-26 is odd.

Example: A key with a site code of 004 and a PIN of 123 will generate the following data stream:

1 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 0 1 1 1

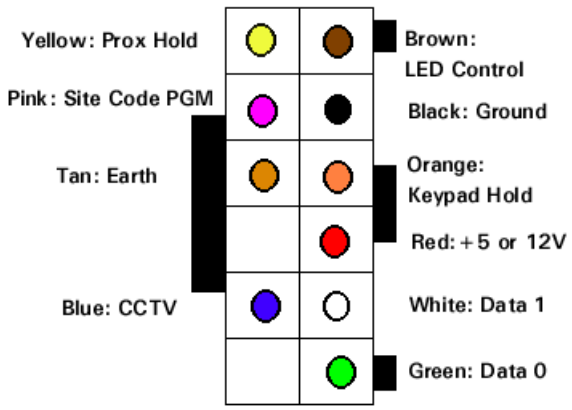
YELLOW – When the Prox Hold line, YELLOW wire, is pulled "low", prox read is stored in the buffer. When the Prox Hold line is released to a logic "high", the buffered code is sent.

PINK – for PPH-103 see RII 11B, PPH-163 see RII 23B, PPH-983 see RII 67.

BLUE – Pressing any position on the Keypad will generate a 30 second 0.25 amp intermittent duty grounding output.

ORANGE – PPH-103 series – When ORANGE wire is pulled "low", codes entered on the keypad are stored in the buffer, when it is released to a logic "high", the buffered code is sent. PPH-163 series – Pull the ORANGE wire "low".

BROWN – When the BROWN wire is pulled "low", green LED will be on and red LED off. When it goes "high", green LED will be off and red LED on.



PPH-103 Series (ONLY)

Connector Wiring	**Connector P/N MWH-39**
Red – Input Voltage	**Pink – Site Code PGM**
Black – Ground	**Blue – CCTV**
Green – Data 0	**Orange – Keypad Hold Line**
White – Data 1	**Tan – Case Ground**
Brown – LED Control	**Yellow – Proximity Hold Line**

Installation Instructions:

1) Set the jumper for the proper input voltage (5 or 12). Jumper is in Hardware Kit.
2) The PPH-PRO will mount to a J-box using the 6-32 X 1" Pan Head screws or use the 6 X 1" Wood screws with or without the plastic anchors for wall mounting (The lower one will be covered by the label).
3) The Keypad will mount to the housing using the 6-32 X 5/8" Flat Head screws which are then covered by the labels.

PPH-103-SN, PPH-103-BN, PPH-103-KN, PPH-983-SN, PPH-983-BN, PPH-983-KN <u>ONLY:</u>

4) *Option 1*:
   Use harness marked "MWH-39" for PiezoProx to Controller connection via one port.
   Plug Keypad onto the harness that is part of the PPH-PRO then set the Keypad for 5V.

   Option2:
   Use separate harnesses for PiezoProx to Controller connection via two ports.
   Use harness marked "MWH-38A" for Keypad to Controller connection to one port.
   Use harness marked "MWH-39" for PiezoProx to Controller connection via the second port.

PPH-163-SN, PPH-163-BN, PPH-163-KN <u>ONLY:</u>

5) Option 1:
   Use harness marked "MWH-39" for PiezoProx to Controller connection via one port.
   Plug Keypad onto the harness that is part of the PPH-PRO then set the Keypad for 5V.
   PPH-163 series – Pull the ORANGE wire "low" (Connect ORANGE to BLACK).

   Option2:
   Use separate harnesses for PiezoProx to Controller connection via two ports.
   Use harness marked "MWH-38" for Keypad to Controller connection to one port.
   Use harness marked "MWH-39" for PiezoProx to Controller connection via the second port.