Honeywell

Touchpoint Plus 19" Rack
Quick Start Guide
English

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1   Information

Please read this entire guide before installing the Touchpoint Plus 19'' Rack, as it contains information that is essential for your safety and for the correct operation of the Touchpoint Plus 19'' Rack.

Please go to www.honeywellanalytics.com to download the Technical Handbook for the Touchpoint Plus, which contains full instructions.

1.1   Safety

Incorrect setup, maintenance, operation or modification of the Touchpoint Plus 19'' Rack gas detection system or its installation may constitute a serious hazard to the health and safety of personnel and their environment. It is therefore imperative that the contents of this guide are thoroughly understood by the user(s) who are and will be responsible for the installation, operating and servicing of this product.

1.2   Conditions of Use

This Touchpoint Plus 19'' Rack equipment should only be installed and operated under the following circumstances:

- By properly trained personnel.
- Under approved conditions.
- With due authorisation.
- Using approved maintenance and servicing procedures.

1.3   Packaging list

Please check that your package was undamaged, and that you have received the following:

- Touchpoint Plus 19'' Rack
- Quick start guide (This document)

2   Safety Warnings

- Installation must be in accordance with the recognized standards of the appropriate authority in the country concerned. For Europe see EN 60079-14 and EN 60079-29-2.
- Installation must be in accordance with the recognized standards of the appropriate authority in the country concerned. Please refer to local, national and company regulations.
- All cabling must be appropriately rated and approved in accordance with local, national and company regulations. Additionally, cabling must satisfy requirements defined in the manuals of connected field devices, in particular if the field device is certified for use in a hazardous location.
- The Touchpoint Plus 19'' Rack input voltage supply must include overcurrent protection.
- Do not operate the Touchpoint Plus 19'' Rack outside of its technical specification (Chapter 6 of this document).
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Touchpoint Plus 19'' Rack must not be operated in oxygen enriched atmospheres, i.e. greater than 25% v/v oxygen.

3   General Introduction

The Touchpoint Plus 19'' Rack is an entry level (or upgrade) touch-screen digital controller that can contain up to eight inputs of the user's choice.

The Touchpoint Plus 19'' Rack can also be expanded to a further rack to contain a further eight inputs of the user's choice. Please note that the expansion unit has no Motherboard or Graphical User Interface fitted.

The input types available are mA or mV analogue inputs specifically for gas detector devices. The Touchpoint Plus 19'' Rack has up to 24 relay outputs that can be programmed with basic logic to control various outputs. The Touchpoint Plus 19'' Rack can also provide 16 isolated mA loop outputs.

Figure 1 shows the basic layout of the Touchpoint Plus 19'' Rack Controller:
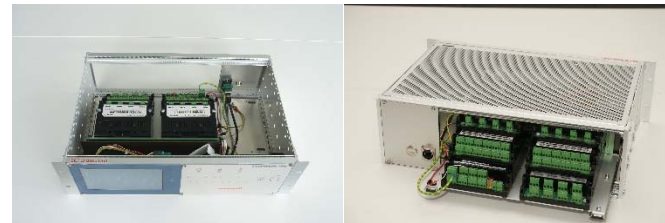

Figure 1.   Basic System Layout

4   Installation

4.1   Touchpoint Plus 19'' 3U Rack installation

If using a 19" Rack, the OEM or installer must ensure the installation is at least IP20 / Type 1 / Class 1 (grounded) to mitigate the risk of electrical shock.

The 3U high front access racks are designed for mounting in standard 19'' (483mm) wide mounting frames. These are fitted as follows:

1) Insert the rack into the 19'' mounting frame and secure using M6 or similar bolts through the four mounting holes located on the front flange plates.

2) Prepare and connect the cable ends to the modules. It is good practice to keep sensor cabling separate from the other wiring.

3) Ensure that the rack is correctly earthed by connecting a minimum 6mm earth cable to the protective earth stud located on the rear of the rack.

<u>CAUTION</u>

Do not apply power to the Touchpoint Plus 19'' Rack until the commissioning procedure has been fully read and understood. Please refer to the Technical Handbook of this product for more information.

5   Wiring and Connections

5.1   Power Supply Connection

The Touchpoint Plus 19'' Rack systems are factory set to operate at a voltage of 18 to 32 VDC.

Every Unit has a typical peak power consumption of max 150W (including field devices) and max 210W with expansion unit.

Note: Remote sensors may need their own power supplies if they exceed 15W power consumption.

5.2   DC Power Supply

Touchpoint Plus 19'' Rack controller must be powered directly from a 24VDC protected & regulated power supply.

All installations, including cabinets, racks and remote units, must be connected to protected earth, and must be capable of staying earthed (grounded) when the power supply is interrupted.

5.3   Field Device Cables

Field device cabling should be appropriate to the zone classification, and in accordance with the device manufacturer's recommendations. Refer to local and national regulations where appropriate, and to the device user manual.

All sensor field cables must be screened and earthed (grounded) in order to:

- Ensure correct operation of the system
- Avoid spurious signals
- Meet European Standards for RFI and EMC.

Ensure that the maximum loop resistance is not exceeded, as specified by the device manufacturer.

Take account of voltage drops due to line resistance to ensure that the correct voltage level is present at the field device, as specified by the device manufacturer.

The I/O modules will accept wire sizes to a maximum of 2.5 mm².

5.4   Main Module Connections

The Main Module controls the Touchpoint Plus 19'' Rack and its ancillary components.

Terminal	Label	Channel	Remarks
1	+DC	Power	+18 – 32 V
2	–DC		-V Return
3	—		Earth / Ground
4	NC	System State Relay 1	Fig. 9
5	COM		Fig. 9
6	NO		Fig. 9
7	NC	System State Relay 2	Fig. 9
8	COM		Fig. 9
9	NO		Fig. 9
10	NC	System State Relay 3	Fig. 9
11	COM		Fig. 9
12	NO		Fig. 9
13	+24 VDC	Visual Output	Fig. 4
14	VIS		Fig. 4
15	Unused		—
16	A1	External Alarms	Fig. 4
17	A2		Fig. 4
18	F		Fig. 4
19	+24 VDC	External Alarm Power	Fig. 4
20	+24 VDC		Fig. 4
21	+24 VDC		Fig. 4
22	3.3 V	Remote COM/Reset/Inhibit	Fig. 10
23	R1		Fig. 10
24	R2		Fig. 10
25	CAN_H	CAN	Expansion Unit Connection
26	CAN_L		Expansion Unit Connection

Table 1.   Main Module Connections

5.5   mA Input Module Connections

This is an optional module for providing up to eight mA loop inputs. (Ch.5.12)

Terminal	Label	Input	Field Device
1	+Ve	mA input 1	+ 24 VDC
2	–Ve		0 VDC
3	Sig		4 – 20 mA signal
4	+Ve	mA input 2	+ 24 VDC
5	–Ve		0 VDC
6	Sig		4 – 20 mA signal
7	+Ve	mA input 3	+ 24 VDC
8	–Ve		0 VDC
9	Sig		4 – 20 mA signal
10	+Ve	mA input 4	+ 24 VDC
11	–Ve		0 VDC
12	Sig		4 – 20 mA signal
13	+Ve	mA input 5	+ 24 VDC
14	–Ve		0 VDC
15	Sig		4 – 20 mA signal
16	+Ve	mA input 6	+ 24 VDC
17	–Ve		0 VDC
18	Sig		4 – 20 mA signal
19	+Ve	mA Input 7	+ 24 VDC
20	–Ve		0 VDC
21	Sig		4 – 20 mA signal
22	+Ve	mA input 8	+ 24 VDC
23	–Ve		0 VDC
24	Sig		4 – 20 mA signal

Table 2.   mA Input Module Connections

5.6   mV Input Module Connections

This is an optional module for mV sensor inputs. (Ch.5.12)

Terminal	Label	Input	Field Device
1	S	mV input 1	Sensitive (+)
2	01		Signal
3	NS		Sensitive (–)
4	S	mV input 2	Sensitive (+)
5	01		Signal
6	NS		Sensitive (–)
7	S	mV input 3	Sensitive (+)
8	01		Signal
9	NS		Sensitive (–)
10	S	mV input 4	Sensitive (+)
11	01		Signal
12	NS		Sensitive (–)
13	S	mV input 5	Sensitive (+)
14	01		Signal
15	NS		Sensitive (–)
16	S	mV input 6	Sensitive (+)
17	01		Signal
18	NS		Sensitive (–)
19	S	mV input 7	Sensitive (+)
20	01		Signal
21	NS		Sensitive (–)
22	S	mV input 8	Sensitive (+)
23	01		Signal
24	NS		Sensitive (–)

Table 3.   mV Input Module Connections

5.7 Dual Input Module

This is an optional module for providing 2 or 4 x mA Loop + 2 or 4 x mV inputs.

Terminal	Label	Input	Field Device
1, 7, 4, 10	+Ve	mA Inputs 1 – 4	+ 24 VDC
2, 5, 8, 11	–Ve		0 VDC
3, 6, 9, 12	Sig		4 – 20 mA signal
13, 16, 19, 22	S	mV Inputs 1 – 4	Sensitive (+)
14, 17, 20, 23	01		Signal
15, 18, 21, 24	NS		Sensitive (–)

5.8 Modbus RTU Option

This is an option that uses Modbus RTU (RS-485) control protocols. Full details are given in the Technical Handbook.

5.9 Relay Output Module Connections*

This is an optional module providing 12 relay outputs. (Ch.5.12)

*Max. switching voltage 30VDC or 45 VAC.

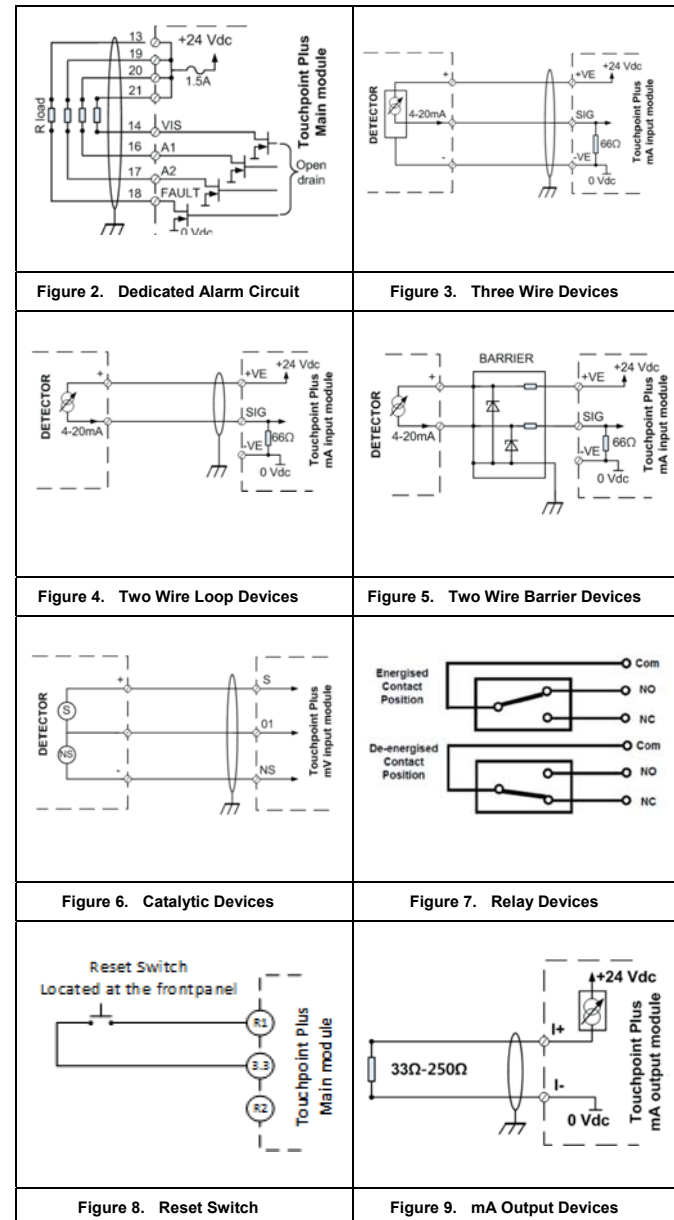| Terminal	Label	Output
1	NC	Relay 1
2	COM	
3	NO	
4	NC	Relay 2
5	COM	
6	NO	
7	NC	Relay 3
8	COM	
9	NO	
10	NC	Relay 4
11	COM	
12	NO	
13	NC	Relay 5
14	COM	
15	NO	
16	NC	Relay 6
17	COM	
18	NO	
19	NC	Relay 7
20	COM	
21	NO	
22	NC	Relay 8
23	COM	
24	NO	
25	NC	Relay 9
26	COM	
27	NO	
28	NC	Relay 10
29	COM	
30	NO	
31	NC	Relay 11
32	COM	
33	NO	
34	NC	Relay 12
35	COM	
36	NO	

Table 4. Relay Output Module Connections

5.10 mA Output Module

This is an optional module for providing isolation mA loop output (Ch.5.12).

Terminal	Label	Output
1	I+	mA Out 1
2	I–	
3	I+	mA Out 2
4	I–	
5	I+	mA Out 3
6	I–	
7	I+	mA Out 4
8	I–	

Table 5. mA Output Module Connections

5.11 Field Device Circuit Diagrams

Figure 2. Dedicated Alarm Circuit

Figure 3. Three Wire Devices

Figure 4. Two Wire Loop Devices

Figure 5. Two Wire Barrier Devices

Figure 6. Catalytic Devices

Figure 7. Relay Devices

Figure 8. Reset Switch

Figure 9. mA Output Devices

CAUTION

Do not remove the orange terminal inclusive the capacitors from Touchpoint Plus 19'' Rack.

5.12 System Reset

The reset button is located on the front panel. This button is by default connected to the remote reset input option on the main module. See figure 9. That input will provide a non-password protected reset function.

6 Technical Specifications

General Specification	
Capacity	Up to 8 channels with Controller unit, up to 16 channels with expansion unit
Type of Inputs	2 or 3 wires, mA, mV, max. 15W per channel, max 40W total (with dedicated A/V drive) / 68W total (without dedicated A/V drive)
Housing	19'' rack, 3U
Dimensions 19'' 3U Rack (H x W x D)	435 mm x 305 mm x 135 mm
Housing Material	Aluminum
Earthing Points	M6
Weight	5.9 kg Controller unit, 5.8 kg expansion unit
User Interface (UI) – Controller ONLY	
Display	7'' colour LCD touchscreen, Graphic User Interface
Visual Indicators	3 LEDs for master indicators. LED for each channel. Green: Normal; Yellow: Fault: Inhibit; Red: Alarm
Audible Alarm	70 dB @ 1 metre (40 ins)
Button	One alarm mute and reset membrane button One additional system reset membrane button
Languages	Selectable English, Chinese (Simplified), Dutch, French, German, Italian, Portuguese, Russian, Spanish
Power Supply*	
Power DC	18 to 32 VDC (+/-10%) Typical 24VDC
Power Consumption	Max 150W (including field devices), 210W max with expansion unit
Environmental	
Operating Temperature	–5 to +55 ° continuous operation
Storage Temperature	Instrument –25 to +55 °C
Humidity Range	10– 90 %RH non-condensing
Ingress Protection	at least IP20 / Type 1 / Class 1 (grounded)
Available I/O Modules	
4-20mA Input	2 or 3 wire, SOURCE. 2/4/8 channel modules, 10/12/16 with expansion unit
mV Input	Catalytic type flammable gas detectors (Honeywell models). 2/4/8 channel modules, 10/12/16 with expansion unit
Dual Input	2 channel mA + 2 channel mV module or 4 channel mA + 4 channel mV module
4–20 mA Output	4 or 8 isolated repeated outputs, 0-22mA, 12 or 16 with expansion unit. (4-20 mA = 0-100 %FSD)
Relay Output	12 or 24 relay outputs, NO/C/NC changeover, 1.7A@30VDCmax to 45VAC max user configurable - energised/de-energised, latching/non latching, time delay
Common Inputs	Remote inhibit
Common Outputs	Four powered A/V outputs for alarms and fault, three common alarm outputs
Approvals	
Electromagnetic Compatibility and Electrical Safety	EMC/RFI (EN 50270:2015) LVD (EN 61010-1:2010)
Performance**	Designed to meet - EN 50271:2010; EN 60079-29-1:2007; EN 45544-1 /-2/-3:2015
Safety Integration	IEC/EN 61508:2010 and EN 50402:2005+A1:2008 SIL2 certification
Others	
Data Logging	Configuration backups and event / TWA logging onto SD Card. Can be transferred to PC or Printer (.bin and .csv)
Communication	Optional: RS 485 Modbus RTU*** or Modbus TCP+Web monitoring***

* Basic and expansion units each require a power supply
** Contact Honeywell Analytics for availability
*** Not available in Expansion Unit

7 Default Password

The default access password for all levels is TPPL, but it is the user's responsibility to immediately change the passwords as to avoid unauthorized access. Full instructions are contained in the Technical Handbook, and Honeywell will not accept any liability caused by failing to follow these instructions.

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