

Touchpoint Plus Quick Start Guide English

1 Information

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

1.1 Safety

Incorrect setup, maintenance, operation or modification of the Touchpoint Plus 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 chapter are thoroughly understood by everyone who has access to the gas and fire detection system or its associated equipment.

1.2 Conditions of Use

This Touchpoint Plus equipment should only be 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

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

- Touchpoint Plus
- Allen Key
- Quick start guide (this document)

Go to www.honeywellanalytics.com to download the Technical Handbook, which contains full install instructions.

2 General Introduction

The Touchpoint Plus is an entry level (or upgrade) touch-screen digital controller for light industrial and commercial gas detection installations.

It has eight inputs, with eight inputs available through an expansion unit.

It can handle a wide range of milliamp, millivolt and catalytic sensors and analogue inputs, and it can control various outputs such as audible and visible signals and solenoid valves.

The cabinets are constructed from high-impact plastic, are rated IP65, and have fully-sealed, easy opening access. They are supplied with a wall mount bracket or can be directly mounted to any solid vertical surface or rack. Cable entry is via entry glands on the lower side.

Figure 1 shows the basic layout of the Touchpoint Plus Controller:

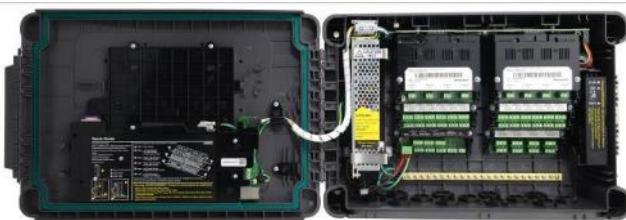


Figure 1. Basic System Layout

3 Installation

3.1 Mount the Unit Directly to the Wall

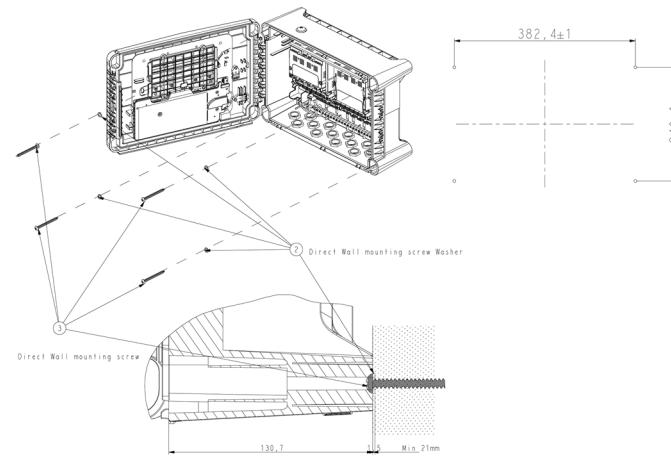


Figure 2. Wall Mounting Points

3.1.1 Fixings Required

Screw x 4; corrosion resistant, sized according to the fixing surface:

- Screw Head dia. < 14 mm (12.1 mm recommended)
- Screw Body dia. < 7.5 mm (6.15 mm recommended)
- Screw Length > 76.2 mm (3 in) (If using concrete anchor, > 55 mm + anchor depth)

Flat Washer x 4; corrosion resistant, 19.05 mm max. OD, to fit the screws above.

3.2 Mount the Unit Using the Optional Wall Bracket

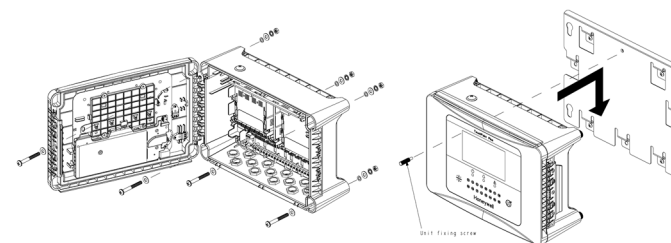


Figure 3. Wall Mounting Options

Refer to the wall mount bracket instructions (part number: TPPLOWMB).

4 Wiring and Connections

4.1 Power Connection

The Touchpoint Plus systems are factory set to operate at a switchable voltage of 110/220 VAC, on a single phase, 50 to 60 Hz supply. They can also be wired to DC 18 – 32 V.

Every Unit has a typical peak power consumption of less than 105W, and must be directly connected to supplies via a Main Isolator Switch that leaves protective earth (ground) permanently connected.

The circuit should incorporate a Residual Current Device or Residual Current Circuit Breaker (RCD or RCCB).

Touchpoint Plus systems are not certified for connection to domestic power supplies.

4.2 Expansion Power Module

TPPL has the option to add an expansion unit that has the same power equipment and modules as the base unit except that it has no Motherboard or GUI. See Figure 5 for wiring details.

4.3 AC Power Supply

To confirm or alter the pre-set operating voltage, open the system front cover, locate the SMPS RS-150-24 transformer and, if required, change the voltage selector inserting a screwdriver at the point shown by the Voltage Selector label below:



Figure 4. Switched Mode Power Supply (SMPS) Connections

Note: Mains Earth (Ground) must only be connected to the Protective Earth (Ground) rail, and not to the SMPS.

Regional power cable wires are coloured in accordance with the following code:

Wire	Europe	Canada	USA	Asia
Protective Earth (Ground)	Green + Yellow	Green	Green	Green
Isolated Earth (Ground)	—	Green	Green + Yellow	—
Neutral	Blue	White	White	Black
Live	Brown	Red or Black	Blue, Red, or Black	Red, Yellow, or Blue

Table 1. Regional Power Cable Colours

Before making any electrical connections or changes ensure:

- The mains supply isolator switch and backup battery switch are in the Off position.
- The system is set up to operate at the correct voltage.

Refer to the User Manual for further information on system electrical specifications and power requirements.

Note 1: Input voltage of less than 24 VDC will fail to charge the backup battery, and the battery will discharge over time.

Note 2: Remote sensors may need their own power supplies if they exceed 15W power consumption.

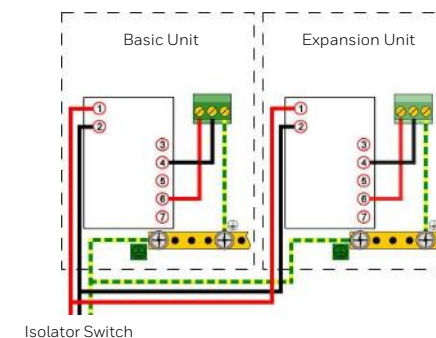


Figure 5. Mains Power Supplies

4.4 DC Power Supply

It is possible to power the Touchpoint Plus controller directly from a DC 24V supply without using AC supplies at all. However, batteries alone will not suffice as they must not drop below 22 volts.

Note: The system must still be connected to Protective Earth (Ground) when using an external DC supply.

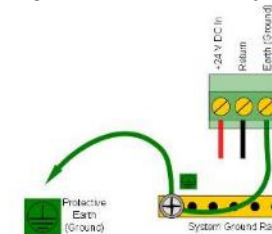


Figure 6. DC 24 V Input Terminals

4.5 Field Device Cables

Field Device cabling (sensors, lights, solenoids, etc.) 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.

4.6 Main Module Connections

The Main Module controls the Touchpoint Plus 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. 12
5	COM		Fig. 12
6	NO		Fig. 12
7	NC	System State Relay 2	Fig. 12
8	COM		Fig. 12
9	NO		Fig. 12
10	NC	System Failure Relay 3	Fig. 12
11	COM		Fig. 12
12	NO		Fig. 12
13	+24 VDC	Visual Output	Fig. 7
14	VIS		Fig. 7
15	Unused		–
16	A1	External Alarms	Fig. 7
17	A2		Fig. 7
18	F		Fig. 7
19	+24 VDC	External Alarm Power	Fig. 7
20	+24 VDC		Fig. 7
21	+24 VDC		Fig. 7
22	3.3V	Remote COM/Reset/Inhibit	Fig. 13
23	R1		Fig. 13
24	R2		Fig. 13
25	CAN_H	CAN	Expansion Unit Connection
26	CAN_L		Expansion Unit Connection

Table 2. Main Module Connections

4.7 mA Input Module Connections

This is an optional module for providing up to eight mA loop inputs. (see Technical Handbook, Ch.5.2.10)

Terminal	Label	Input	Field Device
1	+Ve	mA input 1	+ 24 VDC
2	–Ve		0 VDC

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

Table 3. mA Input Module Connections

4.8 mV Input Module Connections

This is an optional module for mV CAT sensor inputs. (see Technical Handbook, Ch.5.2.11)

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

Table 4. mV Input Module Connections

4.9 Dual Input Module

This is an optional module for providing 2 or 4 x mA Loop + 2 or 4 x mV CAT 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	mV Inputs 1 – 4	4 – 20 mA signal
13, 16, 19, 22	S		Sensitive (+)

14, 17, 20, 23	01	Signal
15, 18, 21, 24	NS	

Table 5. Relay Output Module Connections

4.10 Modbus RTU Option

This is an option that uses Modbus RTU (RS-485) control protocols. Full details are given in the Touchpoint Plus Modbus Installation Guide.

4.11 Relay Output Module Connections

This is an optional module providing 12 relay outputs. (see Technical Handbook, Ch.5.2.14)

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

Table 6. Relay Output Module Connections

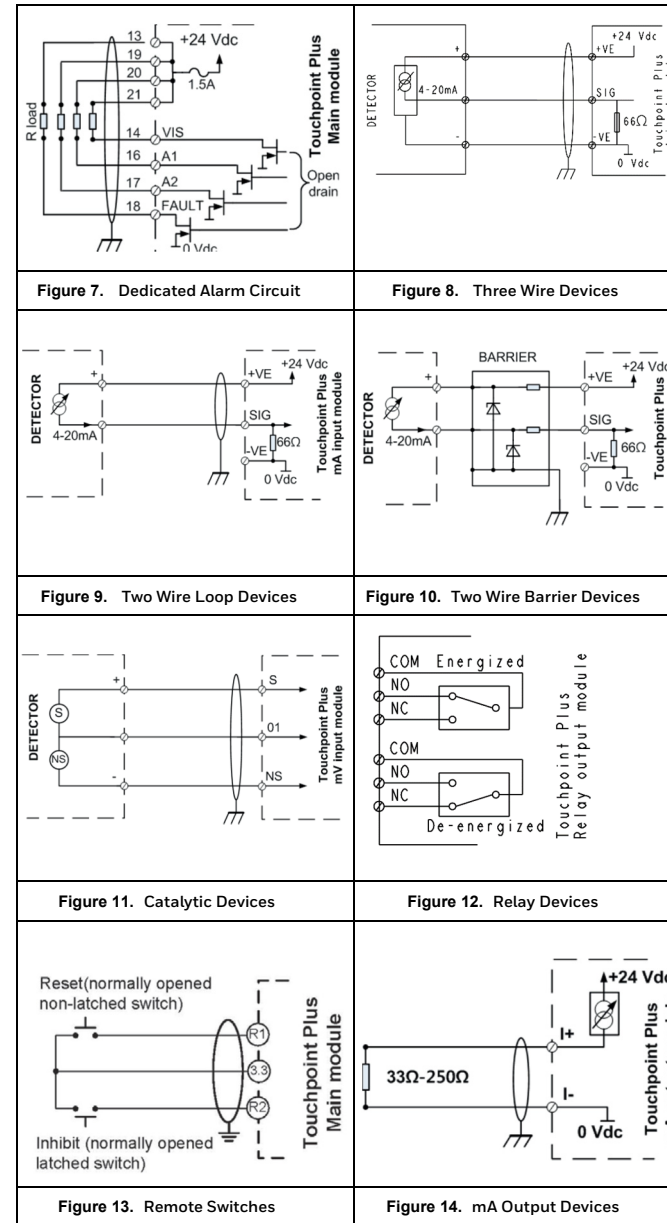
4.12 mA Output Module

This is an optional module for providing isolation mA loop output (see Technical Handbook, Ch.5.2.13).

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 7. mA Output Module Connections

4.13 Field Device Circuit Diagrams



4.14 Backup Battery Option

The optional backup battery is shipped in sleep mode. You must read the manual before connecting it to the system.

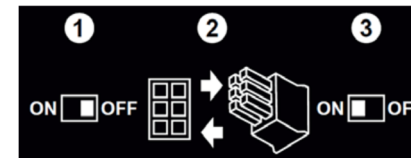


Figure 15. Backup Battery Connection

5 Technical Specifications

General Specifications	
Capacity	Up to 8 inputs Base Unit, + 8 inputs with Expansion Unit
Type of Inputs	2 or 3 wires, mA, mV
Size (Wall Units only)	426 mm x 300 mm x 156 mm
Weight	9 Kg (20 lbs) Base Unit, 8.5 Kg (18.7 lb) Expansion Unit
User Interface	
Display	7 inch Colour LCD Touch Screen GUI

Visual Indicators	3 LED Master Indicators and 16 LED inputs, Green for Normal, Yellow for Fault/ Inhibit, and Red for Alarm
Audible Alarm	70 dB @ 1 metre (40 ins)
Button	One alarm mute and reset membrane button
Languages	Selectable English, Chinese (Simplified), Dutch, French, German, Italian, Portuguese, Russian, Spanish
Power Supply	
Power AC	AC 110/220 V, 50 – 60 Hz (Manual Voltage Selection via SMPS)
Power DC	DC 18 – 32 V (24 VDC Nominal). DC 24 – 32 V advised
Power Consumption	105 W max (including field devices), 210 W max with Expansion Unit
Environmental	
Operating Temperature	-10 to +55 °C (+14 to +131 °F) continuous operation
Storage Temperature	Instrument -25 to +60 °C (-13 to +140 °F)
Humidity Range	5 – 95 %RH non-condensing
Ingress Protection	IP65 (wall mounted), NEMA 4X indoors only
I/O Capacities	
mV Input	Pellistor type Catalytic gas sensors (HA models). 2, 4, or 8 channels with Base Unit or 10, 12, or 16 channels with Expansion Unit
4 – 20 mA Input	2 or 3 wire, SOURCE, 2, 4, or 8 channel module
4 – 20 mA Output	4 or 8 repeated 0 – 22 mA outputs, 12 or 16 with expansion unit. (4 – 20 mA = 0 – 100 %FSD)
Relay Output	Configurable time delay On/Off option. 1.7 A @ 250 VAC, 1.7 A @ 30 VDC, 12 relays per module
Certifications	
Electrical Safety	Compliant with CE, EN 50270:2015, UL/ IEC/EN 61010-1, UL 508
Performance	EN 60079-29-1, EN 50104, EN 45544-1/2/3 and EN 50271 IEC/EN61508:2010 and SIL2 certification CSA 22.2 no.152
Marine	MED (Item No.: 3.54)
Hazardous Approval	ISA 12.12.01-2013 (Class 1, Div 2, Groups A,B,C,D & T4) CSA C22.2 No. 213-M1987
Others	
Backup Batteries	22.2 V Lithium Ion, 2600 mAh. Circa 30 mins Buffer time when fully charged.
Data Logging	Configuration backups and event / TWA logging onto SD Card. Can be transferred to PC or Printer (.bin and .csv)
Communication	Modbus RTU & TCP, Web Monitoring

6 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.

Find out more:

www.honeywellanalytics.com

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