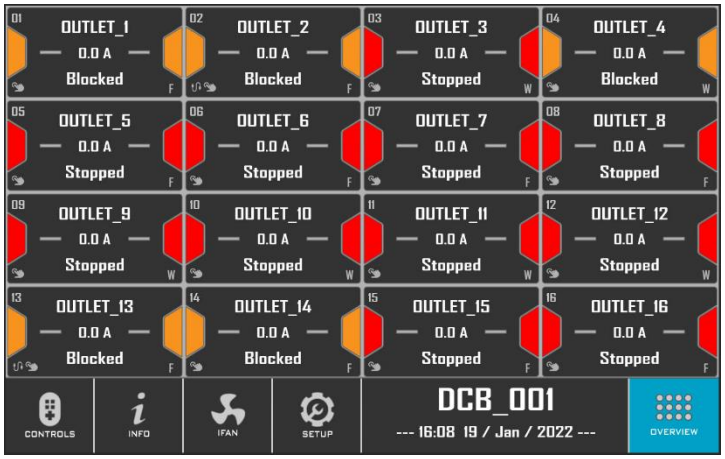
TECHNICAL DATASHEET

PROTECTION INTERFACE PLATFORM (PIP)

Electrical Protection

Application

The Ampcontrol Protection Interface Platform (PIP) is an intelligent controller that is used to interface with 1 to 16 outlets utilising the next generation of Ampcontrol Integrated Protection Relays. The system standardises the interface between the latest protection relays offered by Ampcontrol and any external interfaces (PLC or Networks) where required.



Protection Interface Platform GUI (max of 16 outlets shown)

The PIP consists of the following equipment:

- Protection Interface Platform (PIP), the main control device
- Protection Interface IO Block (PI2), this is the system IO block
- PIP Screen (PIPS), an optional screen to be used with the PIP
- Distributed outlet IO blocks:
    - 2FB – 2x Fixed Outlet IO Block
    - 4FB – 4x Fixed Outlet IO Block
    - 2WB – 2x Withdrawable Outlet IO Block (For use with Ampcontrol OCS only)
    - 4WB – 4x Withdrawable Outlet IO Block (For use with Ampcontrol OCS only)
- Desired Protection Relay(s), the following are compatible:
    - IPE – Integrated Protection Relay Type IPE
    - OCS, Outlet Cassette System Protection Element
    - OCS-RV, Outlet Cassette System Protection Electronics - Residual Voltage

Features

- Standardised outlet control interface
- Standard outlet equipment design and layout
- Module design for ease of installation and replacement
- Built in diagnostics for fault finding
- Reduced system wiring
- Standardises interface hardware making future functionality upgrades easier

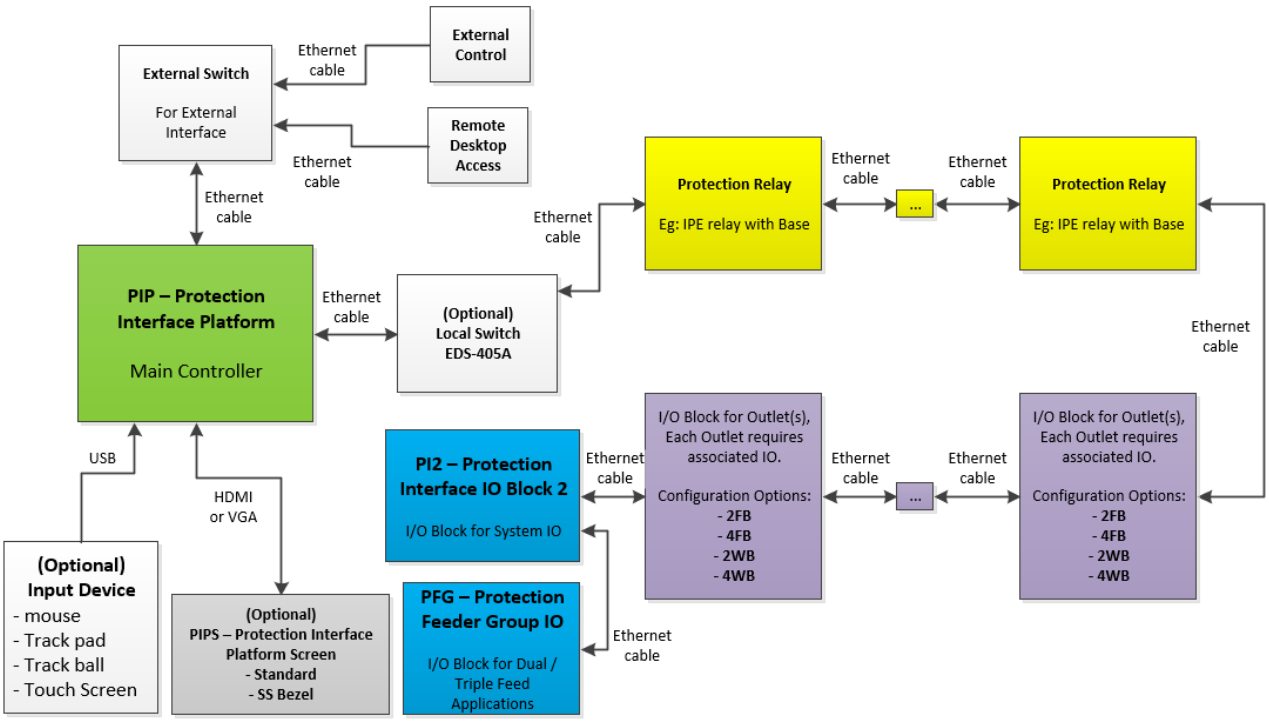
Description

The PIP system incorporates a main control block, system IO block, outlet IO blocks, a local network switch and optional screen (PIPS) and input devices.

The PIP performs all of the gathering of outlet relay data and interfaces with the outlet protection relays. Users are required to access the outlets data or control through the PIP, thus keeping the outlet communications network isolated to all other networks. This eliminates dependency on external network functionality as well as removing complexity to configure the system, resulting in a plug and play platform.

The system topology is completely configurable to suit the desired system layout and application. A local network switch connects the PIP with all of the system blocks.

ampcontrolgroup.com
customerservice@ampcontrolgroup.com
+61 1300 267 373



The PIP's Graphical User Interface (GUI) can be accessed through two ways:

1- PIP Screen (PIPS) or Alternative Screen
2- Ethernet connection.

When accessing the GUI through the Ethernet connection, the operation and functionality of the GUI will be the same as if interacted through the dedicated PIPS.

The PIP provides an intuitive interface to navigate the PIP configuration, system logs and outlet management. The outlet screens provide a common control interface and menu layout. All outlet control and protection settings are made through this interface to help create a standardised structure.

Specifications	
General	
Control Voltage	12-15 VDC Recommended (9-24 VDC Maximum)
Power consumption	48 W (~4 A @12 VDC)
PIP Weight	1.6 kg
Mechanical & Environmental	
Dimensions (H x W x D)	Footprint: 200 x 110 x 40 (mm) Mounting: 182 x 85 (mm)
PIP Operating Temperature	-20 °C to +60 °C with 0.5 m/s air flow
PIP Storage Temperature	-30 °C to +60 °C
IP Rating required	IP55 or greater
Humidity	Between 10 % relative humidity and the dew point, non-condensing
UV Stability	None
Compatible Protection Relays	
IPE / OCS	Integrated Protection relay Type E / Outlet Cassette system Protection Element
OCS-RV	Outlet Cassette system Protection Element – Residual Voltage
Network Parameters – See User Manual	
System Block details – See User Manual	

PIP - System Components	
Part Number	**Description**
300104	KIT Protection Interface Platform (PIP) C/W Dongle & 12 VPS
198608	Protection Interface IO Block 2 (PI2)
198601	2FB - 2 Outlet Fixed IO Block*
198602	4FB - 4 Outlet Fixed IO Block *
198600	2WB - 2 outlet Withdrawable IO Block*
198598	4WB - 4 outlet Withdrawable IO Block*
302301	GFB – Group Feed IO Block
198599	PIPS - PIP Screen 10.1” (Optional)
300716	PIPS SS - PIP Screen 10.1” Stainless Steel Bezel (Optional)
199332	HDMI to DVI Cable 1.5 m (to connect PIP to PIPS) (Optional)
176082	Temp Sensor (Optional)
198558	MOXA 5x Ethernet Port Switch (Un managed) (Optional)
302477	Power Supply 12 V 5 A (For PIP)
157711	Power supply 24 V 10 A
165165	Track Pad – Hazardous Area (Optional)
172912	Trackpad Interface – Hazardous Area (Optional)

* For individual IO component part numbers see user manual

PIP - Accessories		
Part Number	**Description**	**Manufacturer Part Number**
198609	Protection Interface Platform (PIP) V01	-
199859	PIP System Dongle	-
-	Mouse (wired) – Most USB type will work	Not available through Ampcontrol
-	Mouse (wireless) – Most USB type will work	
198558	MOXA 2x Ethernet Port + 3x Fibre Port Switch	EDS-405A
178843	MOXA 8x Ethernet Port Switch	EDS-408A

(198557) IPE Protection Relay Kit (Require 1 per outlet)	
Part Number	**Description**
197358	IPE Relay
180902	IPX Base 5 m Tails
195677	OCS / IPE Plug Set
Earth Leakage Toroid (Require 1 per outlet)	
Part Number	**Description**
101649	EL Toroid EL500 60 mm
101654	EL Toroid EL500 112 mm
101658	EL Toroid EL500S 60 mm
101656	EL Toroid EL500S 112 mm

Phase CT (Require 3 of same items per outlet)	
Part Number	**Description**
101272	45 mm CT 1000:1
101703	88 mm CT 1000:1

Outlet Dongle Part Numbers		
Part Number	**Description**	
199230	IPE Dongle Outlet 1 - PIP	(1000V, for 3300V add note to Purchase order)
199231	IPE Dongle Outlet 2 - PIP	
199232	IPE Dongle Outlet 3 - PIP	
199233	IPE Dongle Outlet 4 - PIP	
199234	IPE Dongle Outlet 5 - PIP	
199235	IPE Dongle Outlet 6 - PIP	
199236	IPE Dongle Outlet 7 - PIP	
199237	IPE Dongle Outlet 8 - PIP	
199238	IPE Dongle Outlet 9 - PIP	
199239	IPE Dongle Outlet 10 - PIP	
199240	IPE Dongle Outlet 11 - PIP	
199241	IPE Dongle Outlet 12 - PIP	
199242	IPE Dongle Outlet 13 - PIP	
199243	IPE Dongle Outlet 14 - PIP	
199244	IPE Dongle Outlet 15 - PIP	
199245	IPE Dongle Outlet 16 - PIP	

Accessories	
Part Number	**Description**
196912	Kit RTX complete with dongle
195677	Kit OCS / IPE Plug Set
164268	Plug Bypass Circuit Breaker Relay OCS/IPE
115119	Module PTB Diode Pilot Termination
169732	RES 100R 5W 1%
117023	Diode 1N5404 3A

DISCLAIMER

While every effort has been made to ensure the accuracy of this document at the date of issue, Ampcontrol assumes no liability resulting from any omissions or errors in this document and reserves the right to revise content at any time.