# 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

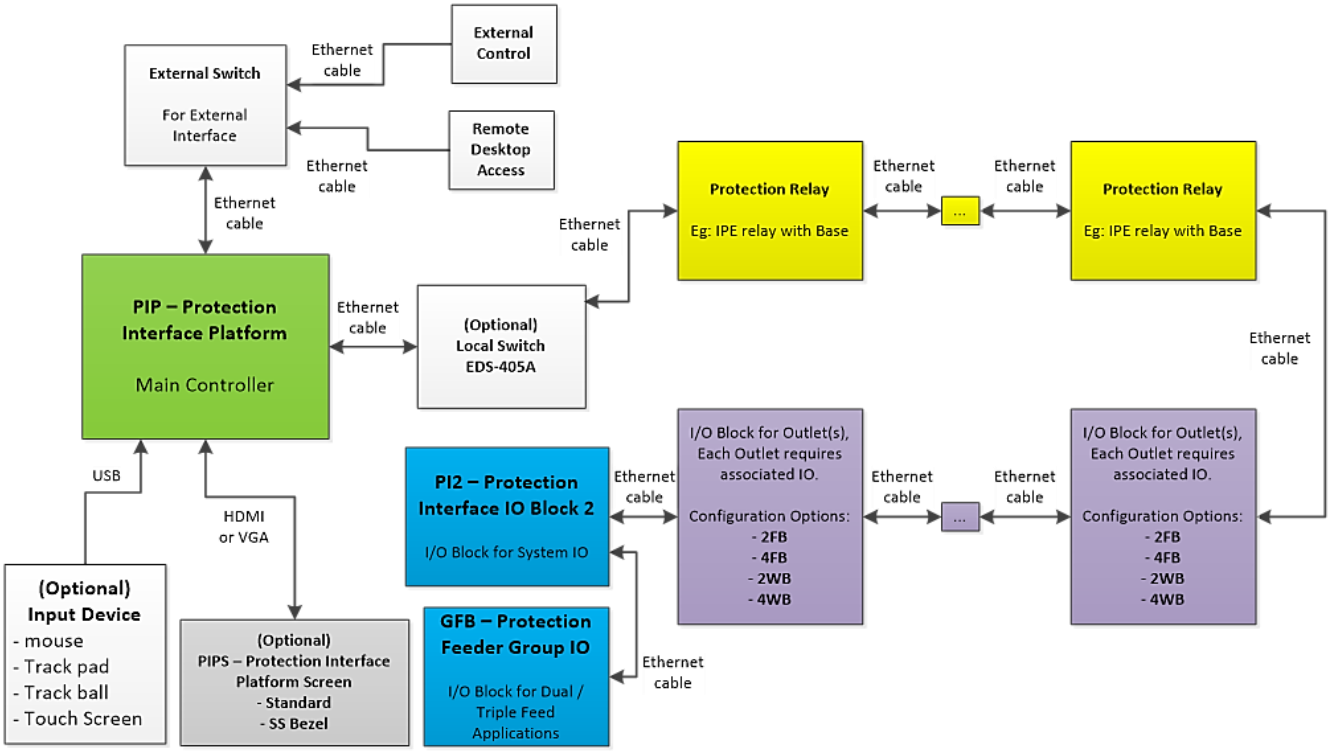
- Standardised outlet control interface
- Standard outlet equipment design and layout
- Module design for ease of installation and replacement
- Built in diagnostics for fault finding
- Reduced system wiring
- Standardises interface hardware making future functionality upgrades easier

### 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 gathers all outlet relay data and interfaces with the outlet protection relays. Users are required to access the outlet's data or control through the PIP, thus keeping the outlet communications network isolated from 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.




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 | | |
|---|---|---|
| **Product** | **PIP (PN 198609)** | **PIP Plus (PN 305696)** |
| **General** | | |
| *Control Voltage* | 12-15 V DC Recommended (9-24 V DC Maximum) | 8-35 V DC |
| *Internal Battery* | Removed | Yes |
| *Power Consumption* | 48 W (~4 A @ 12 V DC) | 50 W |
| *PIP Weight* | 1.6 kg | <1 kg |
| **Mechanical & Environmental** | | |
| *Dimensions – Footprint (H x W x D)* | 200 x 110 x 40 mm | 153 x 56 x 108 mm |
| *Mounting* | 182 x 85 mm | DIN Rail |
| *PIP Operating Temperature* | -20 °C to +60 °C with 0.5 m/s air flow | -25 °C to +70 °C |
| *PIP Storage Temperature* | -30 °C to +60 °C | -40 °C to +85 °C |
| *IP Rating of Enclosure Required* | IP55 or greater | |
| *Humidity* | Between 10% relative humidity and the dew point, non-condensing | 10% ~ 90%, 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 | |
| *IPS* | Integrated Protection System | |
| **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 |
| TBA | Kit Protection Interface Platform (PIP Plus) C/W Dongle |
| 198608 | Kit Protection Interface IO Block Opt 2 (PI2) |
| 198601 | Kit 2FB - 2 Outlet Fixed IO Block * |
| 198602 | Kit 4FB - 4 Outlet Fixed IO Block * |
| 198600 | Kit 2WB - 2 Outlet Withdrawable IO Block * |
| 198598 | Kit 4WB - 4 Outlet Withdrawable IO Block * |
| 302301 | Kit GFB - Group Feed IO Block |
| 198557 | IPE Outlet Kit (Relay + Base + Plug Kit) |
| 198599 | PIPS - PIP Screen 10.1” Aluminium Bezel (Optional) |
| 305695 | PIPS Wide Temp - PIP Screen 10.1” (Optional) |
| 300716 | PIPS SS - PIP Screen 10.1” Stainless Steel Bezel (Optional) |
| 199332 | HDMI to DVI Cable 1.5m (to connect PIP to PIPS) (Optional) |
| 176082 | Temp Sensor (Optional) |
| 198558 | MOXA 5x Ethernet Port Switch (Unmanaged) (Optional) |
| 157711 | Power Supply 24V 10A |
| 165165 | Trackpad - Hazardous Area (Optional) |
| 172912 | Trackpad Interface - Hazardous Area (Optional) |

* For individual IO component part numbers see User Manual

| PIP - Accessories | |
|---|---|
| **Part Number** | **Description** |
| 198609 | Protection Interface Platform (PIP) V01 |
| 199859 | PIP System Dongle |
| 305696 | Protection Interface Platform Plus (PIP PLUS) V01 |
| 302477 | Power Supply 12V 5A (For PIP) |

| Outlet Protection Relay<br>(Require 1 per outlet, see appropriate product documentation for component requirements) | |
|---|---|
| **System** | **Description** |
| IPE | Integrated Protection Relay Type E Version |
| IPE RV | Integrated Protection Relay Type E - Residual Voltage Version |
| IPS | Integrated Protection Solution Protection Element |

| Outlet Dongle Part Numbers | | |
|---|---|---|
| **Part Number** | **Description** | |
| 179345 | Dongle Parameter Blank | |
| 180490 | Module Dongle Parameter Programmer | |
| 199230 | Dongle Outlet 1 - PIP | 1000 V<br>(For alternative system voltages add a note to the Purchase Order)<br><br>Dongles suitable for IPE / OCS / IPS / IPX |
| 199231 | Dongle Outlet 2 - PIP | |
| 199232 | Dongle Outlet 3 - PIP | |
| 199233 | Dongle Outlet 4 - PIP | |
| 199234 | Dongle Outlet 5 - PIP | |
| 199235 | Dongle Outlet 6 - PIP | |
| 199236 | Dongle Outlet 7 - PIP | |
| 199237 | Dongle Outlet 8 - PIP | |
| 199238 | Dongle Outlet 9 - PIP | |
| 199239 | Dongle Outlet 10 - PIP | |
| 199240 | Dongle Outlet 11 - PIP | |
| 199241 | Dongle Outlet 12 - PIP | |
| 199242 | Dongle Outlet 13 - PIP | |
| 199243 | Dongle Outlet 14 - PIP | |
| 199244 | Dongle Outlet 15 - PIP | |
| 199245 | Dongle Outlet 16 - PIP | |

**Find Out More**

**For more information on this product, contact Ampcontrol Customer Service on +61 1300 267 373 or *customerservice@ampcontrolgroup.com* or visit the Ampcontrol website: www.ampcontrolgroup.com**