Description
The FPS Feeder Protection System monitors voltage and current to provide a comprehensive package of 17 protective functions. The FPS is a modular system with integrated protection, breaker control, metering, and data-logging functions.

1 Operator Interface (FPS-OPI)
- Large, bright, 4 x 20 vacuum-fluorescent display
- Display metered values
- Access set points
- Powered by Control Unit
- Panel mount or attach directly to Control Unit
- Remote mounting (1.2 km or 4000 ft maximum loop length)
- 1/2 DIN size
- Hazardous-location certified

2 Control Unit (FPS-CTU)
- Current inputs—5-A or 1-A secondary phase current transformers
- Voltage inputs—up to 600 V without PTs
- Earth-leakage input—5-A or 1-A secondary or sensitive transformer
- 8 digital inputs, 5 relay outputs, 1 analog input and output
- 24-Vdc supply for OPI and RTD modules, and for digital inputs
- IRIG-B time-code input
- 1/2 DIN size, surface mount
- RS-485 network communications (Standard)
- DeviceNet™, Profibus®, or Ethernet communications available

Accessories
- Phase Current Transformers
  Phase CTs are required to detect phase currents.

- Ground-Fault Current Transformer

- MPS-RTD Temperature Input Module
  Optional module provides 8 inputs to connect Pt100, Ni100, Ni120, and Cu10 RTDs.

- SE-IP65CVR-M Cover
  Optional gasketed, transparent cover for limited access and IP65 protection for an Operator Interface Module.
**Features & Benefits**

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<tr>
<th>FEATURES</th>
<th>IEEE #</th>
<th>BENEFITS</th>
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<tr>
<td>Overload</td>
<td>49, 51</td>
<td>Long-time overcurrent provides thermal protection for feeder or load</td>
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<tr>
<td>Inverse-time overcurrent</td>
<td>50, 51</td>
<td>Coordination using IEEE and IEC Curves</td>
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<tr>
<td>Definite-time overcurrent</td>
<td>50, 51</td>
<td>Instantaneous overcurrent to detect catastrophic failure</td>
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<tr>
<td>Current unbalance/Phase loss/Phase reverse</td>
<td>46</td>
<td>Detects an open or high-impedance phase</td>
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<tr>
<td>Ground fault</td>
<td>50G/N, 51G/N</td>
<td>Inverse and definite time. Early insulation-failure detection.</td>
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<td>RTD temperature</td>
<td>38, 49</td>
<td>Optional protection (MPS-RTD module) for load-temperature monitoring</td>
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<tr>
<td>Overvoltage</td>
<td>59</td>
<td>Limits stress to insulation</td>
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<tr>
<td>Undervoltage</td>
<td>27</td>
<td>Detects a damaging brown-out condition</td>
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<td>Voltage unbalance</td>
<td>47</td>
<td>Detects unhealthy supply voltage</td>
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<td>Two setting groups</td>
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<td>Minimizes Arc-Flash hazards during maintenance</td>
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<td>Breaker control</td>
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<td>Allows local and remote operation; reduces component count</td>
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<td>Metering</td>
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<td>Displays the measured and calculated parameters</td>
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<td>Data logging</td>
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<td>On-board 64-event recorder helps with system diagnosis</td>
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<tr>
<td>Communications</td>
<td></td>
<td>Remotely view measured values, event records, &amp; reset trips</td>
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<tr>
<td>Conformal coating</td>
<td></td>
<td>Internal circuits are conformally coated to protect against corrosion and moisture</td>
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</tbody>
</table>

**Specifications**

**Protective Functions** (IEEE Device Numbers)
- Overload (49, 51)
- Phase reverse (current) (46)
- Phase loss (current) (46)
- Overfrequency (81)
- Overcurrent (50, 51)
- Underfrequency (81)
- Ground fault (50G/N, 51G/N)
- Unbalance (voltage) (47)
- Power factor (55)
- RTD temperature (38, 49)

**Input Voltage**
- 65-265 Vac, 25 VA; 80-275 Vdc, 25 W

**Power-Up Time**
- 800 ms at 120 Vac

**Ride-Through Time**
- 100 ms minimum

**24-Vdc Source**
- 100 mA maximum

**AC Measurements**
- True RMS and DFT, Peak, 16 samples/cycle, and positive and negative sequence of fundamental

**Frequency**
- 50 or 60 Hz

**Inputs**
- Phase current, Earth-leakage current, Phase voltage, 7 digital, 1 analog

**Output Contacts**
- 5 contacts — See Product Manual

**Approvals**
- CSA certified, C-Tick (Australian)

**Communications**
- Allen-Bradley® DFI and Modbus® RTU (Standard); DeviceNet™, Profibus®, Ethernet (Optional)

**Conformal Coating**
- Standard feature

**Warranty**
- 10 years

**Mounting: Control Unit**
- Surface

**Operator Interface**
- Panel, Control-Unit mounted