Power. Empowered.
Power Xpert® Dashboard.

EATON
Powering Business Worldwide
User-friendly operation and advanced functionality increases your productivity and uptime.
The One-Line Diagram allows you to see device alarms. You can also see if the breaker is opened or closed.
Control
ARMS Off
One-line
Elevation
Transfer
Automatic
Timeline
3 Alarms
Docs
Settings
Help
02:32:34 PM
02/17/2017
admin
Logout - 15:00
10.130.14.247
4D - C4
Trip U...
Senso...
Type
Locat...
120 V...
800 A
Digitr...
1C
Breaker Code
2XIM

17 cal/cm²

20 cal/cm²

2C - Main Bkr 1
Stat: Closed
PF: 1
Ia: 398 A
Ib: 393 A

20 cal/cm²

3C - Tie Bkr
Stat: Open
PF: 1
Ia: 0 A
Ib: 0 A

20 cal/cm²

4C - Main Bkr 2
Stat: Closed
PF: 1
Ia: 401 A
Ib: 393 A

17 cal/cm²

Source 1

2D - C2
Trip U: 120 V...
Senso: 800 A
Type: Digitr...
Locat: 2D

Main M1, DT11...

Main M1, DT...

Main M1, DT...

Main M1, DT...

Source 2

4D - C4
Trip U: 120 V...
Senso: 800 A
Type: Digitr...
Locat: 4D

Main M1, DT11...

Main M1, DT...

Main M1, DT...

Main M1, DT...

Status
PF Apparent
Ia
 Ib
Ic
Vab
Vbc
Vca
Real Power
Cp Count
Temp Maximum
CF la
CF lb
CF IC
Trip Unit P/S
Sensor/Plug
Type
Location
Breaker Code

Click "more" to get device details.
Elevation View allows you to see device alarms.

Click on the highlighted cell to get a summary of the device to the right.
<table>
<thead>
<tr>
<th>Alarm Type</th>
<th>Description</th>
<th>Status</th>
<th>Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trip</td>
<td>4C - Main Bkr 2 (Device) - Check Auxiliary Switch</td>
<td>Acknowledge</td>
<td>02/16/2017 5:12:50 PM</td>
</tr>
<tr>
<td>Device is in Alarm Status</td>
<td>4C - Main Bkr 2 (Device) - Summary Alarm</td>
<td>Acknowledge</td>
<td>02/16/2017 5:12:50 PM</td>
</tr>
<tr>
<td>Trip</td>
<td>4C - Main Bkr 2 (Device) - Waveform Available</td>
<td>AUTO-ACK</td>
<td>02/16/2017 5:12:50 PM</td>
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<tr>
<td>02/16/2017 5:12:50 PM</td>
<td>Device is in Alarm Status 4C - Main Bkr 2 (Device) - Long Delay</td>
<td></td>
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</table>

Click “View Device Details”
**Trip Details**

**Time-Stamped Event Data**

- **IA**: 5343.00
- **IB**: 3996.00
- **IC**: 0.00
- **IG**: 0.00
- **IN**: 120.0
- **VAB**: 117.0
- **VBC**: 119.0
- **VCA**: 0.0
- **Power**: 0.0
- **Power Demand**: 23234
- **Energy**: --
- **Frequency**: 0.0
- **Reactive Power**: +1.0
- **pf**: --
- **THD IA**: --
- **THD IB**: --

**Waveform**

- View Trendviewer

**Trip**

2C - Main Bkr 1 (Device) - Waveform Available

**History**

- **Alarm Value**: Auto
- **ACK**: No
- **Active**: No
- **Critical**: No
- **Sequence**: 0
- **Time**: 02/16/2017 5:12:50 PM
- **Closed**: Yes
- **Alarm Value**: Auto
- **ACK**: No
- **Active**: No
- **Critical**: No
- **Sequence**: 0
- **Time**: 02/16/2017 5:12:50 PM
- **Closed**: Yes

**Device Details**

- **Sequence**: Yes
- **Closed**: Yes
- **Alarm Value**: Auto
- **ACK**: No
- **Active**: No
- **Critical**: No
- **Time**: 02/16/2017 5:12:50 PM
- **Closed**: Yes

**Return to Be Efficient**
The Docs menu allows access to all saved documents, drawings, and studies.

Click on the document to open it within the Device Details view.
Digitrip models 1150, 1150i, 1150+, and 1150i+ trip units for use only in Magnum and Magnum DS circuit breakers

Data resets in meter screen

A Reset pushbutton operation will reset data values or group of values if the Reset pushbutton is depressed when screen value is displayed (see page 44 METER menu).

Program settings PGM SET

Current curve type selection and pickup/time settings

General

Before placing any circuit breaker in operation, set each trip unit protection setting to the values specified by the engineer responsible for the installation. Each setting is programmed using the front panel pushbuttons and Save when the desired settings are selected. A few settings are interdependent (the LONG PU (I) rating will indirectly affect the SHORT PU value). Therefore, always verify these settings after programming by entering VIEW SETTINGS menu.

The installed rating plug must match the current sensors that establish the maximum continuous current rating of the circuit breaker (I). Instantaneous and ground current settings are defined in multiples of (I).

To illustrate the effect of each protection setting, simulated time-current curves are pictured on the face of the trip unit. Should an automatic trip occur (as a result of the current exceeding the pre-selected value), the LED in the appropriate segment of the simulated time-current curve will flash red, indicating the reason for the trip.

Long TIME setting

There are 45 available Long Delay Time settings I₂₉, as illustrated in Figure 24, ranging from 2 to 24 seconds. For the I₄₉ slope, there are nine settings ranging from 1 to 5 seconds. These settings represent the total clearing times when the current value equals six times (I).
The Setup Screen you can manage device from the Setup Screen.

Current Protection

- Curve type: IEEE
- Phase Slope: Moderate Inverse
- Pickup Ir (xln): 2.0, 720.00A
- Time Dial: 2.0
- Short Delay Pickup (xlr): M1, 2.0, 1440.00A
- Short Delay Time (S): 2.0
- Instantaneous Pickup (xln): Enabled, 2.0, 3200.00A
- Ground Pickup (xln): 2.0, 320.00A
- Ground Slope: 12t, Flat
- Ground Time: 2.0
Find information, receive safety prompts, and perform operations remotely for innovations that will get you through the day and back home safer than ever.
Click “Open Breaker” at the bottom of the device summary.
This action will Open Breaker on Main Bkr 2 (Device) and affect downstream devices.

Before approaching the Assembly be sure to wear all required Personal Protection Equipment and Activate Arcflash Reduction Maintenance (ARMS)

Voltage: 207.3 V
Current: 396.7 A
Feeding: Main Bkr 2 (Device)

You must confirm that you are wearing the proper PPE, before opening the breaker.

Click on “Open Breaker” and the breaker will change to the open position.

Pop-up screen will inform you of the arc energy, PPE requirements, & which downfield devices will be affected.
Enable ARMS
Choose Breakers to Enable ARMS Mode

Enable ARMS on
Main Bkr 2

For work on
Downstream Devices

Enabling ARMS will result in

12cal/cm² at 2' Working Distance on Main Bkr 2

7cal/cm² at 2' Working Distance on DownstreamDevices

Click “Enable ARMS” for activation.
Once ARMS has been engaged, the One Line Diagram will provide graphical indication of affected circuits & devices as well as energy levels.
Once ARMS has been engaged, the Elevation View will provide graphical indication of affected circuits & devices as well as energy.
Click on ARMS at the top left of the screen to view PPE requirements.
### Required Personal Protective Equipment

The following items are required for PPE Level 2

<table>
<thead>
<tr>
<th>Item</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balaclava</td>
<td>4</td>
</tr>
<tr>
<td>Safety Glasses or Goggles</td>
<td>3</td>
</tr>
<tr>
<td>In-Ear Protection</td>
<td>3</td>
</tr>
<tr>
<td>Flame Resistant Coveralls</td>
<td>3</td>
</tr>
<tr>
<td>Voltage Rated Gloves</td>
<td>3</td>
</tr>
<tr>
<td>Leather Boots</td>
<td>2</td>
</tr>
</tbody>
</table>
Line Side of Main Bkr 1 (Device)
Source 1

Arc Flash Boundary

Incident Energy: 20 cal/cm²
PPE Level: 3

Load Side of Main Brkr 1 (Device)
Bus 1

Arc Flash Boundary

Incident Energy: 10 cal/cm²
PPE Level: 3

Load Side of Main Brkr 2 (Device)
Bus 2

Arc Flash Boundary

Incident Energy: 15 cal/cm²
PPE Level: 3

Required Personal Protective Equipment
The following items are required for PPE Level 2:

- Arc Flash Hood (25 cal/cm²)
- Safety Glasses or Goggles
- In-Ear Protection
- Arc Rated Coveralls
- Voltage Rated Gloves
- Leather Boots
Displaying Highest Safety Levels in Switchgear

Arc Flash Boundary Diagram
Example of Boundaries and Definitions

### Line Side of Main Bkr 1 (Device)

- **Source 1**
- **Arc Flash Boundary:**
- **Incident Energy:** 27 cal/cm²
- **PPE Level:** 4

### Load Side of Main Brkr 1 (Device)

- **Bus 1**
- **Arc Flash Boundary:**
- **Incident Energy:** 10 cal/cm²
- **PPE Level:** 3

### Load Side of Main Brkr 2 (Device)

- **Bus 2**
- **Arc Flash Boundary:**
- **Incident Energy:** 15 cal/cm²
- **PPE Level:** 3

---

**Zero Distance**

**Prohibited Space**

**Restricted Space**

**Limited Space**

**Restricted Approach Boundary**

**Limited Approach Boundary**

**Arc Flash Boundary (Outer Boundary)**

**Individual**