Eaton’s Cutler-Hammer business is a worldwide leader providing customer-driven solutions. From power distribution and electrical control products to industrial automation, the Cutler-Hammer business utilizes advanced product development, world-class manufacturing, and offers global engineering services and support. To learn more about Eaton’s innovative Cutler-Hammer products and solutions, call 1-800-525-2000, for engineering services call 1-800-498-2678, or visit www.cutler-hammer.eaton.com.

Eaton Corporation is a global $7.3 billion diversified industrial manufacturer that is a leader in fluid power systems; electrical power quality, distribution and control; automotive engine air management and fuel economy; and intelligent truck systems for fuel economy and safety. Eaton has 40,000 employees and sells products in more than 50 countries. For more information, visit www.eaton.com.

For more information, visit www.cutler-hammer.eaton.com.

DSNAP - Direct DeviceNet Connectivity

- Starter connects to DeviceNet™ for comprehensive diagnostics, monitoring, and control capability with enhanced starter functionality.

QSNAP - Direct Motor Control Panel

- starter connects to QCPort for comprehensive diagnostics, monitoring, and control capabilities with enhanced starter functionality.

DSNAP - Distributed Motor Control Solutions

- Starter provides unmatched size, performance, and reliability.
- DSNAP connects to DeviceNet™ for comprehensive diagnostics, monitoring, and control capability with enhanced starter functionality.

QSNAP - Advantages in Motor Control Solutions

- Starter provides unmatched size, performance, and reliability.
- QSNAP interconnects to QCPort for comprehensive diagnostics, monitoring, and control capabilities with enhanced starter functionality.

- D77A I/O is compact, full-featured, and rugged.
- D77D-DNA DeviceNet™ adapter combines information from I/O and motor control devices for communications for control by a PC or PLC.
- QCPort interconnect system quickly and reliably connects data and power to all devices via backplane and pre-made cables.

DSNAP - Direct Motor Control Panel

- Starter connects to DeviceNet™ for comprehensive diagnostics, monitoring, and control capability with enhanced starter functionality.

QSNAP - Flexible Interconnect System

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Extending the Communication Capabilities of Electromechanical Starters and Soft Starters
DSNAP - Direct DeviceNet Connectivity

- To Control PC or PLC

QSNAP - Direct Motor Control Panel

- To Control PC or PLC

**DSNAP** - Distributed Motor Control Solutions
- IT EM or IT S751 Soft Starters and IT DSNAP

**QSNAP** - Advantages in Motor Control Solutions
- IT EM Starters provide unmatched size, performance, and reliability.
- IT DSNAP connects to QCPort for comprehensive diagnostics, monitoring, and control capabilities with enhanced starter functionality.
- IT ITA I/O is compact, fail-safe, and rugged.
- IT ITD5000P DataLink adapter combines information from I/O and motor control devices for communications for control by a PC or PLC.
- QCPort interconnect system quickly and reliably connects data and power to all devices via backplane and pre-made cables.

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There's More to IT.

SNAP products are designed to offer Cutler-Hammer’s intelligent technology, IT, in a competitive box of features. With SNAP Adapter Products (SNAP), we have been able to greatly expand the feature set of the IT Electromechanical Starters and IT Series 715 Soft Starters. The end result is a communicating motor controller that delivers advanced diagnostics, motor protection, control and communication functions at a competitive price.

Advanced Motor Data and Control Diagnostics
- RMS average current
- Percent thermal memory
- Operating status
- Exception diagnosis
- Operating status and fault codes
- Trip speed/soft start

Start-up nuisance trip
- Adjustable underload warning
- Adjustable overcurrent warning
- Direct Devicetron™ Connectivity (IT SNAP)
- With IT SNAP your motor controller is connected to Devicetron as a single Devicetron node. This allows the starter to be controlled and monitored from a HIL or PLC.

Extended Starter Capabilities
- Trip reset
- Start/stop control
- At-speed (soft starters)
- Percent thermal memory
- RMS average current

The IT SNAP products are ready to use in basic operation mode with no configuration beyond setting the address switches. Alternatively, any DeviceNet node can be used to set operating parameters on the SNAP products using an EDS file. Importing an EDS file can be done to set operating parameters for both non-reversing and reversing applications.

Technical Specifications

### Enhanced Feature Settings

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underload Warning</td>
<td>Detects an underload condition (1% FLA)</td>
</tr>
<tr>
<td>Current Threshold Warning</td>
<td>Detects when a current level has been exceeded (1% FLA)</td>
</tr>
</tbody>
</table>

### Available Data

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D77A-QSNAP</td>
<td>Quick Connect Port (QCPort) Starter Network Adapter Product</td>
</tr>
<tr>
<td>D77B-QSNAP</td>
<td>DeviceNet Starter Network Adapter Product</td>
</tr>
<tr>
<td>D778-QSNAP</td>
<td>DeviceNet Starter Network Adapter Product</td>
</tr>
<tr>
<td>D786-QSNAP</td>
<td>DeviceNet Starter Network Adapter Product</td>
</tr>
<tr>
<td>D787-QSNAP</td>
<td>DeviceNet Starter Network Adapter Product</td>
</tr>
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</table>

### Data

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<tr>
<th>Data</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>Indication of running condition of the motor controller for both non-reversing and reversing applications</td>
</tr>
<tr>
<td>Fault/Warning Code</td>
<td>Indicates diagnostic code(s), including warning or trip information</td>
</tr>
<tr>
<td>Run/Forward/Reverse</td>
<td>Indication of running condition of the motor controller for both non-reversing and reversing applications</td>
</tr>
<tr>
<td>Average Current</td>
<td>Average RMS current of the motor</td>
</tr>
<tr>
<td>Thermal Memory</td>
<td>Percent of maximum IT representing the thermal loading of the starter in terms of motor thermal capacity</td>
</tr>
<tr>
<td>Current Threshold</td>
<td>A warning to alert the user when the user settable threshold value in %FLA has been exceeded</td>
</tr>
<tr>
<td>GI Reference</td>
<td>Soft start only, the soft start ramp is complete and exposure engaged</td>
</tr>
</tbody>
</table>

The IT SNAP products are available to DeviceNet. The extended feature set, including diagnostic and control capabilities, along with an advanced diagnostics, monitoring, and control capabilities, is now available from Eaton's S751 Soft Starters. The IT SNAP products are the ideal motor control solutions for advanced feature set up to a single DeviceNet node to a control PC or PLC.

For advanced feature set up to a single DeviceNet node to a control PC or PLC, the IT SNAP products are ready to use in basic operation mode with no configuration beyond setting the address switches. Alternatively, any DeviceNet node can be used to set operating parameters on the SNAP products using an EDS file. Importing an EDS file can be done to set operating parameters for both non-reversing and reversing applications.

### Product Information

<table>
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<tr>
<th>Product Information</th>
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<tbody>
<tr>
<td>Product Information</td>
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</tr>
<tr>
<td>Feature</td>
<td>Rating</td>
</tr>
<tr>
<td>UL/CSA Certification</td>
<td>UL 508, C22.2 No. 2, 14-95</td>
</tr>
<tr>
<td>UL Certification</td>
<td>0</td>
</tr>
</tbody>
</table>

The IT SNAP family adds to the broad range of industry-leading control components available from Eaton’s Cutler-Hammer business.

Expand the communications and diagnostic capabilities of your IT Electromechanical Starters and IT Series 715 Soft Starters. Talk to a Cutler-Hammer sales engineer today about adding SNAP.
There's More to IT.

With a direct focus on speed, control system design, and customer profitability, Eaton proudly offers Cutler-Hammer intelligent technologies (IT) – a complete line of bus-based, distributed motor control devices. Eaton's SNAP products, available from Eaton's Adapter Products (SNAP), we refer to greatly enhance the feature set of the IT Electromechanical Starters and D775 Soft Start Products. The end result is a communicating motor controller that delivers advanced diagnostics, motor overload protection, and integral auxiliary contact blocks at a competitive price.

Advanced Motor Data and Control Diagnostic Features:

- RMS average current
- Percent thermal memory
- Status indicating fault code
- Calculated status and fault code
- Arm speed fault threshold
- Integrated START/STOP
- Trip/forward/reverse control
- Trip reset
- Enhanced Starter Capabilities
  - Feature rating: diagnostics notification (with accessory)

- Faulting
- Start-up nuisance trip
- Adjustable thermal warning
- Adjustable undervoltage warning

Direct Devicemaster™ Connectivity (DSNAP):
With IT SNAP, your motor controller is connected to Devicemaster as a single Devicemaster node. The Devicemaster node allows the starter to be controlled and monitored via a PLC or PC. All Devicemaster monitoring, diagnostic, and control capabilities, along with an expanded feature set, are now available to Devicemaster.

Integrated with IT SNAP:
- D77A/D77A-QSNAP I/O and Network Adapters (QSNAP)
- D77D-D77D-DNA Adapter (DSNAP)

Devicemaster/D77A-QSNAP adapter provides the combined data of EM/IT/D77A I/O as a single Devicemaster node to a control PLC or PC.

Simple Mounting and Configuration:
IT SNAP front mounts on the existing control location of the motor controller, leaving auxiliary contact position available for additional auxiliary contact blocks. A factory provided assembly connects the SNAP front mount to the starter overload relay.

Adapter Products (SNAP):
- QSNAP provides the most comprehensive diagnostic and control capabilities, along with an expanded feature set, available to Devicemaster.
- DSNAP provides an effective, user-friendly environment.

Data Description:
- Available Data
- Enhanced Feature Settings

Available Data:

- Status
t -Indicates running condition of the motor controller for both non-reversing and reversing applications
- Average Current
- Average RMS current of the motor
- Thermal Memory
- Percent of maximum IT rating the thermal loading of the starter in terms of motor thermal capacity
- Current Threshold
- A warning to alert the user when the user settable threshold value in %TCA has been exceeded
- Event Reference
- Soft start only; the soft start ramp is complete and bypass engaged
- Fault Queue
- The last 5 fault codes are stored in the SNAP

Eaton's SNAP products are ready to use in basic operation mode with no configuration beyond setting the address switches. Alternatively, any DeviceNet adapter can be used to set operating parameters on the SNAP products.

Enhanced Feature Settings:
- Underload Warning
- Detects an underload condition (%TCA)
- Current Threshold Warning
- Detects when current level has been exceeded (%TCA)

Product Information:
- Series
- Rating
- Compatible Starters
- Available Data

Technical Specifications:

IT SNAP Products

Catalog Number Description
D77B-QSNAP Devicemaster Starter Network Adapter Product
D77B-DSNAP Devicemaster Starter Network Adapter Product
Cutler Factory Auxillary starter device for reversing starters
Cutler Factory Ground fault detection module
There’s More to IT.

With a direct focus on speed, control system design, and customer profitability, Eaton is proud to offer Cutler-Hammer intelligent technologies (IT): a complete line of bus- and rack-based motor control devices. SNAP Adapter Products (SNAP), we pride ourselves with the feature set of all the IT Electro-Mechanical Starters and D751 Soft Start products. The net result is a communicating motor controller that delivers advanced diagnostics, motor protection, and soft start features at a competitive price.

Advanced Motor Data and Control Diagnostics
- RMS average current
- Percent thermal memory
- Predictive protection detection
- Operating status and fault codes
- At speed fault detection
- Standby control
- Run forward/reverse control
- Trip reset

Extended Starter Capabilities
- Flexible wiring (indicated on accessory)
- Faulting
- Start-up nuisance trip
- Adjustable current level warning
- Adjustable underload warning

Direct Devicelink™ Connectivity (DSNAP)
With IT SNAP, your motor controller is presented to Devicelink as a single Devicelink node. The DSNAP product is available from Eaton. This allows the motor controller to be controlled and monitored from a PLC or PC.

Integrated with IT D77A I/O and Network Adapter (QSNAP)
IT SNAP products are available to DeviceNet. The QSNAP and D77A I/O products provide an effective, user-friendly environment.

Data Description
- Compatible Starters
- D77B-QSNAP QCPort Starter Network Adapter Product
- D77B-DSNAP DeviceNet Starter Network Adapter Product
- Consult Factory
- Auxiliary existing device for reversing starter
- Consult Factory
- Ground fault detection module

Technical Specifications

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<td>Average Current</td>
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<tr>
<td>Thermal Memory</td>
<td>Percent of maximum IT representing the thermal loading of the device in terms of motor thermal capacity</td>
</tr>
<tr>
<td>Current Reference</td>
<td>A warning to alert the user when the user selectable threshold value for thermal has been exceeded</td>
</tr>
<tr>
<td>Fault Queue</td>
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Enhanced Feature Settings

### Feature Settings

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