Macey®
25kV coupling system
Every Eaton's Crouse-Hinds powering solution is designed to be safe, cost-effective and tailored to our customers' unique mining challenges.

Our 25kV mining coupler is engineered for safe operation, easy handling, simple installation and industry compatibility. The result is a coupling solution that is smaller, lighter and eliminates special installation tools needed with competitive products.
Introducing Eaton’s Crouse-Hinds

Macey® 25kV coupling system
High-voltage couplers engineered for mining

Primary application
Macey® 25kV coupling systems are used to supply power to draglines, longwall machines, cranes and other types of equipment.

Industry-best ease of installation
• No special installation tools needed
• Smaller footprint and reduced weight versus the competition
• Intermateable with other manufacturers’ couplers
• Accommodates a wide range of cable types with entrance fittings, including fiber optic
• Retained bolting system
• Low insertion force/high current design
• Total air displacement—no potting of rear body termination point
• Slip-on stress cone termination module with compression type wire stems eliminates heat or cold shrinking (tyco) sleeves

Best-in-class reliability
• Fully shielded phase compartment eliminates phase to phase faults
• Louvered contact banding for: higher current capacity; lower contact pressure; improved short circuit performance

Increased ease of operation
• No altitude de-rating required
• Slip-on stress cone termination module eliminates strain on contact restraining clip
• Lockout/tagout feature

Service and support
• Four week lead time on standard configuration

Macey® 25kV cable mount coupler
Electrical ratings
- 25kV, 700 amp
- Three-phase

Electrical test data
- AC withstand: 50kV for 1 minute; 40kV for 6 hours
- Short circuit: 25kA for 0.3 seconds (3 tests, 2 10 minute intervals)
- Basic impulse level: 125kV B.I.L.
- Earth through fault: 8kA for 0.2 seconds (3 tests, 2 10 minute intervals)
- Heat rise: 700 amps after 100 cycle contact pre-conditions at 45k over ambient and no more than 10k over the conductor

Environmental ratings
- IP66/67 testing to IEC 60529

Standard materials
- Housing: Aluminum
- Adapter: Aluminum
- Insulated end cover: Aluminum
- Cast protection cover: Aluminum
- Contacts and wire stems: Silver-plated copper
- Hardware: 316 stainless steel

Specifications & features

**EASE OF INSTALLATION**
- Intermateable with other manufacturers' couplers
- Accommodates a wide range of cable types with entrance fittings
- Accommodates fiber optic cable (optional, contact factory for more information)
- Retained bolting system - no lost parts
- Total air displacement - no potting of rear body termination point
- Slip-on stress cone termination module with compression type wire stems eliminate heat or cold shrinking

**BEST-IN-CLASS RELIABILITY**
- Fully shielded phase compartment eliminates phase to phase faults

Cable mount coupler
Equipment mount coupler

**LOUVERED CONTACT BANDING**
- Higher current capacity
- Lower contact pressure
- Improved short circuit performance

**INCREASED EASE OF OPERATION**
- No altitude de-rating required
- Slip-on stress cone termination module eliminates strain on contact restraining clip
- Lockout/tagout feature for safety
25 kV coupling system – ordering information

Cable mount coupler

<table>
<thead>
<tr>
<th>Type</th>
<th>Part number</th>
<th>Cable diameter</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable mount</td>
<td>700-710-25KVAL</td>
<td>0.82 – 3.55”</td>
<td>Length: 25.00 in. (635 mm), Width: 9.50 in. (241 mm), Height: 10.00 in. (254 mm), Weight: 39.80 lbs. (18.1 kg)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20.83 – 90.17 mm</td>
<td></td>
</tr>
</tbody>
</table>

Equipment mount coupler

<table>
<thead>
<tr>
<th>Type</th>
<th>Part number</th>
<th>Cable diameter</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment mount</td>
<td>700-720-25KVAL</td>
<td>0.82 – 3.55”</td>
<td>Length: 13.54 in. (344 mm), Width: 10.00 in. (254 mm), Height: 10.00 in. (254 mm), Weight: 35.5 lbs. (16.1 kg)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20.83 – 90.17 mm</td>
<td></td>
</tr>
</tbody>
</table>

How to order

Refer to the ordering guides for required items, including:
- Equipment and cable mount couplers
- Additional required parts (Tables 1-5 on page 7)
- Installation kit (page 8)
- Mating components (page 8)

Cable mount coupler

1. Cable mount coupler and quantity
   Part # 700-710-25KVAL Qty.

2. Entrance fitting (Table 1)
   - For each coupler: (1) fitting required
   - Size based on outside diameter of cable
   Part # Qty.

3. Entrance fitting gasket (Table 2)
   - For each coupler: (1) fitting required
   - Size based on outside diameter of cable
   Part # Qty.

4. Cable termination module (Table 3)
   - For each coupler: (3) adapters required
   - Size based on outside diameter of conductor insulation
   Part # Qty.

5. Phase pins (Table 4)
   - For each coupler: (3) pins required
   - Size based on mm/AWG of conductor
   Part # Qty.

6. Ground terminal lugs (Table 5)
   - For each coupler: (2) lugs required
   - Size based on mm/AWG of conductor
   Part # Qty.

Mating components

The following are required for each mated pair of couplers (either cable or equipment mount). Order (3) phase insulators and (1) earth pilot connector for every 2 couplers.

Phase insulator (see page 8)
- For each mated pair: (3) required
  Part # 700-700-0020 QTY_3

Earth/pilot connector (see page 8)
- For each mated pair: (1) required
  Part # 700-25-0000 QTY_1
**Table 1: Entrance fittings**

<table>
<thead>
<tr>
<th>Type</th>
<th>Part number</th>
<th>Range (mm²/AWG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fittings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC150F3029</td>
<td>0.82” – 1.87”</td>
<td></td>
</tr>
<tr>
<td>EC150F3030</td>
<td>1.88” – 2.37”</td>
<td></td>
</tr>
<tr>
<td>EC150F3031</td>
<td>2.38” – 2.75”</td>
<td></td>
</tr>
<tr>
<td>EC150F3032</td>
<td>2.76” – 3.55”</td>
<td></td>
</tr>
</tbody>
</table>

**Table 2: Entrance fitting gaskets**

<table>
<thead>
<tr>
<th>Type</th>
<th>Part number</th>
<th>Range (mm²/AWG)</th>
<th>Use with entrance fitting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>fitting gaskets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC150F3004</td>
<td>0.82” – 0.87”</td>
<td></td>
<td>EC150F3029</td>
</tr>
<tr>
<td>EC150F3005</td>
<td>0.88” – 0.94”</td>
<td></td>
<td>EC150F3029</td>
</tr>
<tr>
<td>EC150F3006</td>
<td>0.95” – 1.01”</td>
<td></td>
<td>EC150F3029</td>
</tr>
<tr>
<td>EC150F3007</td>
<td>1.01” – 1.05”</td>
<td></td>
<td>EC150F3029</td>
</tr>
<tr>
<td>EC150F3008</td>
<td>1.06” – 1.12”</td>
<td></td>
<td>EC150F3029</td>
</tr>
<tr>
<td>EC150F3009</td>
<td>1.13” – 1.25”</td>
<td></td>
<td>EC150F3029</td>
</tr>
<tr>
<td>EC150F3010</td>
<td>1.26” – 1.37”</td>
<td></td>
<td>EC150F3029</td>
</tr>
<tr>
<td>EC150F3011</td>
<td>1.38” – 1.50”</td>
<td></td>
<td>EC150F3029</td>
</tr>
<tr>
<td>EC150F3012</td>
<td>1.51” – 1.62”</td>
<td></td>
<td>EC150F3029</td>
</tr>
<tr>
<td>EC150F3013</td>
<td>1.63” – 1.75”</td>
<td></td>
<td>EC150F3029</td>
</tr>
<tr>
<td>EC150F3014</td>
<td>1.76” – 1.87”</td>
<td></td>
<td>EC150F3029</td>
</tr>
<tr>
<td>EC150F3015</td>
<td>1.88” – 2.00”</td>
<td></td>
<td>EC150F3029</td>
</tr>
</tbody>
</table>

**Table 3: Cable adapters (terminating module) and bushings**

<table>
<thead>
<tr>
<th>Type</th>
<th>Part number</th>
<th>Range (mm²/AWG)</th>
<th>Adapter part number</th>
<th>Bushing part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>adapters</td>
<td></td>
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<tr>
<td>(terminating</td>
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</tr>
<tr>
<td>module) &amp;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bushings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC250J3001-C</td>
<td>0.750” – 0.970”</td>
<td></td>
<td>OS-W-972-CC A-082-C</td>
<td></td>
</tr>
<tr>
<td>EC250J3001-D</td>
<td>0.971” – 1.09”</td>
<td></td>
<td>OS-W-972-DD A-082-D</td>
<td></td>
</tr>
<tr>
<td>EC250J3001-E</td>
<td>1.10” – 1.260”</td>
<td></td>
<td>OS-W-972-EE A-082-E</td>
<td></td>
</tr>
<tr>
<td>EC250J3001-F</td>
<td>1.261” – 1.360”</td>
<td></td>
<td>OS-W-972-FF Not Required</td>
<td></td>
</tr>
<tr>
<td>EC250J3001-G</td>
<td>1.361” – 1.510”</td>
<td></td>
<td>OS-W-972-GG Not Required</td>
<td></td>
</tr>
</tbody>
</table>

**Table 4: Phase pins**

<table>
<thead>
<tr>
<th>Type</th>
<th>Part number</th>
<th>Range (mm²/AWG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase pins</td>
<td></td>
<td></td>
</tr>
<tr>
<td>700-25-0009-S</td>
<td>35 mm² / #1 AWG</td>
<td></td>
</tr>
<tr>
<td>700-25-0010-S</td>
<td>50 mm² / 1/0 AWG</td>
<td></td>
</tr>
<tr>
<td>700-25-0012-S</td>
<td>70 mm² / 2/0 AWG</td>
<td></td>
</tr>
<tr>
<td>700-25-0014-S</td>
<td>95 mm² / 3/0 AWG</td>
<td></td>
</tr>
<tr>
<td>700-25-0016-S</td>
<td>120 mm² / 4/0 AWG</td>
<td></td>
</tr>
<tr>
<td>700-25-0018</td>
<td>150 mm² / 300 MCM AWG</td>
<td></td>
</tr>
<tr>
<td>700-25-0020</td>
<td>185 mm² / 350 MCM AWG</td>
<td></td>
</tr>
<tr>
<td>700-25-0023</td>
<td>240 mm² / 500 MCM AWG</td>
<td></td>
</tr>
<tr>
<td>700-25-0026</td>
<td>300 mm² / 600 MCM AWG</td>
<td></td>
</tr>
</tbody>
</table>

**Table 5: Ground terminal lugs**

<table>
<thead>
<tr>
<th>Type</th>
<th>Part number</th>
<th>Range (mm²/AWG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>terminal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lugs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>700-25-0010</td>
<td>35 mm² / #1 AWG</td>
<td></td>
</tr>
<tr>
<td>700-25-0015</td>
<td>50 mm² / 1/0 AWG</td>
<td></td>
</tr>
<tr>
<td>700-25-0017</td>
<td>70 mm² / 2/0 AWG</td>
<td></td>
</tr>
<tr>
<td>700-25-0019</td>
<td>95 mm² / 3/0 AWG</td>
<td></td>
</tr>
<tr>
<td>700-25-0020</td>
<td>120 mm² / 4/0 AWG</td>
<td></td>
</tr>
<tr>
<td>700-25-0021</td>
<td>120 mm² / 250 MCM AWG</td>
<td></td>
</tr>
<tr>
<td>700-25-0025</td>
<td>150 mm² / 300 MCM AWG</td>
<td></td>
</tr>
<tr>
<td>700-25-0027</td>
<td>185 mm² / 350 MCM AWG</td>
<td></td>
</tr>
<tr>
<td>700-25-0029</td>
<td>240 mm² / 500 MCM AWG</td>
<td></td>
</tr>
<tr>
<td>700-25-0031</td>
<td>300 mm² / 600 MCM AWG</td>
<td></td>
</tr>
</tbody>
</table>
### Installation kit

<table>
<thead>
<tr>
<th>Type</th>
<th>Part number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete installation kit</td>
<td>EC250J3002</td>
<td>Complete installation kit includes the following materials and quantities:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• (3) tubes silicon grease</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• (1) roll vinyl electrical tape</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• (1) semiconductor tape</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• (3) bonding straps</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• (3) solvent cleaning wipes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• (1) emery cloth</td>
</tr>
</tbody>
</table>

### Mating components

<table>
<thead>
<tr>
<th>Type</th>
<th>Part number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mating components</td>
<td>700-700-0020</td>
<td>Phase insulator</td>
</tr>
<tr>
<td></td>
<td>700-25-0000</td>
<td>Earth/pilot connector</td>
</tr>
</tbody>
</table>
### Bill of Material

**Part number** | **Cable CSA**
--- | ---
700-25-0009 | 35 mm²
700-25-0010 | 50 mm²
700-25-0012 | 70 mm²
700-25-0014 | 95 mm²
700-25-0016 | 120 mm²
700-25-0018 | 150 mm²
700-25-0020 | 185 mm²
700-25-0023 | 240 mm²
700-25-0026 | 300 mm²

**Item #** | **Part number** | **Description** | **Qty.**
--- | --- | --- | ---
1 | 25-11-0001AL | Main housing | 1
2 | 25-10-0002AL | Front housing | 1
3 | 700-25-1000 | Interior | 3
4 | 25-30-0020 | Gland adapter | 1
5 | 25-30-0002 | Interface seal | 2
6 | 25-30-0003 | Gland cover o-ring | 1
7 | 25-30-0004 | Guiding pin | 2
8 | 25-30-0005 | Eye bolt | 2
9 | 25-30-0006 | Coupling nut | 2
10 | 25-30-0007 | Washer flat 1/2" | 2
11 | 25-30-0008 | Coupling bolt pivot pin | 2
12 | 11-30-0027 | Carry handle | 2
13 | SEE TABLE 1 | Phase pin | 3
14 | 25-30-0024 | Phase pin retainer clip | 3
15 | 25-30-0009 | Interior retainer | 1
16 | 25-30-0010 | Filler seal | 3
17 | 700-25-1001 | Pilot socket | 1
18 | SEE TABLE 2 | Compression plate | 1
19 | 25-30-0011 | Earth rod | 1
20 | 25-30-0012 | Compression rod | 6
21 | 25-30-0013 | Earth thimble | 1
22 | 25-30-0014 | Interior bracket | 2
23 | 25-30-0015 | Washer, tooth lock, M10 | 2
24 | 25-30-0016 | Plug | 1
25 | 25-30-0017 | Plug o-ring | 1
26 | 25-30-0018 | Roll pin | 2
27 | 11-30-0008 | Earth link | 3
28 | 11-30-0034 | Screw, M8x12 mm | 8
29 | 950-001-0010 | Washer, spring, M10 | 6
30 | 990-010-0016 | Screw, M8x12 mm | 1
31 | 990-010-0020 | Screw, M10x20 mm | 7
32 | 990-010-0050 | Screw, M10x50 mm | 8
33 | 148-2664 | Washer, spring, M8 | 8
34 | 148-2883 | Screw, M12x30 mm | 6
35 | 148-3146 | Washer, flat, M10 | 6

**Optional Parts**

- **SEE NOTE #1**
- Termination kit | 1
- 700-700-0020 | 700A shrouded main socket | 3

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**Phase pin**

**Compression plate**

<table>
<thead>
<tr>
<th>Part number</th>
<th>Bushing I.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>700-25-8001</td>
<td>1-3/8&quot;</td>
</tr>
<tr>
<td>700-25-8002</td>
<td>1-17/32&quot;</td>
</tr>
<tr>
<td>700-25-8003</td>
<td>1-21/32&quot;</td>
</tr>
</tbody>
</table>

*Note 1: Contact us for termination kit ordering:
ph: 866-764-5454
e: CrouseCustomerCTR@Eaton.com
**Additional cable mount coupler ordering worksheets**

### Cable mount coupler

<table>
<thead>
<tr>
<th>Type</th>
<th>Part number</th>
<th>Cable diameter (in. - mm.)</th>
<th>Dimensions (in. - mm. - lbs. - kg.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable mount</td>
<td>700-710-25KVAL</td>
<td>0.82 – 3.55” (20.83 – 90.17 mm)</td>
<td>25.00 x 635 x 9.50 x 241 x 10.00 x 254 x 39.80 x 16.1</td>
</tr>
</tbody>
</table>

### How to order

Refer to the ordering guides for required items, including:

- **Equipment and cable mount couplers**
- **Additional required parts (Tables 1-5 on page 7)**
- **Installation kit (page 8)**
- **Mating components (page 8)**

**Cable mount coupler**

1. **Cable mount coupler and quantity**
   
   Part # 700-710-25KVAL   Qty.

2. **Entrance fitting (Table 1)**
   - For each coupler: (1) fitting required
   - Size based on outside diameter of cable
   
   Part #   Qty.

3. **Entrance fitting gasket (Table 2)**
   - For each coupler: (1) fitting required
   - Size based on outside diameter of cable
   
   Part #   Qty.

4. **Cable termination module (Table 3)**
   - For each coupler: (3) adapters required
   - Size based on outside diameter of conductor insulation
   
   Part #   Qty.

5. **Phase pins (Table 4)**
   - For each coupler: (3) pins required
   - Size based on mm/AWG of conductor
   
   Part #   Qty.

6. **Ground terminal lugs (Table 5)**
   - For each coupler: (2) lugs required
   - Size based on mm/AWG of conductor
   
   Part #   Qty.

**Mating components**

The following are required for each mated pair of couplers (either cable or equipment mount). Order (3) phase insulators and (1) earth pilot connector for every 2 couplers.

**Phase insulator (see page 8)**
- For each mated pair: (3) required
  
  Part # 700-700-0020   QTY. 3

**Earth/pilot connector (see page 8)**
- For each mated pair: (1) required
  
  Part # 700-25-0000   QTY. 1
### Equipment mount coupler

<table>
<thead>
<tr>
<th>Type</th>
<th>Part number</th>
<th>Cable diameter</th>
<th>Dimensions</th>
<th>Length</th>
<th>Width</th>
<th>Height</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment mount</td>
<td>700-720-25KVAL</td>
<td>0.82 – 3.55”</td>
<td>in.</td>
<td>13.54</td>
<td>344</td>
<td>10.00</td>
<td>254</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20.83 – 90.17 mm</td>
<td>mm.</td>
<td>10.00</td>
<td>254</td>
<td>10.00</td>
<td>35.50</td>
</tr>
</tbody>
</table>

**How to order**

Refer to the ordering guides for required items, including:
- Additional required parts (Tables 1-5 on page 7)
- Installation kit (page 8)
- Mating components (page 8)

#### Equipment mount coupler

1. **Equipment mount coupler and quantity**
   - Part #: 700-720-25KVAL
   - Qty.

2. **Cable termination module (Table 3)**
   - For each coupler: (3) adapters required
   - Size based on outside diameter of conductor insulation
   - Part #: _____________
   - Qty.

3. **Phase pins (Table 4)**
   - For each coupler: (3) pins required
   - Size based on mm/AWG of conductor
   - Part #: _____________
   - Qty.

4. **Ground terminal lugs (Table 5)**
   - For each coupler: (2) lugs required
   - Size based on mm/AWG of conductor
   - Part #: _____________
   - Qty.

#### Mating components

The following are **required for each mated pair** of couplers (either cable or equipment mount). Order (3) phase insulators and (1) earth pilot connector for every 2 couplers.

- **Phase insulator (see page 8)**
  - For each mated pair: (3) required
  - Part #: 700-700-0020
  - Qty: 3

- **Earth/pilot connector (see page 8)**
  - For each mated pair: (1) required
  - Part #: 700-25-0000
  - Qty: 1