Encoder Brakes
Stearns Solenoid Actuated Brakes with Internally Mounted Encoder

Features
- Available in frame sizes 182TC - 505TC
- All enclosure ratings available, including hazardous location
- Separate conduit exits are provided for the brake and encoder leads, to minimize potential electrical interference
- Choice of popular encoder manufacturers

Benefits
- Encoder located in protected environment - enclosed inside the brake housing
- Simplified encoder mounting - using a hub or shaft-mount encoder - and it's already done!
- Reduced package length - an internal encoder does not add any length to the brake
- Lower installed cost

Ordering Information
Stearns brakes with internal encoders are purchased through the motor manufacturer, as the required shaft length and diameter are non-standard. An internal encoder is not a retrofit option, like a brake coil, heater or switch. To order the brake motor package, specify the brake model and encoder option from table on following page.
### Encoder Brakes (Con’t)

Stearns Solenoid Actuated Brakes with Internally Mounted Encoder

### Ordering Information

For Stearns Solenoid Actuated Brakes (SABs), with internal encoders - Specify the complete brake model number and encoder option from the following table. Contact factory for pricing.

#### Industrial Locations

<table>
<thead>
<tr>
<th>Frame Size</th>
<th>Brake Series</th>
<th>Torque Range (lb-ft)</th>
<th>Encoder Options</th>
<th>Connector / Cable</th>
<th>Stearns Drawing No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>182TC - 256TC</td>
<td>1-087-E00</td>
<td>25 - 105</td>
<td>HS20</td>
<td>M12, 8 Pin / 15’ or 5m</td>
<td>1087E00ED</td>
</tr>
<tr>
<td>324TC - 256TC</td>
<td>1-081-000</td>
<td>125 - 230</td>
<td>HS20, HS25</td>
<td>M12, 8 Pin / 15’ M12, 8 Pin / 5m</td>
<td>10810022ED</td>
</tr>
<tr>
<td>324TC - 405TC</td>
<td>1-082-000</td>
<td>125 - 440</td>
<td>HS20, HS25</td>
<td>M12, 8 Pin / 15’ M12, 8 Pin / 5m</td>
<td>10820022ED</td>
</tr>
<tr>
<td>444TC - 505TC</td>
<td>1-086-000</td>
<td>500 - 1000</td>
<td>HS20, HS25, HS35</td>
<td>M12, 8 Pin / 15’ M12, 8 Pin / 5m</td>
<td>10860022ED</td>
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</tbody>
</table>

#### Division 1 Hazardous Location

<table>
<thead>
<tr>
<th>Frame Size</th>
<th>Brake Series</th>
<th>Torque Range (lb-ft)</th>
<th>Encoder Options</th>
<th>Connector / Cable</th>
<th>Stearns Drawing No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>182TC - 256TC</td>
<td>1-087-300</td>
<td>10 - 105</td>
<td>HS20</td>
<td>M12, 8 Pin / 15’ M12, 8 Pin / 5m</td>
<td>1087308D</td>
</tr>
<tr>
<td>324TC - 256TC</td>
<td>1-082-300</td>
<td>125 - 330</td>
<td>HS20, HS25</td>
<td>M12, 8 Pin / 15’ M12, 8 Pin / 5m</td>
<td>1082304D</td>
</tr>
</tbody>
</table>

1 Brake must be supplied by the motor manufacturer (a longer "stepped-down" motor shaft is required).
2 Encoders are Optical, 1024 PPR.
3 Cables are shielded. Lengths are from encoder connector, inside the brake (not from outside of brake housing)
4 Request this drawing for shaft design requirements
5 No motor shaft modifications required, beyond the brake requirements for a standard hazardous location brake.
6 Drawing 1087308D brake model mounts close-coupled to the motor end bell.
   For the brake model that mounts to the motor fan guard - with a slinger - refer to drawing 10873052D.
7 Based on 182 C-frame on accessory end of motor (7-1/4” bold circle).

In addition to the fully enclosed brake with internal encoder options, encoders can be adapted externally to Stearns brakes:

- **Motor shaft mounted encoder tethered to the brake housing.**
- **Motor shaft mounted encoder bolted to the brake housing.**
- **Encoder mounts to the stepped shaft of a double C-face brake (145TC-256TC frame.)**
- **In-line coupling style encoder (182TC-256TC frame).**
Encoder Brakes
Stearns Solenoid Actuated Brakes
with Internally Mounted Encoder

Features
• Available in frame sizes 182TC - 505TC
• All enclosure ratings available, including hazardous location
• Separate conduit exits are provided for the brake and encoder leads, to minimize potential electrical interference
• Choice of encoder manufacturers - Dynapar and BEI

Benefits
• Encoder located in protected environment - enclosed inside the brake housing
• Simplified encoder mounting - using a hub or shaft-mount encoder - and it's already done!
• Reduced package length - an internal encoder does not add any length to the brake
• Lower installed cost

Ordering Information
Stearns brakes with internal encoders are purchased through the motor manufacturer, as the required shaft length and diameter are non-standard. An internal encoder is not a retrofit option, like a brake coil, heater or switch. To order the brake-motor package, specify the brake model and encoder option from the table on the reverse side of this page.
# Ordering Information

For Stearns Solenoid Actuated Brakes (SABs), with internal encoders -
Specify the complete brake model number and an option number from the following table.

## Industrial Locations

<table>
<thead>
<tr>
<th>Frame Size</th>
<th>Brake Series</th>
<th>Torque Range (lb-ft)</th>
<th>Encoder Options²</th>
<th>Connector / Cable³</th>
<th>List Price</th>
<th>Stearns Drawing No.⁴</th>
<th>Option Number for Ordering</th>
</tr>
</thead>
<tbody>
<tr>
<td>182TC - 256TC</td>
<td>1-087-E00</td>
<td>25 - 105</td>
<td>Dynapar HS20 BEI HS20</td>
<td>M12, 8 Pin / 15' M12, 8 Pin / 5m</td>
<td>$2,700⁶</td>
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<tr>
<td>324TC - 405TC</td>
<td>1-081-000</td>
<td>125 - 230</td>
<td>Dynapar HS20 BEI HS20</td>
<td>M12, 8 Pin / 15' M12, 8 Pin / 5m</td>
<td>$2,500⁶</td>
<td>10810022ED</td>
<td>810-D1</td>
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<td>810-B1</td>
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<tr>
<td>324TC - 405TC</td>
<td>1-082-000</td>
<td>125 - 440</td>
<td>Dynapar HS20 BEI HS20</td>
<td>M12, 8 Pin / 15' M12, 8 Pin / 5m</td>
<td>$2,500⁶</td>
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<tr>
<td>444TC - 505TC</td>
<td>1-086-000</td>
<td>500 - 1000</td>
<td>Dynapar HS20 BEI HS20</td>
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## Division 1 Hazardous Location⁶

<table>
<thead>
<tr>
<th>Frame Size</th>
<th>Brake Series</th>
<th>Torque Range (lb-ft)</th>
<th>Encoder Options²</th>
<th>Connector / Cable³</th>
<th>List Price</th>
<th>Stearns Drawing No.⁴</th>
<th>Option Number for Ordering</th>
</tr>
</thead>
<tbody>
<tr>
<td>182TC - 256TC</td>
<td>1-087-300</td>
<td>10 - 105</td>
<td>Dynapar HS20 BEI HS20</td>
<td>M12, 8 Pin / 15' M12, 8 Pin / 5m</td>
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<td>1087308D⁷</td>
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<td>873-B1</td>
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<tr>
<td>324TC - 405TC</td>
<td>1-082-300</td>
<td>125 - 330</td>
<td>Dynapar HS20 BEI HS20</td>
<td>M12, 8 Pin / 15' M12, 8 Pin / 5m</td>
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<td>823-B1</td>
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</tbody>
</table>

1 Brake must be supplied by the motor manufacturer (a longer "stepped-down" motor shaft is required).
2 Encoders are Optical, 1024 bit.
3 Cables are shielded. Lengths are from encoder connector, inside the brake (not from outside of brake housing).
4 Request this drawing for shaft design requirements.
5 List adder to 1087000 NEMA 4 brake.
6 No motor shaft modifications required, beyond the brake requirements for a standard hazardous location brake.
7 Drawing 1087308D brake model mounts close-coupled to the motor end bell.
   For the brake model that mounts to the motor fan guard, refer to drawing 10873081D.
   For the brake model that mounts to the motor fan guard - with a slinger - refer to drawing 10873052D.
8 Based on 182 C-frame on accessory end of motor (7-1/4" bolt circle).

In addition to the fully enclosed brake with internal encoder option, encoders can be adapted externally to Stearns brakes:

- Motor shaft mounted encoder tethered to the brake housing.
- Encoder mounts to the stepped shaft of a double C-face brake (145TC-256TC frame).
- Motor shaft mounted encoder bolted to the brake housing.
- In-line coupling style encoder (182TC-256TC frame).