Encoder Brakes

Stearns Solenoid Actuated Brakes with Internally Mounted Encoder

HS20 Encoder
(Shown)

1-082-300 Series Brake (shown)

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[1]

Frame Size	Brake Series	Torque Range (lb-ft)	Encoder Options[2]	Connector / Cable[3]	Stearns Drawing No.[4]
182TC - 256TC	1-087-E00	25 - 105	HS20	M12, 8 Pin / 15' or 5m	1087E00ED
324TC - 256TC	1-081-000	125 - 230	HS20 HS25	M12, 8 Pin / 15' M12, 8 Pin / 5m	10810022ED
324TC - 405TC	1-082-000	125 - 440	HS20 HS25	M12, 8 Pin / 15' M12, 8 Pin / 5m	10820022ED
444TC - 505TC	1-086-000	500 - 1000	HS20 HS25 HS35	M12, 8 Pin / 15' M12, 8 Pin / 5m	10860022ED

Division 1 Hazardous Location[5]

182TC - 256TC	1-087-300	10 - 105	HS20	M12, 8 Pin / 15' M12, 8 Pin / 5m	1087308D[6]
324TC - 256TC	1-082-300	125 - 330	HS20 HS25	M12, 8 Pin / 15' M12, 8 Pin / 5m	1082304D[7]

[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)
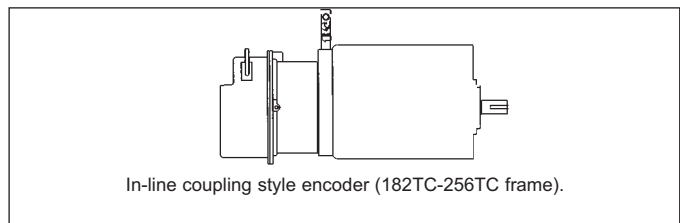
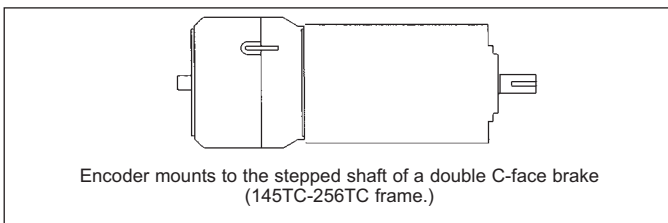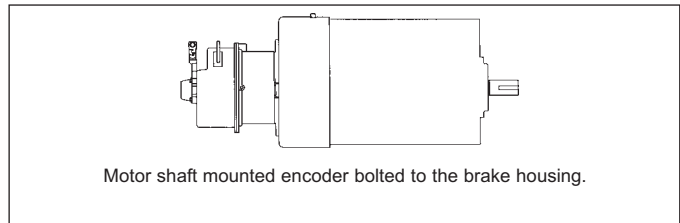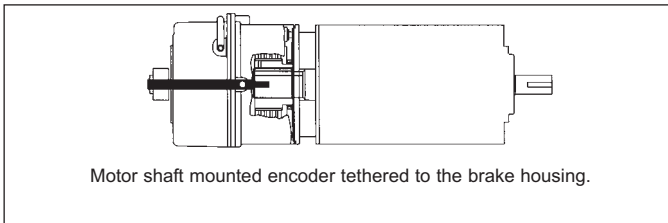[4] Request this drawing for shaft design requirements

[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

HS20 Encoder
(Shown)

1-082-300 Series Brake *(Shown)*
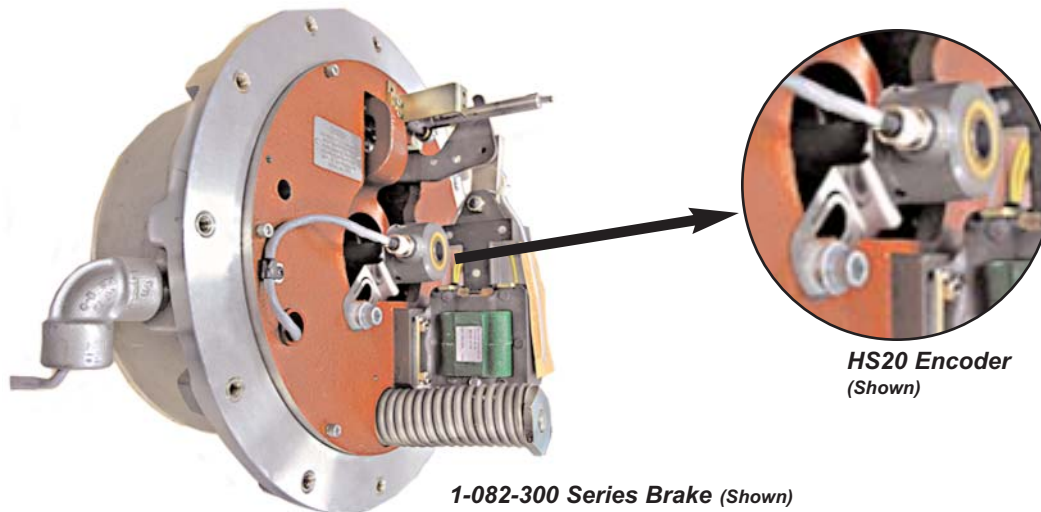
Features
• Available in frame sizes 182TC - 505TC
• All enclosure ratings available, including hazardous location
• Separate conduit exits are provided for the brake and encoder leads, to minimize potential electrical interference
• Choice of encoder manufacturers - Dynapar and BEI

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[1]

Frame Size	Brake Series	Torque Range (lb-ft)	Encoder Options[2]	Connector / Cable[3]	List Price Adder	Stearns Drawing No.[4]	Option Number for Ordering
182TC - 256TC	1-087-E00	25 - 105	Dynapar HS20 BEI HS20	M12, 8 Pin / 15' M12, 8 Pin / 5m	$2,700[5] $3,250[5]	1087E00ED 1087E00ED	87E-D1 87E-B1
324TC - 405TC	1-081-000	125 - 230	Dynapar HS20 BEI HS20	M12, 8 Pin / 15' M12, 8 Pin / 5m	$2,500 $3,000	10810022ED 10810022ED	810-D1 810-B1
324TC - 405TC	1-082-000	125 - 440	Dynapar HS20 BEI HS20	M12, 8 Pin / 15' M12, 8 Pin / 5m	$2,500 $3,000	10820022ED 10820022ED	820-D1 820-B1
444TC - 505TC	1-086-000	500 - 1000	Dynapar HS20 BEI HS20	M12, 8 Pin / 15' M12, 8 Pin / 5m	$2,500 $3,000	10860022ED 10860022ED	860-D1 860-B1

Division 1 Hazardous Location[6]

Frame Size	Brake Series	Torque Range (lb-ft)	Encoder Options[2]	Connector / Cable[3]	List Price Adder	Stearns Drawing No.[4]	Option Number for Ordering
182TC - 256TC	1-087-300	10 - 105	Dynapar HS20 BEI HS20	M12, 8 Pin / 15' M12, 8 Pin / 5m	$4,450 $4,925	1087308D[7] 1087308D[7]	873-D1 873-B1
324TC - 405TC	1-082-300	125 - 330	Dynapar HS20 BEI HS20	M12, 8 Pin / 15' M12, 8 Pin / 5m	$6,300 $6,775	1082304D[8] 1082304D[8]	823-D1 823-B1

[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.

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).