

Series 7EC5: Electric Caliper Brake

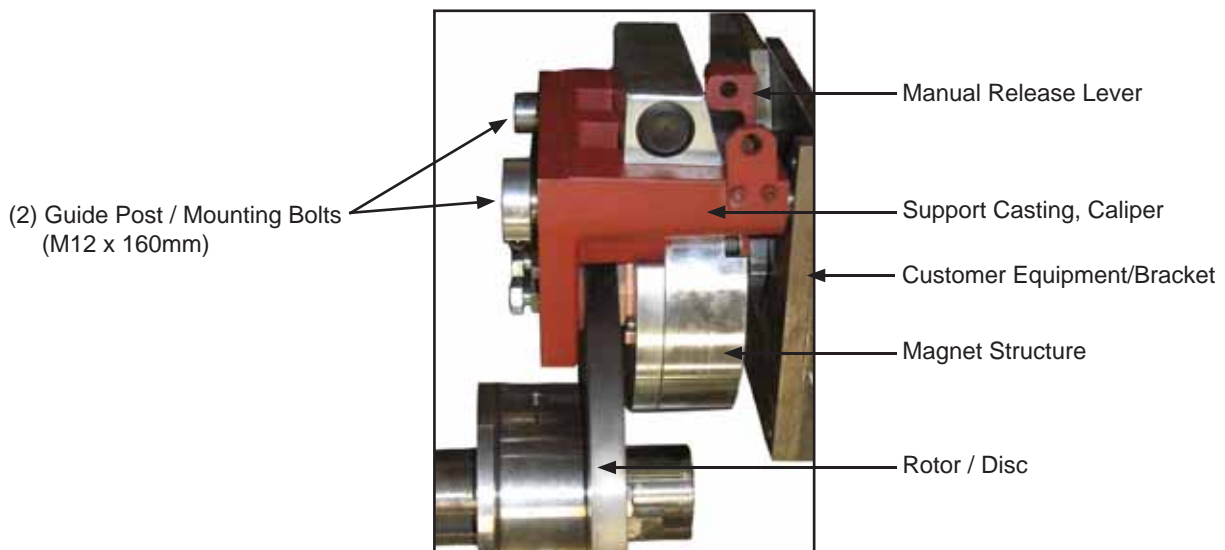
Applications:

- Material handling
 - Bulk handling conveyors
 - Cranes
 - Hoists
 - Winches
- Commercial passenger & industrial elevators
- Wind turbines
- Hillside Trams
- Hydro-Electric dam lock gate hoists
- Other heavy industry applications

Design

The 7EC is a spring-set electrically-released brake, for stopping and/or holding applications. It's a "floating" caliper design - where the brake is free to float (the support casting slides on two guide posts) so that the friction pads will contact both sides of the rotor/disc, while the rotor/disc can remain in the same axial position.

The rotor/disc is typically fixed to a shaft, shaft coupling, or other drive system component (for commercial elevator drives, it is part of the rope sheave). The brake caliper assembly is mounted to the customer's equipment with two bolts (that fit inside the guide posts).



Features / Benefits:

- High Torque Capacity — exceeds range of NEMA & IEC frame motor brakes
- High Thermal Capacity — Consult factory for Thermal Capacity rating, since it depends on specific disc design and application requirements.
- High speed capacity — Consult factory for applications above 1000 RPM.
- Adapts easily to drive systems — the disc can be mounted in several locations:
 - Directly to a drive shaft (for example, the disc can incorporate a hub, with a QD bushing)
 - Bolted to a coupling hub (several coupling manufacturers offer brake discs as an option - i.e., Falk Steelflex® grid coupling, Addax® composite disc coupling)
 - Mounts directly to large motors — motor manufacturers can fit disc to the extended shaft on accessory end of motor
- Simple, low-maintenance installation — electric operation eliminates the hydraulic/pneumatic components - and maintenance - associated with typical non-electric caliper brakes
- Optional environmental / corrosion protection package for outdoor installations
Meets IEEE 45 requirements for marine/maritime applications
- Low cost — in comparison to typical caliper brakes that require hydraulic or pneumatic systems

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Specifications:

- Torque Range: **1000 lb-ft** (1 caliper, with a 22" dia. disc)
to **5000 lb-ft** (4 calipers spaced around a 27" disc)

For higher or lower torque - consult factory for the number of calipers and diameter of disc

- Wear Adjustment: Friction pads are adjustable for wear

Voltage Ratings:

- 103/48 VDC (over-excitation/holding) or,
- 205/103 VDC
- 410/205 VDC

- Coil Watts: 200/50 (overexcitation/holding)

- Manual release, non-maintained, bi-directional

- Weight: 31 lb

Disc:

- Diameter: 330mm (13") minimum
- Thickness: 15-20mm (inch sizes available - consult factory)
- Runout: Maintain within .005" FIM (0,127mm FIM)
- Material: Cast iron (medium carbon steel, consult factory)
- Disc Speed: Maximum SFM based on application requirements. Consult Factory.

- UL Recognized Class H coil insulation system compliant to U.S. and Canadian requirements; File E125303

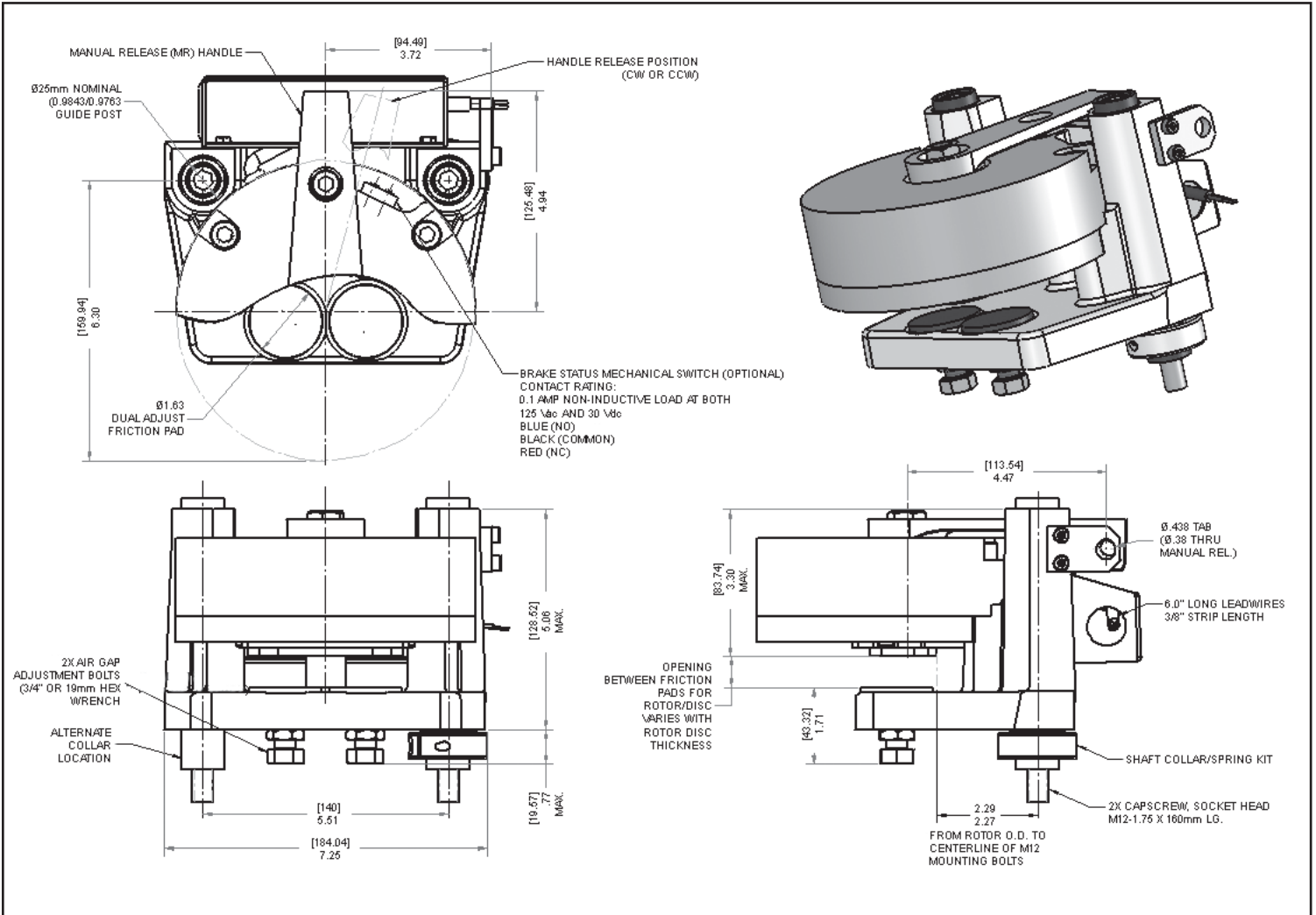
- Caliper mounting to be on a vertical disc only (horizontal shaft). 2D drawing (DWG or DFX), or a 3D model (SolidWorks, IGES, or STP), for complete dimensional information are available upon request.

Pricing:

- 7EC: \$2,085 list price (includes airgap shield as standard component). Consult Stearns for multipliers.

Options / List Price Adders:

- Environmental protection for outdoor installations - \$803
- "Quiet" brake release operation - for commercial elevators - \$178
- Rectifiers - with overexcite voltage
115 VAC input voltage - 103/48 VDC output voltage, p/n 412019611K
230 VAC input voltage - 207/103 VDC output voltage, p/n 412029301K
460 VAC input voltage - 414/207 VDC output voltage, p/n 412049601K
List price for all above rectifiers - \$960
- Brake release indicator switch, NO/NC - \$196
- Discs - Consult Stearns for specific designs and pricing



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