Advanced, versatile, & reliable

The EPC Model 25T/H is designed for high performance in demanding industrial environments, and can serve as a single solution for most 2.0” to 3.5” encoder applications, including HS20, HS25, and HS35 styles.

FEATURES:
• 2.5” Opto-ASIC encoder with low 2.0” profile
• Standard bore sizes from 0.25” to 1.125”
• Metric bore sizes from 6 mm to 28 mm
• Up to 1 MHz maximum frequency
• Resolutions to 10,000 CPR
• Versatile flex mount options
• IP66 sealing available
• Operating temps: -40° C to 105° C

APPLICATIONS
Motor-mounted feedback and vector control, specialty machines, robotics, web process control, paper & printing, high power motors.

Multiple Output Types
For versatility in new applications or retrofits, the 25T/H can be specified with Open Collector, Push-Pull, Line Driver, or Pull-Up Resistor. A 5V fixed output option is available with Line Driver or Push-Pull.

Disk Resolutions
With resolutions from 1 to 10,000 CPR, the Model 25T/H suits a wide range of application requirements.

IP66 Sealing
IP66 sealing is available for applications where water or heavy, fine dust is present. Standard sealing rating is IP50.

Bore Inserts
Bore insert kits allow the 25T/H to replace several encoders with just one model. Offering 22 bore sizes from 0.25” to 1.125” (6 mm to 28 mm), the non-conducting ULTEM bore insert material provides thermal and electrostatic discharge (ESD) isolation.

Flex Mount Options
Anti-rotation flex mounts accommodate a variety of mounting requirements for both OEM and retrofit applications.

Connector Options
The 25T/H accommodates industry-standard connectors with a wide range of options.
Advanced design for superior performance

ULTEM 1000 Bore Inserts
- Effective thermal barrier
- Protection from ESD

Cooling Fins
- Dissipates heat; protects bearings and electronics
- Design allows for a large 1.125” max bore size

Opto-ASIC Sensing
- Wide sensor to disk air gap
- Stable over broad temp range (-40° C to 105° C)
- Reduced risk of damage from shock and vibration
- Phased-array sensor for clean, reliable signal
- "Board on a chip" design reduces number and size of components

Composite Housing
- Proprietary high-strength, corrosion-resistant material
- Lightweight housing reduces bearing wear
- Embedded particles provide noise protection

Radial Ball Bearings
- Robust 30 mm internal diameter
- PolyrexE bearing grease resists high temps, corrosion, and offers noise protection

Motor Kits
- SG tether arm mount
- Mating connector
- 56C protective encoder cover

ADDITIONAL OPTIONS
Corrosion Resistance
- Stainless steel M12 connector
- Corrosion resistant gland and cable
- Stainless steel shaft collar and hardware

Model 25T/H Specifications

Electrical
- Input Voltage: 4.75 to 28 VDC max for temperatures up to 85° C
  4.75 to 24 VDC max for temperatures between 85° and 105° C
- Input Current: 100 mA max with no output load
- Output Format: Incremental – Two square waves in quadrature with channel A leading B for clockwise shaft rotation, as viewed from the mounting face.
- Output Types:
  - Open Collector – 20 mA max per channel
  - Pull-Up – Open Collector with 2.2k ohm internal resistor, 20 mA max per channel
  - Push-Pull – 20 mA max per channel
  - Line Driver – 20 mA max per channel
  (Meets RS 422 at 5 VDC supply)
- Index: Once per revolution.
  - 1 to 360 CPR: Unrated
  - 361 to 10,000 CPR: Gated to output A
  Max Frequency: 250 kHz for 1 to 2500 CPR
  500 kHz for 2501 to 5000 CPR
  1 MHz for 5001 to 10,000 CPR
- Electrical Protection: Reverse voltage and output short circuit protected. NOTE: Sustained reverse voltage may result in permanent damage.
- CE Testing: Emissions tested per EN61000-6-3:2001 as applicable. Immunity tested per EN61000-6-2:2005 as applicable.
- Min. Edge Sep.: 45° electrical min, 63° electrical or better typical
- Rise Time: Less than 1 microsecond
- Accuracy: Within 0.1° mechanical from one cycle to any other cycle, or 6 arc minutes.

Mechanical
- Max Shaft Speed: 6000 RPM, 8000 RPM intermittent
  4000 RPM for IP66 seal option
- Bore Tolerance: -0.0005” to +0.0005”

Environmental
- Storage Temp: -20° to 85° C
- Humidity: 98% RH non-condensing
- Vibration: 20 g @ 5 to 2000 Hz
- Shock: 80 g @ 11 ms duration
- Sealing: IP50, IP66 with shaft seals at both ends

Not sure which motion feedback is right for your application? Give us a call. When you call EPC, you talk to engineers and encoder experts who can help you specify the right encoder solution for your motion control application. Contact EPC today.