The Model 58TF Accu-CoderPro™ is a 58 mm thru-bore encoder that is specifically designed for the challenges of an industrial environment. Its advanced set of electronics allow the encoder to be configured to meet your exact application needs. Choose from 6 output types, 32 different waveforms, and select any resolution from 1 to 65,536 CPR (that’s 262,144 counts in full quadrature). The Model 58TF is also highly mechanically configurable, with bore options up to 5/8” or 15 mm, several flexible mounting options, multiple connector options, and sealing up to IP67. This versatile thru-bore encoder can go in almost any application.

**COMMON APPLICATIONS**
Motor Control, Conveyors, Elevator Controls, Machine Control, Food Processing, Process Control, Robotics, Material Handling, Textile Machines and all types of Motion Control Feedback

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**NOTES:**
1. All output types are 5V to 30V in/out except HS Line Driver and P5 Push-Pull output types, which are 5-30VDC in and 5VDC out.
2. Open Collector (OC) and Pull-Up Resistor (PU) outputs not recommended for CPR > 8192 and/or frequencies > 150 kHz.
3. 7-pin MS Connector does not provide Index Pulse when selected output is Line Driver (HV or HS).
4. 5-pin M12 Connectors only available with Pull-Up, Open Collector, and Push-Pull output types.
5. For non-standard English cable lengths enter 'F' plus cable length expressed in feet. Example: F06 = 6 feet of cable. For non-standard metric cable lengths enter 'M' plus cable length expressed in meters. Example: M06 = 6 meters of cable. Frequency above 300 kHz standard cable lengths only.
**MODEL 58TF SPECIFICATIONS**

**Electrical**
- Input Voltage: 4.75 to 30 VDC max. See Output Types for limitations
- Input Current: 100 mA max with no output load (65 mA typical)
- Output Format: Incremental, Programmable. See Waveforms on following page for options.
- Output Types:
  - **Line Driver**\(^*\) (HV) – 20 mA max per channel, max freq. 1.0 MHz, 5 VDC max at 100°C or 24 VDC max at 85°C.
  - **Line Driver**\(^*\) (HS) – 5-30 VDC in/5 VDC out, 20 mA max per channel, max freq. 2.7 MHz, 5 VDC max at 100°C.
  - **Push-Pull (PP)** – 20 mA max per channel, max frequency 1.0 MHz, 5 VDC max at 100°C or 24 VDC max at 85°C.
  - **Push-Pull (PS)** – 5-30 VDC in/5 VDC out, 20 mA max per channel, max frequency 2.7 MHz, 5 VDC max at 100°C.
  - **Open Collector (OC)** – 100 mA max per channel, 200 kHz max freq recommended.
  - **Pull-Up (PU)** – 2.2k ohm internal resistors, 100 mA max per channel, 150 kHz max freq recommended, max temp 85°C at > 2 VDC max temp 100°C.
  - Meets RS 422 at 5 VDC supply

**Max Frequency**
- 2.7 MHz subject to RPM restrictions for high resolution (CFR):
  - 5000 RPM max for CPR 16385 to 32768 and 2500 RPM max for CPR 32769 to 65536
  - NOTE: Use 5 VDC Line Driver (HS or HV output type) to obtain high frequencies.

**CE/EMC**
- Immunity tested per EN 61000-6-2:2005
- Emission tested per EN 61000-6-4:2007 + A1: 2011

**Rise Time**
- Better than 0.015° or 54 arc-sec from true position

**Mechanical**
- Max Shaft Speed: 6000 RPM. Higher shaft speeds may be achievable, contact Customer Service.
- Shaft Material: 303 Stainless Steel
- Shaft Rotation: Bi-directional
- Bore Tolerance: -0.0005\(^*\) +0.001\(^*\)
- User Shaft Tolerances:
  - Radial Runout: ±0.030 max
  - Axial Endplay: ±0.030 max
- Starting Torque:
  - IP50 sealing: 3.0 oz-in typical
  - IP64 sealing: 4.0 oz-in typical
  - IP66 or IP67 sealing: 7.0 oz-in typical
- Moment of Inertia: 5.5 x 10^-4 oz-in-sec²
- Housing: Black non, corrosive finish
- Weight: 10 oz.

**Environmental**
- Operating Temp: -20°C to 85°C for standard models to 100°C for extended temp option
- NOTE: For IP66 or IP67 sealing derate max temperature of 100°C by 4°C for every 1000 RPM above 2000 RPM.
- Humidity: 95% RH non-condensing
- Vibration: 10 to 2000 Hz A 20g (International Standard ISO 60668-2-6)
- Shock: 80g @ 6 ms Duration (International Standard ISO 60668-2-27)
- Sealing: IP50 standard; IP64, IP66 or IP67 optional

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**MODEL 58TF / 58HF 3-POINT FLEX MOUNT (SE)**

**MODEL 58TF / 58HF CONNECTOR OPTIONS**

**MODEL 58TF / 58HF MOUNTING OPTIONS**

**WIRING TABLE**

For EPC-supplied mating cables, refer to wiring table provided with cable. Trim back and insulate unused wires.
WAVEFORMS

Choose any of these waveforms when ordering.

Odd numbers - A leads B
Even numbers - B leads A
A and B - High Going Index
W and X - Low Going Index
A and W - 90 Degree Index
B and X - 180 Degree Index