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# Encoder Selection Guide

## SAE Dimension Encoders & Metric Dimension Encoders

| Encoder Selection Guide | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Type | Duty | Series | Encoder Diameter | Shaft Diameter | Shaft Type | Operating Voltage (VDC) and Electrical Output | IP Rating | Cable | Max Radial Load (N) | Max Axial Load (N) | Available Resolutions (PPR) | Brand |
| Incremental | Modular Kit | AMT | 28mm, 42mm | 2, 3, 4, 5, 6, 8 mm 3/16, 1/4, 3/8, 1/2, 5/8 inch | Hollow | 5V Line Driver (TTL) or 5V Push-Pull (Totem Pole) | IP20 | Custom cables sold separately | N/A | N/A | Programmable up to 4096 | Same Sky |
| Incremental | Modular Kit | MTRA | 31mm | 5mm 1/4", 3/8" | Hollow | 5V Line Driver (TTL) or 5V Push-Pull (Totem Pole) | IP20 | Custom cables sold separately | N/A | N/A | 400, 1000 | SureStep |
| Incremental | Light Duty | TRD-S(H)R | 38mm, 40mm | 8mm | Solid or Hollow | 5V Line Driver (TTL) or 5-26V NPN/PNP Open Collector (HTL) | IP50 or IP65 | Integral 2m pigtal cable | 20 | 10 | 100, 200, 360, 500, 600, 1000, 1024, 2000, 2500 | JTEKT |
| Incremental | Light Duty | A41 | 41mm | 1/4" | Solid or Hollow | 5-30VDC Universal output circuit: Push-Pull (Totem Pole), or NPN/PNP Open Collector (HTL), or Line Driver (TTL) | IP64 | Integral 2m pigtal cable | 20 | 20 | 100, 200, 360, 500, 1000, 1024, 200, 2048, 3600, 4096 | Lika |
| Incremental | Medium Duty | A50 | 50mm | 1/4", 3/8" | Hollow | 5-30VDC Universal output circuit: Push-Pull (Totem Pole), or NPN/PNP Open Collector (HTL), or Line Driver (TTL) | IP65 | M12 cables sold seperately | 20 | 20 | 360, 1000, 1024, 2048 | Lika |
| Incremental | Medium Duty | A80 | 80mm | 30mm (reducer bushings available for 19 & 20mm, 5/8", 7/8", 1, and 1 1/8") | Hollow | 5-30VDC Universal output circuit: Push-Pull (Totem Pole), or NPN/PNP Open Collector (HTL), or Line Driver (TTL) | IP64 | M23 cables sold separately | 30 | 30 | 1024 | Lika |
| Incremental | Medium Duty | AQ58/59 | 58mm, 59mm | 3/8" solid, 15mm hollow (reducer bushings available for 6, 8, 10, 11, 12 mm; 1/4, 3/8, 1/2 inch) | Solid or Hollow | 5-30VDC Universal output circuit: Push-Pull (Totem Pole), or NPN/PNP Open Collector (HTL), or Line Driver (TTL) | IP65 | M12 cables sold seperately | 100 | 100 | Programmable from 1 to 16,384 (default 1024) | Lika |
| Incremental | Medium Duty | AR01 | 58mm | 15mm | Solid Dual-shaft | 5-30VDC Universal output circuit: Push-Pull (Totem Pole), or NPN/PNP Open Collector (HTL), or Line Driver (TTL) | IP65 | M12 cables sold seperately | 50 | 50 | 250 (linear res: 0.36 deg/cts) 1250 (linear res: 0.072 deg/cts) | Lika |
| Incremental | Medium Duty | TRDA-20 | 2" | 3/8" | Solid | 5VDC Line Driver (TTL) or 5-30VDC Push-Pull (Totem Pole) | IP50 | Integral 2m pigtal cable | 50 | 30 | 100, 360, 500, 1000, 1024, 2500 | JTEKT |
| Incremental | Medium Duty | TRDA-25 | 2.5" flange (w/2.0" body) | 3/8" | Solid | 5VDC Line Driver (TTL) or 5-30VDC Push-Pull (Totem Pole) | IP65 | Military Spec (MS) cables sold seperately | 50 | 30 | 100, 360, 500, 1000, 1014, 2500 | JTEKT |
| Incremental | Medium Duty | TRD-N(H) | 50mm | 8mm | Solid or Hollow | 5VDC Line Driver (TTL) or 5-30VDC Push-Pull (Totem Pole) | IP65 | Integral 2m pigtal cable | 50 | 30 | 3, 4, 5, 10, 30, 40, 50, 60, 100, 120, 200, 240, 250, 300, 360, 400, 480, 500, 600, 750, 1000, 1024, 1200, 2000, 2500 | JTEKT |
| Incremental | Heavy Duty | TRD-GK | 78mm | 10mm | Solid | 10-30VDC Push-Pull (Totem Pole) | IP65 | Integral 2m pigtal cable | 100 | 50 | 30, 100, 120, 200, 240, 250, 300, 360, 400, 500, 600, 1000, 1200, 2000, 2500, 3600, 5000 | JTEKT |
| Absolute | Medium Duty | TRD-NA | 50mm | 8mm | Solid | 10-30V NPN/PNP Open Collector (HTL) | IP65 | Integral 2m pigtal cable | 50 | 30 | 32, 64, 128, 180, 256, 360, 512, 720, 1024 (gray code) | JTEKT |