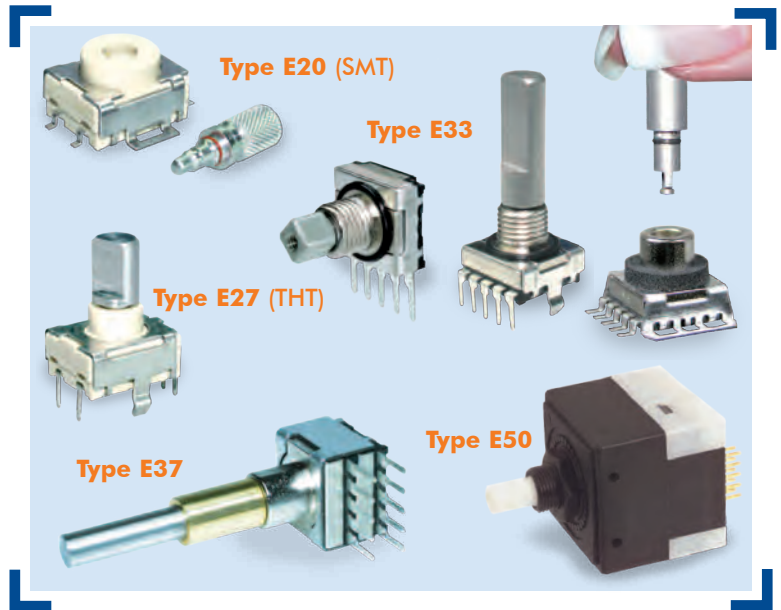
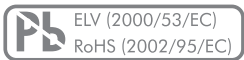


Encoders Overview

- 16 to 32 detents resolution
- High life expectancy
- Various switching torques from 0.5 to 2.5 Ncm
- Gold plated contacts
- THT or THR/SMT reflow
- Front panel sealing: Up to IP68
- Operating temperature range: Up to -40 to +85°C
- Various options and customization



Type Comparison

Features / Encoder Type	Type E20 & E27 (Cost Effective)	Type E33 (High Performance)	Type E37 (Dual Concentric)	Type E50 (Magneto-Optical)
Summary	Mechanical incremental encoder with 16 or 30 detents and optional push button switch.	Mechanical incremental encoder with 16 or 32 detents and optional push button switch.	Dual concentric encoder with 16 or 32 detents and optional push button switch.	High-end, long life encoder with 24 or 32 detents and optional push button switch.
PCB mounting	THT (E27) or SMT (E20)	THT or SMT	THT	None (cable connector)
Contact plating	AuCo (hard gold)	AuCo (hard gold)	AuCo (hard gold)	Contactless; optical sensing
Rotational life	100,000 revolutions	Up to 1,000,000 revolutions	Up to 1,000,000 revolutions	10,000,000 revolutions
Standard switching torque	0.5, 1.5, 2.5 Ncm or no detents	0.5, 1.0, 1.5, 2.0, 2.5 Ncm or no detents <i>SWISS CLICK INDEXING SYSTEM™</i>	0.5, 1.0, 1.5, 2.0, 2.5 Ncm or no detents <i>SWISS CLICK INDEXING SYSTEM™</i>	0.45, 0.6, 1.3 or 1.5 Ncm (magnetic indexing)
Push button force	3, 6 N or no push button	3, 6 N or no push button	3, 6 N or no push button	5 N or no push button
Operating temp.	-40 to +85°C	-40 to +85°C	-40 to +85°C	-20 to +70°C
IP sealing	IP50, optional IP67	IP60, opt. IP68 (1 bar, 1 hour)	IP60, opt. IP68 (1 bar, 1 hour)	IP50
Shaft style	Metal, snap-in mechanism	Metal, snap-in mechanism	Metal	Plastic
Bushing	Threaded M7 x 0.75 or non-threaded, plastic	Threaded M7 x 0.75 or non-threaded, metal	Threaded M7 x 0.75 or non-threaded, metal	Threaded M10 x 0.75, plastic
Body dimensions	11.5 x 13.75 x 6.5 mm	11.5 x 12.3 x 4.9 mm	11.5 x 12.3 x 9.1 mm	30.3 x 30.3 x 30.5 mm
Packaging	Tray or tape & reel	Tray or tape & reel	Tray	Tray
Standard product variety	<ul style="list-style-type: none"> ■ Vertical or horizontal ■ THT (THR) or SMT reflow ■ Threaded or non-threaded ■ 3 or 6 N PB force or no PB ■ 16, 30 or no detents ■ 0.5, 1.5 or 2.5 Ncm ■ IP50 or IP67 sealing ■ Various shaft types ■ Tray or tape & reel 	<ul style="list-style-type: none"> ■ Vertical or horizontal ■ THT (THR) or SMT reflow ■ Threaded or non-threaded ■ 3 or 6 N PB force or no PB ■ 16, 32 or no detents ■ 0.5, 1.0, 1.5, 2.0 or 2.5 Ncm ■ IP60 or IP68 sealing ■ Various shaft types ■ Tray or tape & reel 	<ul style="list-style-type: none"> ■ Vertical or horizontal ■ THT (THR; reflowable) ■ Threaded or non-threaded ■ 3 or 6 N PB force or no PB ■ 16, 32 or no detents ■ 0.5, 1.0, 1.5, 2.0 or 2.5 Ncm ■ IP60 or IP68 sealing 	<ul style="list-style-type: none"> ■ 5 N PB force or no PB ■ 24 or 32 detents ■ 0.45, 0.6, 1.3 or 1.5 Ncm ■ 6 mm or ¼" shaft diameter ■ 5 VDC regulated or 5 to 26 VDC operating voltage
See page	21-25	27-30	31-34	35-38

Application Examples



Vehicle instrumentation

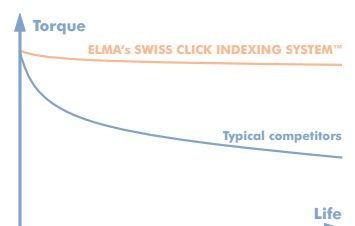


Aircraft transponder



Handheld radio

SWISS CLICK INDEXING SYSTEM™



The Swiss Click Indexing System™ ensures consistent torque over life.