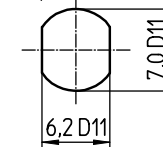
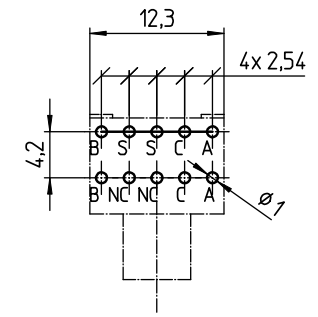


Front panel cut-out



Footprint / Print Layout
THT horizontal
(view from mounting side)



PCB-thickness: 1 - 1,5 mm

E37-CT6330-1: THT horizontal, threaded M7x0.75, 6 N PB, 2x16 detents/2.5 Ncm, 2x8 PPR, IP60

General Specifications for E37:

Mechanical Data

Inner shaft: *
16 detents with 2.5 Ncm (+/- 30%) or no detents

Outer shaft: *
32, 16 or no detents

For 32 detents: 0.5 or 2.0 Ncm (+/- 30%)
For 16 detents: 1.5 or 2.5 Ncm (+/- 30%)

Rotational life: **
1,000,000 revolutions min. with 0.5 or 1.5 Ncm switching torque or with no detents
500,000 revolutions min. with 2.0 Ncm switching torque
300,000 revolutions min. with 2.5 Ncm switching torque

Residual switching torque (end of life):
90% typ.

Shaft strength:
100 N min. push, 100 N min. pull, 50 Ncm min. bending

Fastening torque of nut:
100 Ncm max.

Electrical Data

Coding/output:
2-bit quadrature

Resolution:
16 or 8 pulses per revolution (PPR) per channel

Phase shift (A leads B clockwise):
90° (+/- 70°)

Pulse width per channel:
180° (+/- 36°)

Operating speed:
60 RPM max.

Contact bouncing time:
2 ms max.

Contact resistance:
10 Ohms max. (over the entire rotational life)

Dielectric withstanding voltage to housing/shaft:
500 VDC during 60 seconds (MIL-STD-202G, method 301)

Material Data

Shaft:
Stainless steel 1.4305 / brass CuSn39Pb3

Housing:
Zinc diecast with glossy nickel plating,
fiber enforced high performance plastic

Nut:
Brass with glossy nickel plating

Contact system:
Alloy copper, AuCo plated (hard gold)

Soldering leads:
Alloy copper, tin plated

Housing clamp, retention clips:
Tin-plate

O-rings:
NBR (Nitril), 70 shore, reflowable

Gasket (non-threaded bushing):
Closed-cell EPDM based rubber, 45 shore A,
complies to SAE J 18-79, reflowable

Environmental Data

Operating temperature range: **
-40 to +85°C (IEC 60068-2-14)

Storage temperature range:
-65 to +125°C (IEC 60068-2-14, MIL-STD-202G,
method 107G, condition B-3)

Humidity (non condensing):
93% RH max. (MIL-STD-202G, method 103B, condition B)

IP sealing:
IP60, optional IP68* (1 bar, 1 hour) shaft/front panel
sealing (non-threaded bushing; gasket provides IP65*)

Vibration:
29 Gms max. @ 100 to 1000 Hz (MIL-STD-202G,
method 214A, condition 1H/15 minutes)

Shock:
100 G max. (MIL-STD-202G, method 213B, condition C)

Flammability:
UL94-V0 (IP65/IP68: O-rings and non-threaded bushing
gasket are UL94-HB)

Additional Data for Push Button Switch

Push button actuation force (new condition):
6 N (+/- 30%)

Push button switch travel:
0.5 (+/- 0.2) mm

Push button switch life: **
200,000 actuations min.

Residual push button actuation force (end of life):
90% typ.

Contact bouncing time:
2 ms max.

Dielectric withstanding voltage to housing/shaft:
500 VDC during 60 seconds (MIL-STD-202G, method 301)

Contact pads:
Alloy copper, AuCo plated (hard gold)

Membrane switch:
Stainless steel, AuCo plated (hard gold)

* O-ring of IP65/IP68 shaft sealing may slightly increase switching torque.

**2 Rotational/actuation life is tested at room condition (+25°C, 50 to 60% RH).
Operating speed is 60 RPM (encoder) and 2 Hz (push button).
Different operating conditions may decrease life expectation dramatically.

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OneSpaceDesigner
Cadim/EDB

Tolerances unless otherwise specified		±0.2 / Koordinaten ±0.1		Last Changes:		Part-No.	
Notes:		Material		Name		E37-CT6330-1	
-		.		Date		Designed 22.05.2008 MEIERM	
-		Dimension x		Title		Dual E37-CT6330-1	
-		similar drawing x		Kundenspezifikation horizontal			
-		Replaced by x		Document-No.		Vers.	
-		First angle projection		Scale		Rev.	
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