

Model # **YP15-PLUG-01[B,A,C]**

- Features**
- Clutch mechanism
 - < 50ms operation
 - 196 authorization

General Description

Die-cast electronic plug with clutch mechanism engaging in bi-directional (B), anti-clockwise (A) or clockwise (C) directions. Features sealed keyway, contactless connection, hardened drill-guard, key retention.



Warranty 1 year

Ratings

Ingress protection	To be certified	
EMC/EMI	IEC61000(2,3,4,8,9)	ESD 15kV
Corrosion resistance	To be certified	
Cold	IEC60068-2-1	-40°C
Dry heat	IEC60068-2-2	+55°C

Security

Authorizations	196	
Key strength	64	bits
Supported protocols	SG0	

Mechanical

Dimensions	12.79 x 29.84	mm
Breaking torque	3.0	Nm
Safe sustained torque	2.5	Nm
Time from insertion to engage	50	ms
Engaging angle	32	°
Retention hole	4.0	mm

Electrical

Drive voltage	3	V
Drive frequency	500	KHz

Power consumption

Actuation	6.7	mA
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Operating life

Actuation probability

>99.0

%

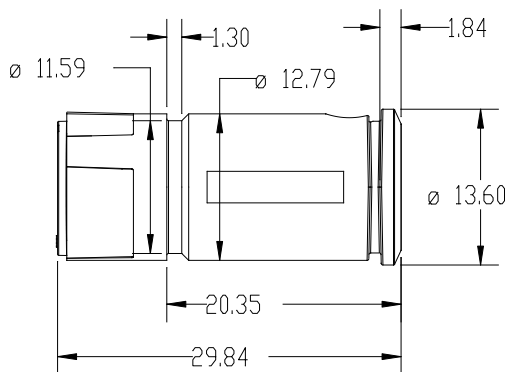


Figure 1: Plug dimensions

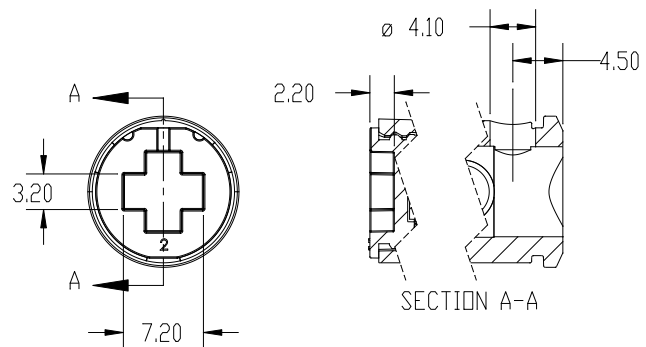


Figure 2: Tailpiece and key retention

Notes

1. The plug may be retained using the 0.6 x 1.3mm annular groove.
2. A lockset mechanism may be driven by coupling to the 7.2 x 3.2 x 2.2mm cruciform cavity in the plug tailpiece.
3. A 4mm ball-bearing in the key retention hole will stand proud by 0.5mm with or without key fully inserted, and lift 0.9mm during key insertion. A 3.5mm ball-bearing will be flush and also lift 0.9mm.
4. The tailpiece has a "home" mark that lines up with a corresponding mark on the plug body to indicate the plug home position.
5. The bi-direction clutch model (B) will rotate freely in both directions when not engaged, and engage at $\pm 32^\circ$ from the home position upon insertion of an unauthorized key. This behaviour is symmetric at each 120° rotation of the tailpiece.
6. The clockwise (C) model will always engage in the anti-clockwise direction at the home position, and engage upon insertion of an authorized key inserted and rotated clockwise by 32° . This behaviour repeats only every 360° .
7. The anti-clockwise (A) model behaves identically to the clockwise model but in the reverse direction.
8. The plug does not require maintenance or lubrication for an operating life in excess of 100k cycles and no lubricants should be applied.
9. The plug should be protected from viscous or tacky lubricants that may seep into the clutch cavity and gum up the mechanism. The effect will be to prevent the plug from engaging.
10. The plug will fail to engage if turned sooner than 50ms from full key insertion.

11. Wiping the plug guarantees any previously issued authorizations will no longer work.