

Features

- Low profile absolute encoder
- High-class rotational feel
- Haptic detent feedback
- Sealed shaft
- Insulated plastic shaft and bushing
- RoHS compliant*



PAC18R - 18 mm Low Profile Absolute Encoder

Electrical Characteristics

Output..... 4-bit gray code
 Contact Rating..... 1 mA @ 10 VDC
 Insulation Resistance
 10 megohms minimum @ 500 VDC
 Dielectric Withstanding Voltage
 Sea Level..... 500 VAC minimum
 Contact Resistance 100 ohms maximum

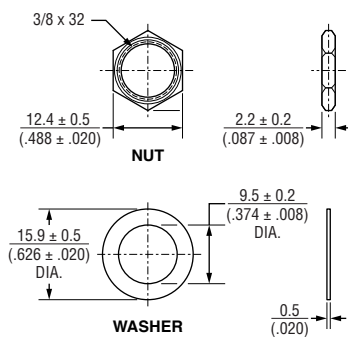
Environmental Characteristics

Operating Temperature Range
 -35 °C to +70 °C (-22 °F to +158 °F)
 Storage Temperature Range
 -40 °C to +80 °C (-40 °F to +185 °F)
 IP Rating..... IP 64

Mechanical Characteristics

RPM (Operating) 60 maximum
 Mechanical Angle 360 ° continuous
 Torque
 Starting and Running 10 to 200 gf-cm
 Detent 350 to 650 gf-cm
 Mounting 7 kgf-cm maximum
 Rotational Life..... 30,000 cycles minimum
 Soldering Condition
 Wave Soldering..... 260 °C for 3 seconds
 Manual Soldering... 350 °C for 3 seconds
 Hardware..... One flat washer and one hex nut supplied with threaded bushing versions

Hardware



WARNING
 Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

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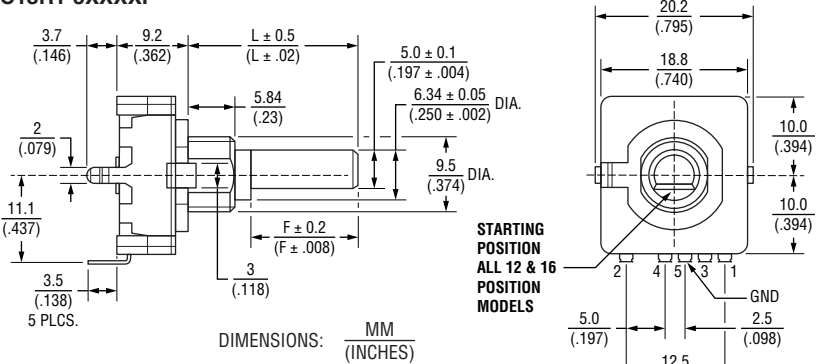
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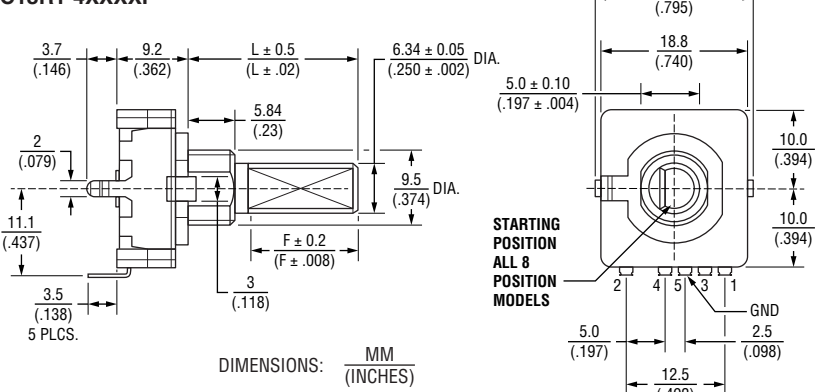
[SAMPLES](#)

Product Dimensions

PAC18R1-3XXXXF



PAC18R1-4XXXXF

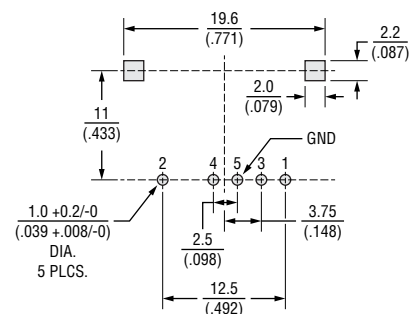


Shaft Configurations

L	19.5 (.768)	21.5 (.846)	28.9 (1.138)
F	6.5 (.256)	13.66 (.548)	15.7 (.618)

Dimensions: MM (INCHES)

Recommended PCB Layout



PAC18R - 18 mm Low Profile Absolute Encoder



Pin Out Code 8 Positions

Position	Angle in °	P1	P2	P3	P4
1	0	0	0	0	0
2	45	0	1	0	0
3	90	1	1	0	0
4	135	1	1	1	0
5	180	0	1	1	0
6	225	0	1	1	1
7	270	0	0	1	1
8	315	0	0	1	0

Pin Out Code 12 Positions

Position	Angle in °	P1	P2	P3	P4
1	0	0	0	0	0
2	30	1	0	0	0
3	60	1	1	0	0
4	90	0	1	0	0
5	120	0	1	1	0
6	150	1	1	1	0
7	180	1	0	1	0
8	210	0	0	1	0
9	240	0	0	1	1
10	270	1	0	1	1
11	300	1	0	0	1
12	330	0	0	0	1

Pin Out Code 16 Positions

Position	Angle in °	P1	P2	P3	P4
1	0	0	0	0	0
2	22.5	1	0	0	0
3	45	1	1	0	0
4	67.5	0	1	0	0
5	90	0	1	1	0
6	112.5	1	1	1	0
7	135	1	0	1	0
8	157.5	0	0	1	0
9	180	0	0	1	1
10	202.5	1	0	1	1
11	225	1	1	1	1
12	247.5	0	1	1	1
13	270	0	1	0	1
14	292.5	1	1	0	1
15	315	1	0	0	1
16	337.5	0	0	0	1

How To Order

PAC18R 1 - 4 1 D 19 F

Model Series _____

Number of Units _____
1 = Single

Orientation _____
3 = PC-Pins Down Facing, Bushing without Thread
4 = PC-Pins Down Facing, Bushing with Thread

Position Option _____
1 = 8 Positions
2 = 12 Positions
3 = 16 Positions

Detents _____
N = No Detents
D = Detents (Positions)

Shaft Length _____
19 = 19.5 mm
21 = 21.5 mm
28 = 28.9 mm

Shaft Type _____
F = Insulated Flatted Shaft



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Users should verify actual device performance in their specific applications.

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