## SERIES 20

## Concentric Shafts

## FEATURES

- Compact mechanical encoder with concentric shafts
- Output Code Choices
- Panel and Shaft Seal Option
- Manufactured to ISO 9001 and Military Standards
- Available with a fixed stop or continuous rotation
- Custom Configurations Available


DIMENSIONS in inches


## SPECIFICATIONS

## Electrical Ratings

Switching Loads:
$150 \mathrm{~mA}, 115 \mathrm{Vac}$
$200 \mathrm{~mA}, 28 \mathrm{Vdc}$
Life Expectancy:
25,000 cycles at rated loads
Contact Resistance: 300 mohms max. (less than 100 mohms initially) Insulation Resistance: 1000 Mohms min. (10,000 Mohms initially) Dielectric Strength: 500 Vac min.

Mechanical Ratings
Stop Strength: 5 in-lbs.
Rotational Torque:
5 in-oz outer shaft
3.5 in-oz inner shaft

Mounting Torque: 12 in-lbs. recommended
Operating Temperature Range:
$-40^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$
Storage Temperature Range:
$-55^{\circ} \mathrm{C}$ to $+100^{\circ} \mathrm{C}$
Immersion: 15 psi (33ft) for 30 minutes
Pin Dimensions: . 018 inch square

Hardware Dimensions:
Lockwasher: .437inch diameter, .022inch thick Hex Nut: 5/16-32 UNEF-2B Thread,
.437 inch across flats, .094 inch thick
Materials and Finishes
Terminal Pins: Phosphor bronze with tin over nickel plating
Panel Seal: Buna-N rubber, adhesive coated Lockwasher: Spring steel with zinc plating Hex Nut: Brass with tin/zinc plating

ORDERING INFORMATION (potential combinations)


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\begin{array}{ll}
\text { Series } 20 \text { : Mechanical Encoder, concentric shafts } & \\
\text { Seal: } S=\text { Sealed; } A=\text { Not Sealed } & \\
\text { Output code } & \text { Output Code: } \\
\text { Angle of throw (outer shaft) } & G=\text { Gray } \\
\text { Stop arrangement: AC = all positions continuous rotation; } & B=\text { Binary } \\
\text { AF = all positions with fixed stop between first and last; } & Q=\text { Quadrature } \\
\text { 02 to 15: number of positions, if less than maximum } & \text { Angle of throw / max positions: } \\
& 2=22.5^{\circ} / 16 \text { positions } \\
\text { Termination: } P=\text { Pins; } 02 \text { to } 25=\text { Cable Length } & 0=30^{\circ} / 12 \text { positions } \\
\text { Stop arrangement (see above) } & 6=36^{\circ} / 10 \text { positions } \\
\text { Angle of throw (inner shaft) } & 5=45^{\circ} / 8 \text { positions } \\
\text { Output code } &
\end{array}
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