MR-3007

Pancake Resolver

The **MR-3007** is a high accuracy Pancake Resolver, which was designed, developed and produced for military as well as high-end industrial applications (see examples below). The Pancake Resolver converts mechanical position into an electrical signal. It can also, if combined with a servo-amplifier and an electro-mechanical or hydraulic drive, translate electrical signals into angular position.

Features:

- More compact than an optical encoder; exhibits much higher signal-to-noise ratio than an inductosyn.

Applications:

- Missile guidance, night vision pods, stabilized plat - forms, ball-screw / robotics positioning, remote video control, optical measurement, medical equipment (MRI, CT scanners) and wherever angle is measured.
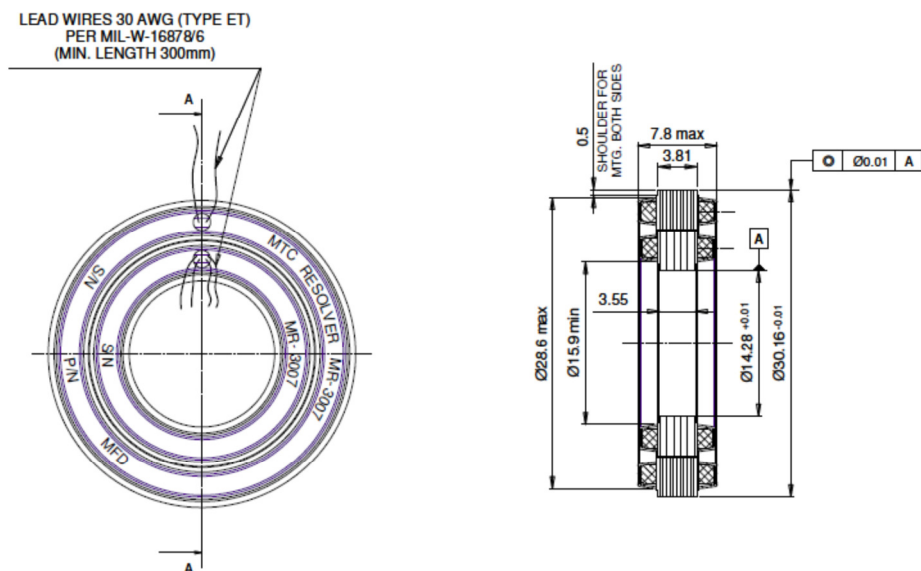

Specifications

Parameters	Units	Values	Tolerances
Input voltage	V	5	± 5%
Frequency	kHz	2.0	± 1.5%
Angular range	deg.	± 90	-
Transformation ratio	-	1	±5%
Phase shift	deg.	25	max
Null voltage	mV	15	max
Accuracy	arc·min	±3	-
Primary current	mA	70	max
Resolver speed	-	1	-
Weight	gr.	22	max

MR-3007 *(continued)*

Drawing

LEAD WIRES 30 AWG (TYPE ET)
PER MIL-W-16878/6
(MIN. LENGTH 300mm)

All dimensions are in mm

Wiring Diagram

STATOR

S1
RED/WHT

S3
BLK/WHT

ROTOR

R4
BLU

R2
YEL

R1
RED

R3
BLK
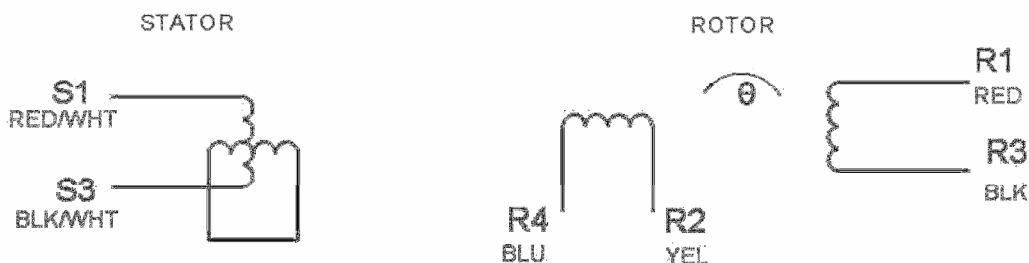
Phase Equation

$E(R1-R3) = K \cdot E(S1-S3) \cdot \cos\theta$

$E(R2-R4) = K \cdot E(S1-S3) \cdot \sin\theta$

where K – transformation ratio, θ – measured angle, deg.

Direction of Rotation

θ is positive for a CCW rotation of the rotor as viewed from the rotor lead wires exit side.

For Additional Information

To learn more about the MR-3007 Pancake

Resolver or other MTC products, contact MTC

on **+972 4 998 7772** or email **marketing@mtcind.com**