

# 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 platforms, ball-screw / robotics positioning, remote video control, optical measurement, medical equipment (MRI, CT scanners) and other angle measuring applications.

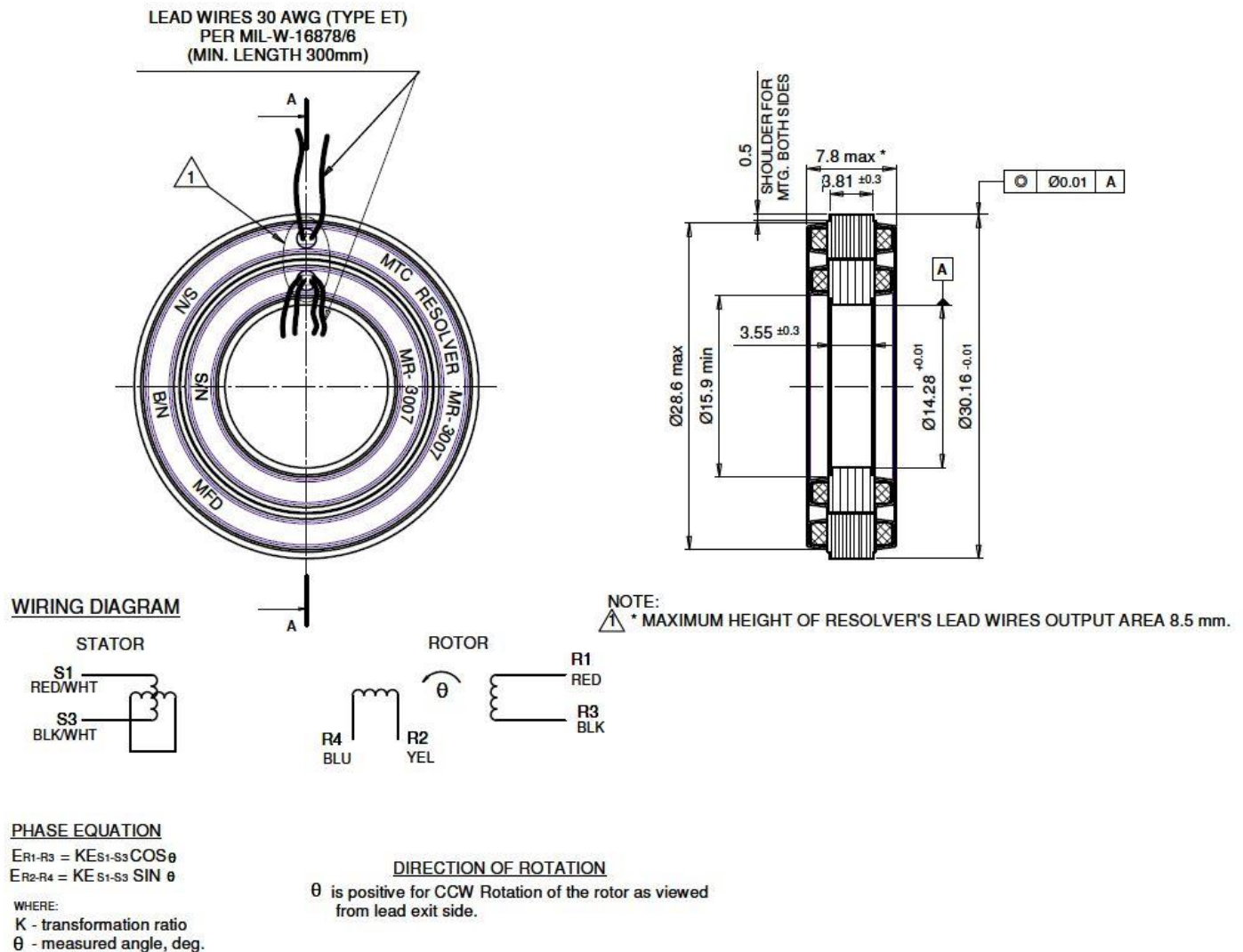


## Specifications

Parameters	Units	Values	Tolerances
Input voltage (Stator primary)	V	5	± 5%
Frequency	kHz	2.0	± 1.5%
Angular range	deg.	360	-
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	-	X1	-
Weight	gr.	22	max

## MR-3007 (continued)

### Drawing



### 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

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