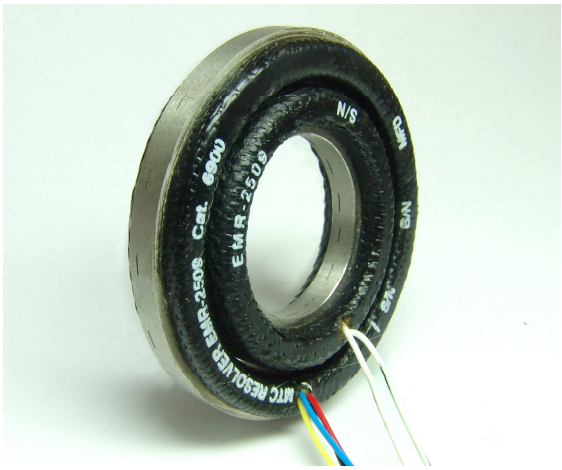
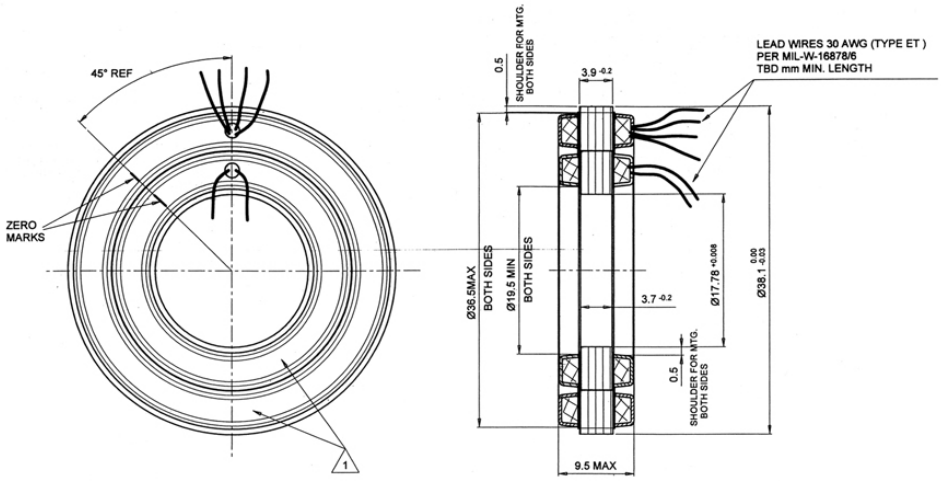
EMR-2509

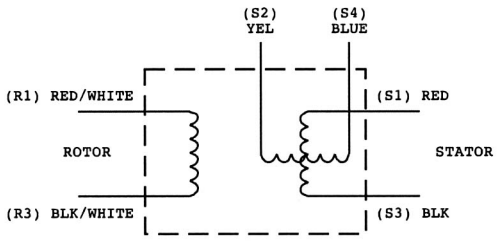
Multispeed Pancake Resolver

This high accuracy multispeed pancake resolver was designed, developed and produced for military as well as special industrial applications. It can be made more compact than an optical encoder, and exhibits much higher signal-to-noise ratio than an inductosyn. Transformation ratio can vary according to customer specifications





Wiring Diagram



Phase Equation

$E(S1S3) = TR \cdot [\, E(R1R3) \cdot \cos(8 \cdot \theta) \,]$
$E(S2S4) = TR \cdot [\, E(R1R3) \cdot \sin(8 \cdot \theta) \,]$
where:
TR – 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.

Specification

Parameter	Unit	Value	Tolerance
Input Voltage	V	4	± 5%
Frequency	kHz	2.4	± 1.5%
DC resistance - rotor - stator	 Ohm Ohm	 180 255	 ± 10% ± 10%
Rotor Impedance Zro – with stator open circuited	Ohm	135 + j150	R ± 35%
Stator Impedance Zss – with rotor short circuited	Ohm	220 + j200	X ± 25%
Transformation ratio at RT and 10 MΩ / 20 pF output load	-	0.5	5%
Phase shift	deg	0 – 45	-
Null Voltage	mV	5	max
Accuracy	Arc▪ sec	±30	-
Primary current	mA	36	max
Resolver speed	-	X8	-
Weight	gr.	27	± 5%