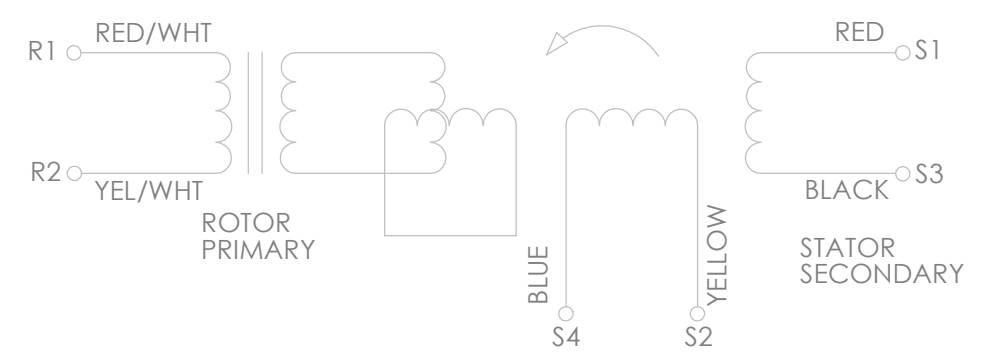


NOTES:
 1 MEASURED IN A VERTICAL POSITION.
 2 ACCURACY DATA (+ & -) MARKED ON HOUSING OD IN AREA INDICATED.

6X #28 AWG (ET) LEADS
 10" MIN. LENGTH

SCHEMATIC

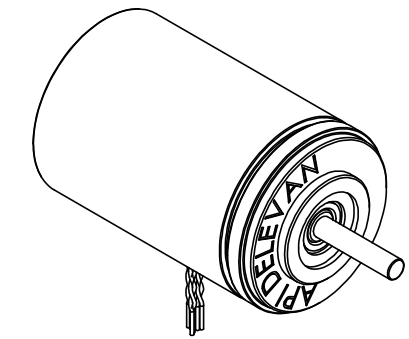


PHASING EQUATION
 INCREASING ANGLE FOR
 CCW ROTATION OF SHAFT
 FACING SHAFT END

$$E(S1-S3) = KE(R1-R2) \cos \phi$$

$$E(S2-S4) = KE(R1-R2) \sin \phi$$

**PART, ASSEMBLY AND ALL COMPONENTS
 MEET EU ROHS DIRECTIVE**



<p>THIRD ANGLE PROJECTION</p>	<p>UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES [mm] DIAMETERS CONCENTRIC .003 [.076] TIR FACES PERPENDICULAR -.003 [.076] INSIDE CORNERS R .015 [.381] MAX</p>	<p>UNLESS OTHERWISE SPECIFIED: REMOVE ALL BURRS AND BREAK SHARP EDGES -.005/.010 [.127/.254]</p>	<p>API Delevan</p>		
	<p>INTERPRETATION PER ASME Y14.5M-1994</p>	<p>TOLERANCES: DECIMAL .00±.01 [.254] .000 ±.005 [.127] ANGLE ±0.5° CHAMFER ANGLE ±10°</p>			<p>R11 OUTLINE</p>
<p>MATERIAL</p>	-	<p>MACHINE SURFACES 63</p>	<p>APPROVALS</p>	<p>DATE</p>	<p>SIZE DWG. NO.</p>
<p>FINISH</p>	-	<p>CHECKED</p>	-	-	
<p>THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF API DELEVAN. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF HAROWE IS PROHIBITED.</p>		<p>DES ENG</p>	-	-	<p>SCALE SHEET 1 OF 2 CODE IDENT: 99800</p>

REVISIONS				
REV	ECO	DESCRIPTION	DATE	CHECKED
-	-	NEW DRAWING		

NUMBERING R11-XXXXXXXX

R11
SERIES

ELECTRICAL DATA

HOUSING STYLE	STYLE	SHAFT STYLE	STYLE	CONNECTOR	TYPE	ELECTRICAL & MECHANICAL DATA AT 25°C				SPECIAL OPTIONS	LENGTH								
						1A06		1A20				1B06		1B20					
S	SERVO GROOVE STYLE	01	ROUND	F	FLYING LEADS	VALUES ARE REFERENCE UNLESS OTHERWISE TOLERANCED HIPOT TESTING PERFORMED AT 60HZ, 4 SECOND DURATION				A	STANDARD CONFIGURATION								
						ELEC CYC / MECH CYC	deg/deg	1	ELEC CYC / MECH CYC			deg/deg	1	ELEC CYC / MECH CYC	deg/deg	1	ELEC CYC / MECH CYC	deg/deg	1
						EXCITATION FREQUENCY	±1% kHz	2.25	EXCITATION FREQUENCY			±1% kHz	2.25	EXCITATION FREQUENCY	±1% kHz	2.0	EXCITATION FREQUENCY	±1% kHz	2.0
						INPUT VOLTAGE	±5% Vrms	1.88	INPUT VOLTAGE			±5% Vrms	1.88	INPUT VOLTAGE	±5% Vrms	6.0	INPUT VOLTAGE	±5% Vrms	6.0
						INPUT CURRENT	Max. mA Arms	21	INPUT CURRENT			Max. mA Arms	21	INPUT CURRENT	Max. mA Arms	12	INPUT CURRENT	Max. mA Arms	12
						INPUT POWER	Watts	.015	INPUT POWER			Watts	.015	INPUT POWER	Watts	.035	INPUT POWER	Watts	.035
						IMPEDANCE ZRO	Ohms	57 +J104	IMPEDANCE ZRO			Ohms	57 +J104	IMPEDANCE [ZRO]	Ohms	644	IMPEDANCE [ZRO]	Ohms	644
						IMPEDANCE ZRS	Ohms	54 +J77	IMPEDANCE ZRS			Ohms	54 +J77	IMPEDANCE [ZRS]	Ohms	511	IMPEDANCE [ZRS]	Ohms	511
						IMPEDANCE ZSO	Ohms	480 +J850	IMPEDANCE ZSO			Ohms	480 +J850	IMPEDANCE [ZSO]	Ohms	634	IMPEDANCE [ZSO]	Ohms	634
						IMPEDANCE ZSS	Ohms	475 +J635	IMPEDANCE ZSS			Ohms	475 +J635	IMPEDANCE [ZSS]	Ohms	527	IMPEDANCE [ZSS]	Ohms	527
						TRANSFORMATION RATIO	±5%	1.4	TRANSFORMATION RATIO			±5%	1.4	TRANSFORMATION RATIO	±5%	.454	TRANSFORMATION RATIO	±5%	.454
						DC RESISTANCE (R1-R2)	±15% Ohms	17	DC RESISTANCE (R1-R2)			±15% Ohms	17	DC RESISTANCE (R1-R2)	Ohms	74	DC RESISTANCE (R1-R2)	Ohms	74
						DC RESISTANCE (S1-S3, S2-S4)	±15% Ohms	207	DC RESISTANCE (S1-S3, S2-S4)			±15% Ohms	207	DC RESISTANCE (S1-S3, S2-S4)	Ohms	159	DC RESISTANCE (S1-S3, S2-S4)	Ohms	159
						POSITION ERROR	Max. arcminutes	±6	POSITION ERROR			Max. arcminutes	±20	POSITION ERROR	Max. arcminutes	±6	POSITION ERROR	Max. arcminutes	±20
						PK-PK VELOCITY ERROR	Max. %	-	PK-PK VELOCITY ERROR			Max. %	-	PK-PK VELOCITY ERROR	Max. %	-	PK-PK VELOCITY ERROR	Max. %	-
PHASE SHIFT, OPEN CIRCUIT	degrees	+11	PHASE SHIFT, OPEN CIRCUIT	degrees	+11	PHASE SHIFT, OPEN CIRCUIT	degrees	+8.5	PHASE SHIFT, OPEN CIRCUIT	degrees	+8.5								
NULL VOLTAGE	Max. mVrms	15	NULL VOLTAGE	Max. mVrms	15	NULL VOLTAGE	Max. mVrms	15	NULL VOLTAGE	Max. mVrms	15								
HIPOT, LEADS TO CASE, 500VAC	Max. mA Arms	2	HIPOT, LEADS TO CASE, 500VAC	Max. mA Arms	2	HIPOT, LEADS TO CASE, 500VAC	Max. mA Arms	2	HIPOT, LEADS TO CASE, 500VAC	Max. mA Arms	2								
HIPOT, INTERPHASE, 250VAC	Max. mA Arms	2	HIPOT, INTERPHASE, 250VAC	Max. mA Arms	2	HIPOT, INTERPHASE, 250VAC	Max. mA Arms	2	HIPOT, INTERPHASE, 250VAC	Max. mA Arms	2								
TEMPERATURE RANGE	°C	-55 TO +125	TEMPERATURE RANGE	°C	-55 TO +125	TEMPERATURE RANGE	°C	-55 TO +125	TEMPERATURE RANGE	°C	-55 TO +125								
SHAFT END PLAY	MAX	.005	SHAFT END PLAY	MAX	.005	SHAFT END PLAY	MAX	.005	SHAFT END PLAY	MAX	.005								
SHAFT RADIAL PLAY	MAX	0.0015	SHAFT RADIAL PLAY	MAX	0.0015	SHAFT RADIAL PLAY	MAX	0.0015	SHAFT RADIAL PLAY	MAX	0.0015								
SHAFT RUNOUT	MAX F.I.R.	0.001	SHAFT RUNOUT	MAX F.I.R.	0.001	SHAFT RUNOUT	MAX F.I.R.	0.001	SHAFT RUNOUT	MAX F.I.R.	0.001								

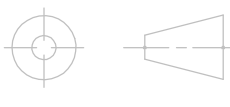
1

2

NOTES:

1 SHAFT END PLAY MEASURED WITH A 1LB. REVERSE GAGE LOAD.

2 RADIAL PLAY MEASURED WITH A 1 LB. REVERSE GAGE LOAD.



THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES [mm]
DIAMETERS CONCENTRIC .003 [.076] TIR
FACES PERPENDICULAR .003 [.076]
INSIDE CORNERS R .015 [.381] MAX

INTERPRETATION PER ASME
Y14.5M-1994

UNLESS OTHERWISE SPECIFIED:
REMOVE ALL BURRS AND BREAK
SHARP EDGES -.005/.010

TOLERANCES:
DECIMAL .00±0.01 [.254] .000 ±.005 [.127]
ANGLE ±0.5°
CHAMFER ANGLE ±10°

MACHINE SURFACES $\sqrt{63}$

API Delevan

R11 OUTLINE

MATERIAL	-	APPROVALS	DATE
FINISH	-	CHECKED	-
		DES ENG	-

SIZE	DWG. NO.
B	
SCALE	SHEET 2 OF 2
	CODE IDENT: 99800