

CUSTOMER: RS ELECTRONICS
 DOCUMENT: ----- REV. --- E.N. --- REV. ---
 TO PARTS LIST 2157-0000 (157-21A) REV. LATEST
 MOUNT SERVO WINDING C.P. SECTIONS 1
 ADD AND DELETE AS FOLLOWS:

SALES ORDER		
NUMBER	DATE	QTY.
64184*4	8-24-98	160
64647*1	9-11-98	250
64858*1	9-28-98	120
64890*2	10-6-98	100
65532*2,3,4	10-22-98	450

TITLE	DELETE	ADD	PART
	PART NUMBER	QTY.	PART NUMBER QTY. ORIGIN
ELEMENT A			
SPECTROL MOD. # -102	-----	--	920-03-01ZJA 1 --
-202	-----	--	920-03-02ZJA 1 --
-502	-----	--	920-03-03ZJA 1 --
-103	-----	--	920-02-04ZJA 1 --
-203	-----	--	920-02-05ZJA 1 --
-503	-----	--	920-02-06ZJA 1 --

ASSEMBLE TO PRODUCTION INSTRUCTIONS 3157-0000
 REV LATEST REVISE AND OMIT AS FOLLOWS:

DRILLING INSTRUCTIONS		
SECTION	HOUSING NUMBER	DRILL PER 561-04 AT SET-UP NUMBERS SHOWN

ELEMENT INFORMATION								
SECTION	STANDARD RESISTANCE OR PART NUMBER	RES. TOL.	LIN. REQ'D.	CODE	WIRE	CORE	CONTACT BASE HEIGHT	CONTACT RAD.
1	A B							

B SWAGE TERMINALS TO LID PER 561-0080 (ELEMENT/TERMINAL ASS'Y).

SECTION	BRIDGING INSTRUCTIONS	INSERTION INSTRUCTIONS
	WIDTH MATERIAL	
		STD

FINAL ASSEMBLY INSTRUCTIONS	
LUBRICANTS: 502-7497 (ELEMENT TRACK SURF)	
BRUSH AND CONTACT FORCE: STD	
END PLAY SHIMMING: STD	
SECTION PHASING: -----	
MARKING: 1.0	

SHAFT ASSEMBLY INSTRUCTIONS
 PRESS DIMENSION: .691 ±.002

Uncontrolled Copy
 For Reference Only

1157-9002 F 02

REVISIONS						
E.C.O.	SYM	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
2554	D	1. '925-02-01ZJA' THRU -06ZJA' WAS 920-02-01ZJA THRU -06ZJA' OF PARTS LIST.	4-28-98	J.B.	S. DUH	K.MUMPER
2647	E	1. PRESS DIM. WAS '.685±.002'.	7-1-98	J.B.	S. DUH	K.MUMPER
4893	F	1. '920-03-01ZJA' THRU -03ZJA' WAS 925-02-01ZJA THRU -03ZJA' OF PARTS LIST. 2. RVSD FLAT PATTERN: ADDED 'MEX', 'VISHAY SPECTROL' WAS 'SPECTROL' LOGO, MOD WAS 01	11-1-05	D.F.S.		

1.0 MARK PER FLAT PATTERN AND ES-2163 (157) FOR EQUIPMENT, CLEANING, CURING, AND Q.A.

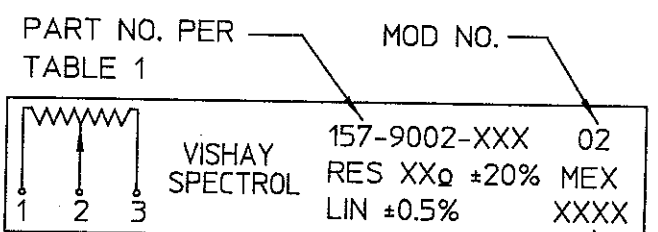
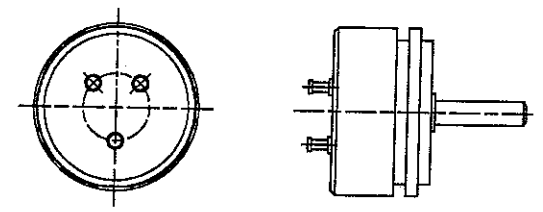


TABLE 1				
SPECTROL P/N	R.S. P/N	RESISTANCE OHMS (+19% -20%)		
		MIN.	MAX.	NOM.
157-9002-102	173-552	800	1190	1K
157-9002-202	173-568	1.6K	2380	2K
157-9002-502	173-574	4K	5950	5K
157-9002-103	173-580	8K	11.9K	10K
157-9002-203	173-596	16K	23.8K	20K
157-9002-503	173-	40K	59.5K	50K



ELECTRICAL REQUIREMENTS										
FUNCTION	DEF.	CONF.	LIN.	RES'L.N.	ELECT. ROT.	RES. MIN.	RES. MAX.	RES. TOL.	RES. NOM.	SECT.
LINEAR	IND.	----	±0.5%	NO REQ	340°±4°		PER TABLE 1			1

MECHANICAL REQUIREMENTS						
RUNOUTS (T.I.R. MAX.)		SHAFT	FRONT	REAR	MOUNT: SERVO	
PILOT DIA: STD	RADIAL PLAY: STD	EXTENSION	.500 ±.031	----	BEARING: BALL	
LATERAL: STD		SLOT	----	----	TORQUE-STARTING: STD	
SHAFT: STD	AT -----	F.M.S.	FLAT	----	TORQUE-RUNNING: STD	
END PLAY: STD		ROTATION	360° CONTINUOUS		STOP FORCE: ---	

DRAWN P. DARLING	DATE 1-31-92
CHECKED -----	DATE -----
APPROVED K. MUMPER	DATE 2-4-92
APPROVED -----	DATE -----

SPECIFICATIONS
 PARTS LIST AND
 PRODUCTIONS INSTRUCTIONS
 PRECISION POTENTIOMETER
 SPEC MODEL 157-9002

VISHAY

 SPECTROL ELECTRONICS CORPORATION
 ONTARIO, CALIFORNIA 91761

1157-9002

Precision Industrial Potentiometer



FEATURES

- High Quality
- Short Length Behind Panel (11/32")
- Rugged One Piece Metal Housing
- Stainless Steel Shaft
- Long Rotational Life
- Wide Operating Temperature Range
- Linearities to $\pm 0.25\%$ Special
- Optional Sealed Construction (Bushing Mount Only)

ELECTRICAL SPECIFICATIONS

PARAMETER	MIL-PRF-39024 TEST PROCEDURES APPLY
Resistance	1K Ω to 100
Resistance Tolerance	$\pm 20\%$
Special to	$\pm 10\%$
Linearity	$\pm 2.0\%$
Special to	$\pm 0.25\%$
Temperature Coefficient of Resistance	$\pm 600\text{ppm}/^\circ\text{C}$
Power Rating	1.0 watts at 40°C Ambient
Derate to	0 watts at 125°C
Rotation	340° \pm 4°
End Voltage	0.5% maximum
Dielectric Withstanding	1,000V _{RMS} , 60Hz
Insulation Resistance	100M Ω minimum, 500VDC
Output Smoothness	0.1%

MECHANICAL SPECIFICATIONS

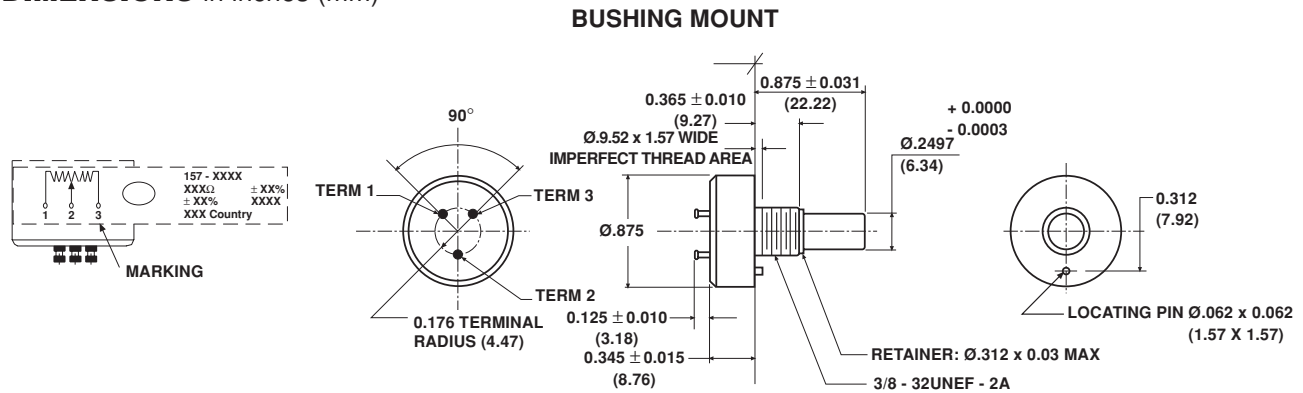
PARAMETER		
Weight	0.5 oz maximum	
Rotation	360° (Continuous)	
Mount	BUSHING	SERVO
Bearing Type	Sleeve Bearing	Ball Bearing
Operating Torque		
Starting	0.30 oz - in	0.25 oz - in
Running	0.25 oz - in	0.15 oz - in
Mechanical Tolerance (in/mm) (maximum)		
Shaft Runout (TIR)	0.002 in	0.002 in
Pilot Dia Runout (TIR)	–	0.002 in
Lateral Runout (TIR)	0.005 in	0.002 in
Shaft End Play	0.006 in	0.005 in
Shaft Radial Play	0.003 in	0.002 in

ORDERING INFORMATION

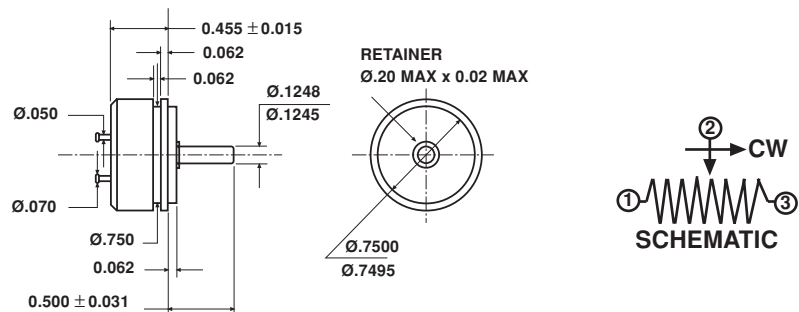
157	1	1	XXX
MODEL	MOUNTING	NUMBER OF SECTIONS (SINGLE SECTION ONLY)	RESISTANCE EIA CODE
Example: 157 - 1 - 1 - XXX	1. Bushing 2. Servo		



DIMENSIONS in inches (mm)



SERVO MOUNT



ALL DIMENSIONS ARE IN INCHES
TOLERANCES: UNLESS OTHERWISE NOTED
DECIMALS ± 0.005
ANGLES $\pm 2^\circ$

MATERIAL SPECIFICATIONS	
Housing/Bushing	Aluminum, anodized
Rear Lid	Ceramic
Shaft	Stainless Steel
Terminals	Solderable
Bushing Mount Hardware	Lockwasher, Internal Tooth Steel, Nickel Plated
Panel Nut	Brass, Nickel Plated

ENVIRONMENTAL SPECIFICATIONS		
Temperature	- 55°C + 125°C	
Rotational Life	BUSHING 10 million shaft Revolutions	SERVO 10 million shaft Revolutions
Moisture Resistant	Yes	
Vibration	15g 10 to 2000Hz	
Shock	50g	
Salt Spray	96 Hours	
Load Life	900 Hours	

STANDARD RESISTANCE VALUES	
EIA CODE	RESISTANCE
102	1K Ω
202	2K Ω
502	5K Ω
103	10K Ω
203	20K Ω
503	50K Ω
104	100K Ω