



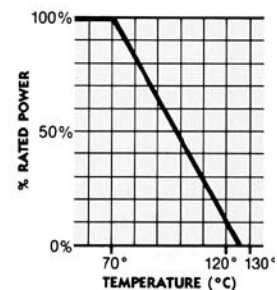
SERVO MOUNT/BALL BEARING
MODEL 3201

WIREWOUND 3, 5 AND 10-TURN PRECISION POTENTIOMETERS

SERVO MODEL	3201
ELECTRICAL	
Actual Electrical Travel	3600° + 4° - 0°
Normal Resistance Range	100 Ω to 100K
Extended Resistance Range ⁽¹⁾	10 Ω to 250K
Resistance Tolerance: Standard %	± 3
Best Practical %	± 1
Power Rating At 70°C, Derating To 0 at 125°C (Watts)	2.5
Linearity, Independent, Tolerance, Standard %	± 0.25
Best Practical %	± 0.05
Equivalent Noise Resistance (ENR) Max. (Ohms)	100
End Voltage Max. (% Of Total Applied Voltage)	Within linearity tolerance
Insulation Resistance At 500 VDC, Min. (Megohms)	1000
Dielectric Withstanding Voltage (Volts RMS)	1000
Max. Applied Voltage (Volts DC) ⁽²⁾	1000
Temperature Coefficient Of Potentiometer, Max. %/°C	± .007
Tap Spacing Minimum	30°
MECHANICAL	
Total Mechanical Travel	3600° + 4° - 0°
Mechanical Life, Shaft Revolutions	2 million
Ganged Cups, Max. (Number)	2
Taps, Max., Excluding End Terminations	46
Moment Of Inertia, Per Cup (gm-cm ²)	0.4
Weight: Single Cup (oz.)	1.3
Each Additional Cup (oz.)	1.0
Torque, Max. Per Cup (oz.-in)	0.5
Pilot Diameter Runout, Max.	.0015
Lateral Runout, Max.	.002
Shaft Runout, Max.	.001
Shaft Radial Play, Max.	.002
Shaft End Play, Max.	.005
Dimension For Each Additional Cup	1.323 ± .002
Stop Strength Static (oz.-in)	128
ENVIRONMENTAL	
Temperature Range (°C) Standard	- 55 to + 125

(1) All specifications listed apply to units with a total resistance within the normal resistance range. Higher or lower resistances may require some degradation of listed specifications because of resistance wire composition or size.

(2) Not to exceed specified power rating.



THEORETICAL RESOLUTION—For typical coil characteristics by model number and resistance value, see Resolution Tables, page 52.

ALL MODELS are manufactured to meet or exceed applicable characteristics of MIL-R-12934. For MILITARY-APPROVED (QPL) Listings, see page 52.

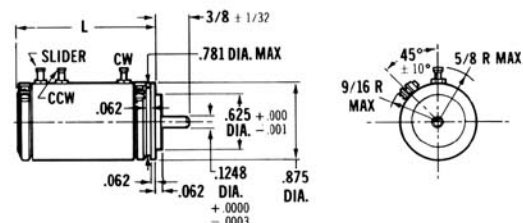
TOLERANCES UNLESS OTHERWISE SPECIFIED:

FRACTIONAL: ± 1/64" DECIMAL: ± .005" ANGULAR: ± 1°

3201

LENGTHS

MODEL	NUMBER OF TURNS	LENGTH DIMENSION L
3204	3	1.070 ± .006
3504		1.388 ± .007
3704		1.231 ± .007
3207	5	1.213 ± .006
3507		1.610 ± .007
3201	10	1.570 ± .006
3501		2.165 ± .007
3701		2.008 ± .007



DESIGN ACTIVITY FOR INSTRUMENT CO. MANUFACTURER DUNCAN ELECTRONICS,
 CODE IDENT. NO. 23021 CODE IDENT. NO. 11534
 PART NO. 66-489 PART NO. 3200-1087 S/N 1611

ITEM	REQUIREMENT	INSPECTED
1.0 OUTLINE DIMENSIONS	PER 66-323	MCA 15
2.0 LATERAL RUNOUT	.001 MAX. T.I.R.	MCA 15
3.0 SHAFT RUNOUT	.001 MAX. T.I.R. SEE NOTE 1	MCA 15
4.0 PILOT RUNOUT	.001 MAX. T.I.R.	MCA 15
5.0 RADIAL PLAY	.001 MAX. T.I.R. SEE NOTE 1	MCA 15
6.0 END PLAY	.005 MAX.	MCA 15
7.0 MECH. ROTATION	360° MIN.	MCA 15
8.0 MECH. BACKLASH	1° MAX.	MCA 15
9.0 TEMP. CYCLING	PER PARA'S 3.22 & 4.6.18 OF MIL-R-12934	MCA 15
10.0 TORQUE STARTING & RUNNING	1.5 OZ-IN MAX.	MCA 15
11.0 MARKING	PER MIL-R-12934	MCA 15
12.0 WORKMANSHIP	PER MIL-R-12934	MCA 15
13.0 TOTAL RESISTANCE	5KΩ ± 4%	MCA 15
14.0 ABS. MIN. RESIST.	26Ω MAX. EACH END	MCA 15
15.0 END VOLTAGE	0.5% MAX. EACH END	MCA 15
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16.0 INSULATION RESISTANCE	1000 MEGOHMS MIN. @ 500 V	MCA 15
17.0 VOLTAGE BREAKDOWN	750 VOLTS RMS	MCA 15
18.0 LINEARITY	±.05% INDEPENDENT	MCA 15
19.0 NOISE	100 mV MAX. @ 4 RPM	MCA 15

NOTE 1. SHAFT RUNOUT, INCLUDING RADIAL PLAY, NOT TO EXCEED .002 TIR

A	10184	7-8-76	Fm	CS	CD	DWG. NAME	TEST DATA REPORT	
REV.	G. O.	DATE	DWN.	CHK'D	APP.	GROUP "A" INSPECTION PER MIL-R-12934		
 DUNCAN electronics, inc. COSTA MESA, CALIFORNIA						DWG. NO.	PAGE 1 OF 2	RE
						3200-1087-0-7		A

DESIGN ACTIVITY FORD INSTRUMENT CO. MANUFACTURER DUNCAN ELECTRONICS,
 CODE IDENT. NO. 23021 CODE IDENT. NO. 11534
 PART NO. 66-489B PART NO. 3200-1087 S/N 1611

FIXED RESISTOR

GROUP A TEST

ITEM	REQUIREMENT	INSPECT
1.0 D.C. RESIST	31.4K TO 69.46K $\pm 1/4\%$ (TOL. ON ACTUAL VALUE)	MCA 15
2.0 VISUAL & MECH. EXAMINATION	PER PARA 4.6.2 OF MIL-R-93	MCA 15
2.1 BODY & MT'G DIMENSIONS	PER DWG. 49-518	MCA 15
2.2 WIRE LEAD TERMINALS	PER PARA 3.4.1.2 OF MIL-R-93	MCA 15
2.3 MARKING	PER DWG'S 66-489 & 49-518	MCA 15
2.4 WORKMANSHIP	PER MIL-R-93	MCA 15

GROUP B TEST

ITEM	REQUIREMENT	INSPE
1.0 SHORT-TIME OVERLOAD	PER PARA'S 3.6 & 4.6.3 OF MIL-R-93	MCA 15
2.0 TEMP. CYCLING	PER PARA'S 3.7 & 4.6.4 OF MIL-R-93	MCA 15

REV.						C. Q.						DATE						DWN.						CHK'D						APP.					
DWG. NAME												TEST DATA REPORT																							
DWG. NO.												GROUPS A & B INSP. PER MIL-R-93																							
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