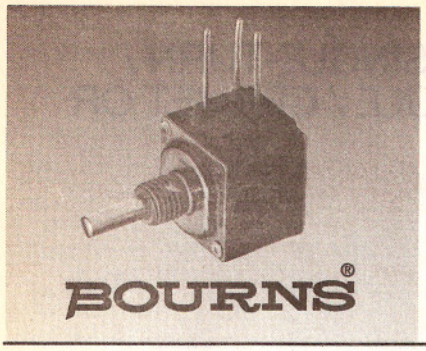

5/8" (16MM) SQUARE / SINGLE-TURN / MODULAR SEMI-PRECISION / CERMET OR CONDUCTIVE PLASTIC

- Zero base linearity, as low as 1% available
- Exclusive shaft torque control feature
- Up to 4 sections available

FOR DIMENSIONAL DRAWINGS SEE PAGE 247.
FOR ORDERING INFORMATION SEE PAGE 249.

OBSOLETE DATE 9/30/2006

Model 87/88

Bourns® Panel Controls

	Conductive Plastic Element	Cermet Element
Initial Electrical Characteristics[1]		
Standard Resistance Range	(L & N) 250 ohms to 2.5 megohms	(M & P) 250 ohms to 2.5 megohms
Resistance Tolerance	±5%	±3%
Zero Base Linearity	(L) Standard ±2%, (N) Optional 1%	(M) Standard ±2.5%, (P) Optional ±1.5%
Absolute Minimum Resistance	2 ohms	2 ohms
Continuity	Maintained for full mechanical angle	Maintained for full mechanical angle
Effective Electrical Angle	240° ±4°	240° ±6°
Contact Resistance Variation	±1%	±1.5% or 3 ohms (whichever is greater)
Dielectric Withstanding Voltage	MIL-STD-202, Method 301	MIL-STD-202, Method 301
Sea Level	1,500 VAC minimum	1,500 VAC minimum
70,000 Feet	500 VAC minimum	500 VAC minimum
Insulation Resistance (500 VDC)	1,000 megohms minimum	1,000 megohms minimum
Power Rating (Voltage Limited By Power Dissipation or 350 VAC, Whichever Is Less)		
+70°C Single Section Assembly	1 watt	2 watts
+70°C Multiple Section Assembly	0.5 watt/section	1 watt/section
+125°C	0 watt	0 watt
Roll-on/Roll-off	0.5% maximum	0.5% maximum
Theoretical Resolution	Essentially infinite	Essentially infinite
Environmental Characteristics[1]		
Storage Temperature Range	-55°C to +125°C	-65°C to +150°C
Temperature Coefficient Over Storage Temperature Range	±1,000PPM/°C	±150PPM/°C
Vibration (Single Section)	15G	15G
Total Resistance Shift	±2% maximum	±2% maximum
Voltage Ratio Shift	±5% maximum	±5% maximum
Shock (Single Section)	30G	30G
Total Resistance Shift	±2% maximum	±2% maximum
Voltage Ratio Shift	±5% maximum	±5% maximum
Load Life	1,000 hours	1,000 hours
Total Resistance Shift	±10% maximum	±5% maximum
Rotational Life (No Load)	100,000 cycles	100,000 cycles
Total Resistance Shift	10 ohms or ±12% maximum (whichever is greater)	10 ohms or ±10% maximum (whichever is greater)
Moisture Resistance	MIL-STD-202, Method 103, Condition B	MIL-STD-202, Method 103, Condition B
Total Resistance Shift	±10% maximum	±10% maximum
Insulation Resistance (500 VDC)	100 megohms minimum	100 megohms minimum
Mechanical Characteristics[1]		
Running Torque (Non-Locking Bushings)		
Single or Dual Section (A & B Bushings)	0.3 to 1.5 oz.-in. (0.21 to 1.06 Ncm)	0.3 to 1.5 oz.-in. (0.21 to 1.06 Ncm)
Single or Dual Section (C & E Bushings)	0.3 to 1.5 oz.-in. (0.21 to 1.06 Ncm)	0.3 to 1.5 oz.-in. (0.21 to 1.06 Ncm)
Triple Section (All Bushings)	0.5 to 2.0 oz.-in. (0.35 to 1.41 Ncm)	0.5 to 2.0 oz.-in. (0.35 to 1.41 Ncm)
Quadruple Section (All Bushings)	0.5 to 2.0 oz.-in. (0.35 to 1.41 Ncm)	0.5 to 2.0 oz.-in. (0.35 to 1.41 Ncm)
Shaft Locking Torque with Locknut @ 10 in-lb. (B & E Bushings)	20 oz.-in. (14.12 Ncm)	20 oz.-in. (14.12 Ncm)
Stop Strength	1/4" (6.35mm) and 1/8" (3.17mm) shafts - 4 in.-lb. (45.19 Ncm) min. .078 in. (0.20mm) shaft - 2 in.-lb.. (22.6 Ncm) min.	1/4" (6.35mm) and 1/8" (3.17mm) shafts - 4 in.-lb. (45.19 Ncm) min. .078 in. (0.20mm) shaft - 2 in.-lb. (22.6 Ncm) min.
Mechanical Angle	300° ±5°	300° ±5°
Weight (Single Section)	21 grams maximum	21 grams maximum
Each Additional Section	6 grams maximum	6 grams maximum
Terminals	Printed circuit terminals or J-Hooks	Printed circuit terminals or J-Hooks
Marking	Manufacturer's trademark, wiring diagram, date code, resistance,manufacturer's part number	Manufacturer's trademark, wiring diagram, date code, resistance, manufacturer's part number

NOTE: Model 87/88 performance specifications do not apply to units subjected to printed circuit board cleaning procedures.
[1]At room ambient: +25°C nominal and 50% relative humidity nominal, except as noted.

Specifications are subject to change without notice.