

Features

- Single-turn (3851 and 3852)
- Linear and audio tapers
- 3-3/4-turn (3856)
- Wide resistance range
- Minimal depth package
- Good resolution

3851/3852/3856 - 3/4 " Diameter Panel Control

Initial Electrical Characteristics¹

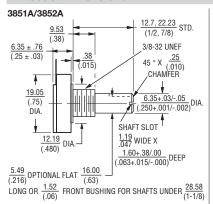
	3851 Conductive Plastic Element	3852/3856 Cermet Element
Standard Resistance Range		
Linear Tapers (A, B, E, and H)	1 K to 1 megohm	100 ohms to 1 megohm
Audio Tapers (C, D, F, and G)	1 K to 1 megohm	1 K ohms to 1 megohm
Total Resistance Tolerance	±10 % or ±20 %	±5 % or ±10 %
Independent Linearity	±10 %	(A & H tapers) ±5 %
	2 ohms maximum	
	250 ° ±5 °	
Contact Posistance Variation	±1 %	+3 % of total registance or 3 ohms
Contact nesistance variation	±1 /0	
Distriction With the Work Walters (MIL OTD	000 M-th1 001)	(whichever is greater)
Dielectric Withstanding Voltage (MIL-STD-		0001/40
	900 VAC minimum	
	350 VAC minimum	
Insulation Resistance (500 VDC)	1,000 megohms minimum	1,000 megohms minimum
Power Rating (Voltage Limited By Power D	Dissipation or 350 VAC, Whichever Is Less)	•
. 70 00	(Lineau tanava) 1att	(Linear tapers) 2 watts
	(Audio tapers) 0.5 watt	(Audio tapers) 1 watt
.10E °C	(Audio tapers) 0.5 watt 0 watt	(Addio tapers) i watt
+120 U	wall	Oalt
+150 °C		0 watt
Theoretical Resolution	Essentially infinite	Essentially infinite
Environmental Characteristics ¹		
Operating Temperature Pange	1 °C to +125 °C	1 °C to +105 °C
Operating temperature hange	1 0 10 +125 0	1 0 10 +125 0
	65 °C to +125 °C	65 °C to +150 °C
Temperature Coefficient Over		
Storage Temperature Range	±1,000 ppm/°C	±150 ppm/°C
Vibration	20 G	20 G
Total Resistance Shift	±2 % maximum	±2 % maximum
Voltage Hatio Stillt	±5 % maximum	±0 % [[[axii]]ui]]
	100 G	
	±2 % maximum	
Voltage Ratio Shift	±5 % maximum	±6 % maximum
	1,000 hours	
	±10 % maximum	
Potational Life (No Load)	100,000 cycles	50 000 evelos
Total Desistance Chift	100,000 Cycles	±5 % or 5 ohms TRS whichever is greater
	±3 %	±3 %
Moisture Resistance (MIL-STD-202, Metho	d 103, Condition B)	
Total Resistance Shift	±10 % maximum	±2 % maximum
IP Rating	IP 40	IP 40
Mechanical Characteristics ¹		
Stop Strength		
3851 & 3852		56.5 N-cm (5 lbin.)
		Continuous turn
Mochanical Anglo		280 ° ±5 ° / 3856 – 1350 ° ±50 °
iviechanical Angle		200 ±3 /3030 = 1330 ±30
Torque (Starting and Running)	A & B I	oushings 0.35 to 4.23 N-cm (0.05 to 6.0 ozin.)
	C & E	bushings 0.21 to 4.23 N-cm (0.3 to 6.0 ozin.)
		3856 – 0.11 to 2.12 N-cm (0.15 to 3.0 ozin.)
Mounting (Torque on Bushing)		1.7-2.0 N-m (15-18 lbin.) maximum
Weight (Single Section)		30 grams maximum
		Printed circuit terminals or solder lugs
Coldovina Condition	Decembered and coldering vising O	OF /A of the clean solder 0 005 " wire disposter
		n95/Ag5 no clean solder, 0.025 " wire diameter.
		No wash process to be used with no clean flux.
		seconds, no wash process with no clean flux.
Marking	Manufacturer's trademark, wiring dia	agram, resistance, date code, and part number
Ganging (Multiple Section Potentiometers).	, , ,	1 cup maximum
Hardware One lockwasher and	one mounting nut is shipped with each potention	ometer, except where noted in the part number.

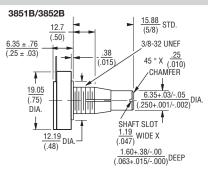
At room ambient: +25 °C nominal and 50 % relative humidity nominal, except as noted.

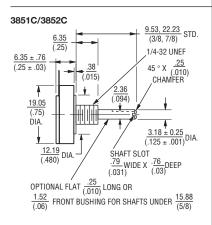
3851/3852/3856 - 3/4 " Diameter Panel Control

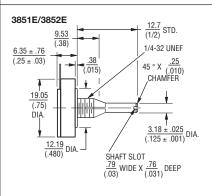
BOURNS

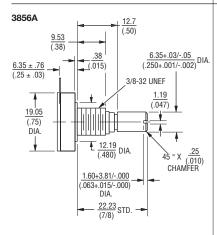
Product Dimensions

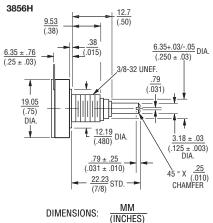




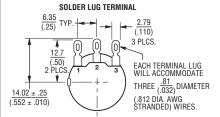




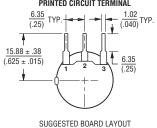




Terminal Configuration

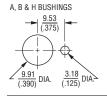


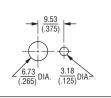




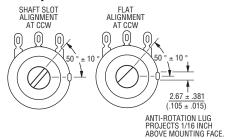


3851/3852/3856

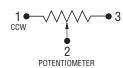




Shaft End Detail 3850 Family

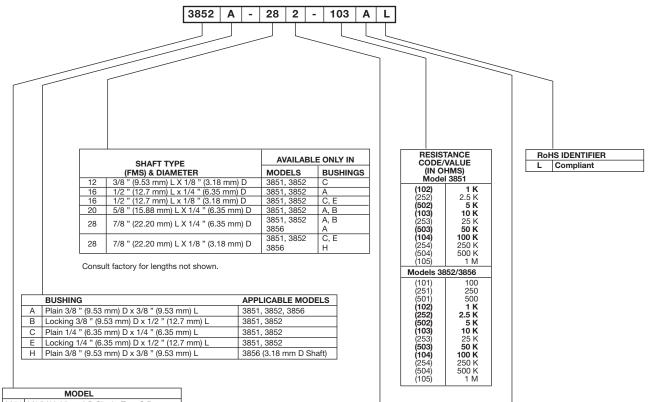


TOLERANCES EXCEPT AS NOTED: DECIMALS: $.XXX \pm \frac{.127}{(.005)}, XX \pm \frac{.38}{(.015)}$ FRACTIONS: $\pm 1/64$ ANGLE: $\pm 3\%$



3851/3852/3856 - 3/4 " Diameter Panel Control

How To Order



3851 3/4 " (19.05 mm) D Single-Turn C.P. 3852 3/4 " (19.05 mm) D Single-Turn Cermet 3856 3/4 " (19.05 mm) D 3-3/4-Turn Cermet

Boldface features are Bourns standard options. All others are available with higher minimum order quantities.

TERMINAL STYLE AND SHAFT TYPE		
1	Solder Lugs, Plain End	
2	Solder Lugs, Slotted End	
3	Solder Lugs, Flatted Shaft	
5	PC Pins, Plain End	
6	PC Pins, Slotted End	
7	PC Pins, Flatted Shaft	

%	3852, 3856
%	3851
±10 %	3852, 3856
±20 %	3851
%	3851
V ±10 %	3852, 3856
V ±20 %	3851
%	3852, 3856
֡	% % ±10 % ±20 % % V ±10 % V ±20 %