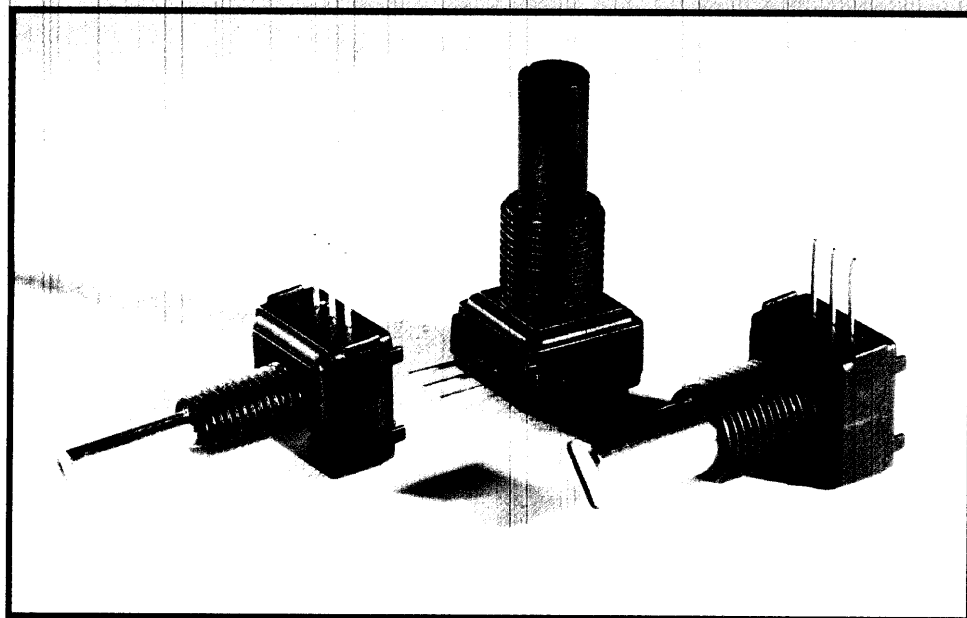




6014 075 to 614 488

# MODEL 248/249

**B**ased on the highly successful **MODEL 148/149** series, the **MODEL 248/249** retains the proven high performance characteristics in a more cost effective package.

With its many features, the **MODEL 248/249** series is destined to become the first choice when seeking high quality, cost effective panel or P.C.B. mounting potentiometers.

## ELECTRICAL

### Element type:

- 248: Conductive Plastic
- 249: Cermet

### Total resistance range:

- 248: 100 ohms to 500K ohms
- 249: 100 ohms to 1MΩ

### Resistance tolerance:

- 248: ±20%
- 249: ±10%

### Power rating:

- 248: 0.5 watts @ 70°C
- 249: 1.0 watts @ 70°C
- Both derated to zero @ 125°C

### Temperature coefficient of resistance:

- 248: ±1000ppm/°C
- 249: ±100ppm/°C

### Linearity tolerance:

- ±5% Independent

### Contact resistance variation:

- 248: 1.5% of Total Resistance
- 249: 3% of Total Resistance

### Insulation resistance:

- 1000 MΩ minimum, 500VDC

### Dielectric strength:

- 750 volts RMS minimum 50Hz

### End resistance:

- 2 ohms maximum each end

### Effective electrical angle:

- 265° ±5°

## MECHANICAL

### Rotation:

- 295° ±5°

### Torque:

- Starting and running
- 1.5 to 18.75mNm

### End stop torque:

- 0.35Nm (50oz in)

### Weight: 8.3 grammes (0.29oz)

- (1/4" x 3/8" FMF metal shaft)

### Max tightening torque:

- 0.50Nm (1/4" Bush)
- 0.70Nm (3/8" Bush)

## RESISTANCE VALUES

248 - 100R, 250R, 500R, 1K, 2K5, 5K, 10K, 25K, 50K, 100K, 250K, 500K.

249 - 100R, 250R, 500R, 1K, 2K5, 5K, 10K, 25K, 50K, 100K, 250K, 500K, 1M.

## MARKING

### Unit identification:

Manufacturer's name and model number, IEC resistance value coding, tolerance, date code and terminal identification.

## ENVIRONMENTAL

Temperature range: ..... -55° to +125°C  
 Shock: ..... 390 metres/s/s, 1000 bumps  
 Vibration: ..... 98 metres/s/s, 0.75mm, 10 to 500Hz

Mechanical rotational life: ..... 50,000 cycles  
 Load life @ 70°C: ..... 1000 hours

### Materials:

Shaft: ..... Plated brass or plastic  
 Housing and rear lid: ..... Plastic flame retardant  
 Terminals: ..... Phosphor bronze, solder plated  
 Lockwasher: Steel, nickel plated  
 Panel nut: Brass, nickel plated

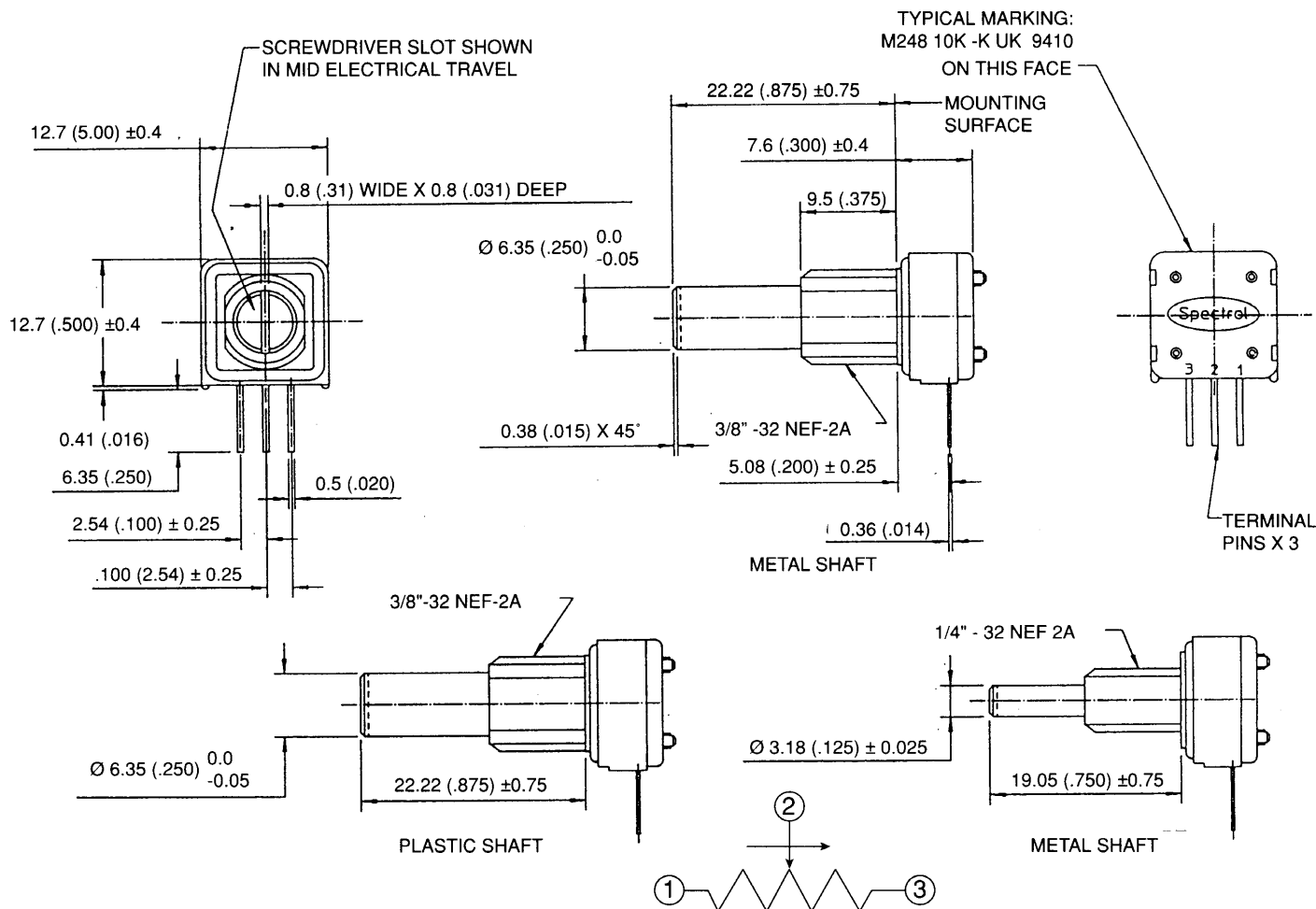
Options: PCB supports/stand-off, rear supports for rear mounting, 6mm dia shafts, cw audio tapers, alternative shaft length

**Spectrol Reliance Limited, Garrard Way, Swindon, Wiltshire SN3 3HY Tel: (01793) 521351 Telex: 44692 Fax: (01793) 539255**

**Spectrol Electronics Corporation, 4051 Greystone Drive, Ontario, CA 91761 Tel: (909) 923 3313 Fax: (909) 923 3503**

**Spectrol Electronics GmbH, Bauschstrasse 16, D73079 Süssen, Germany, Tel: 07162/7001-2, Fax: 07162/3546**

## Dimensions



## Ordering Information

Example  
Model 248 with 3.18 (1/8") diameter  
plated brass shaft x 19.05 (3/4") FMF.  
10k value, CW audio Taper. Type 1 stand offs.

**248 - JE - 8 - 08 - 103**

Model  
Number

Special features

D = rear locating lugs  
E = Type 1 rear stand offs  
F = Type 2 rear stand offs  
J = CW audio taper

Shaft Options

7 = 6.35 (1/4") Plastic  
8 = 3.18 (1/8") Plated Brass  
9 = 6.35 (1/4") Plated Brass

Standard Values (ohms)

| Res. Code | Value |
|-----------|-------|
| 101       | 100   |
| 251       | 250   |
| 501       | 500   |
| 102       | 1k    |
| 252       | 2k5   |
| 502       | 5k    |
| 103       | 10k   |
| 253       | 25k   |
| 503       | 50k   |
| 104       | 100k  |
| 254       | 250k  |
| 504       | 500k  |

Standard Shaft Lengths (FMF)  
(See options)

10 = 22.22 (7/8") for 6.35 (1/4")  
Plastic  
08 = 19.05 (3/4") for 3.18 (1/8")  
Plated Brass  
10 = 22.22 (7/8") for 6.35 (1/4")  
Plated Brass

**Shaft length options (FMF)**

| Code | 6.35 (1/4") Plastic | 3.18 (1/8") Brass | 6.35 (1/4") Brass |
|------|---------------------|-------------------|-------------------|
| 01   |                     |                   |                   |
| 02   | 9.5 (3/8")          | 9.5 (3/8")        | 9.5 (3/8")        |
| 03   |                     | 11.0 (7/16")      | 11.0 (7/16")      |
| 04   | 12.7 (1/2")         | 12.7 (1/2")       | 12.7 (1/2")       |
| 05   |                     | 14.3 (9/16")      | 14.3 (9/16")      |
| 06   | 15.9 (5/8")         | 15.9 (5/8")       | 15.9 (5/8")       |
| 07   |                     | 17.5 (11/16")     | 17.5 (11/16")     |
| 08   | 19.05 (3/4")        | 19.05 (3/4")      | 19.05 (3/4")      |
| 09   |                     | 20.6 (13/16")     | 20.6 (13/16")     |
| 10   | 22.22 (7/8")        | 22.22 (7/8")      | 22.22 (7/8")      |
| 11   |                     | 23.8 (15/16")     | 23.8 (15/16")     |
| 12   | 25.4 (1")           | 25.4 (1")         | 25.4 (1")         |
| 13   |                     | 27.0 (1 1/16")    | 27.0 (1 1/16")    |
| 14   | 28.6 (1 1/8")       | 28.6 (1 1/8")     | 28.6 (1 1/8")     |
| 15   |                     | 30.2 (13/16")     | 30.2 (13/16")     |
| 16   | 31.8 (1 1/4")       | 31.8 (1 1/4")     | 31.8 (1 1/4")     |
| 17   |                     | 33.3 (15/16")     | 33.3 (15/16")     |
| 18   | 34.9 (1 3/8")       | 34.9 (1 3/8")     | 34.9 (1 3/8")     |
| 19   |                     | 41.3 (1 5/8")     | 41.3 (1 5/8")     |
| 20   | 38.1 (1 1/2")       | 38.1 (1 1/2")     | 38.1 (1 1/2")     |

ISO 9001



FM 26189



A Kearney-National Company

As a general policy Spectrol does not recommend the use of any of its products in life support applications where failure or malfunction of the Spectrol product can be reasonably expected to cause failure of the life support device or to significantly affect its safety or effectiveness.