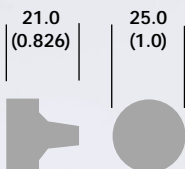




# 11/15/16/21

## Precision Multidials



### MODEL 11

#### Ordering Code

11 - 1 - 11

##### Basic Model

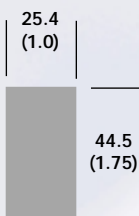
11

##### Shaft Diameter & Numerical Display

1. 1/4" Shaft (standard)
2. 1/8" Shaft adapter

##### Finish & Other Features

11. Satin chrome, black markings
21. Black chrome, white markings
31. Brushed chrome, black markings
41. Satin chrome, white markings



### MODEL 15

#### Ordering Code

15 - 1 - 11

##### Basic Model

15

##### Shaft Diameter & Numerical Display

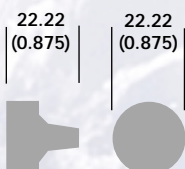
1. 1/4" Dia. 3 digit
2. 1/8" Dia. 4 digit
3. 1/8" Dia. 3 digit
4. 1/8" Dia. 4 Digit

##### Bezel

1. Open
2. Clear plastic window

##### Finish

1. Satin clear anodize
3. Black anodize white bezel trim
5. Black anodize



### MODEL 16

#### Ordering Code

16 - 1 - 11

##### Basic Model

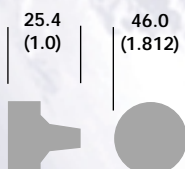
16

##### Shaft Diameter Accommodation & Fixings

1. 1/4" Dia. shaft - 1 set screw
2. 1/4" Dia. shaft - 2 set screws
3. 1/8" Dia. shaft - 1 set screw
4. 1/8" Dia. shaft - 2 set screws

##### Finish

11. Satin chrome, black markings (standard)
21. Black chrome, white markings
31. Brushed chrome, black markings
41. Satin chrome, white markings



### MODEL 21

#### Ordering Code

21 - 1 - 11

##### Basic Model

21

##### Shaft Diameter & Accommodation

1. 1/4" Shaft (standard)
2. 1/8" Shaft adapter

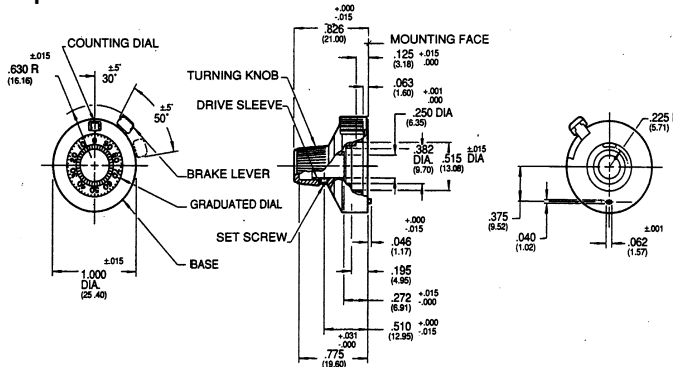
##### Finish & Other Features

11. Satin chrome, black markings
21. Black chrome, white markings
31. Brushed chrome, black markings

The part number consists of three groups of digits. The first is the **SPECTROL Model Number**. The second group describes the shaft diameter with which the dial is to be used. The third group describes the exterior finish, markings and other features.



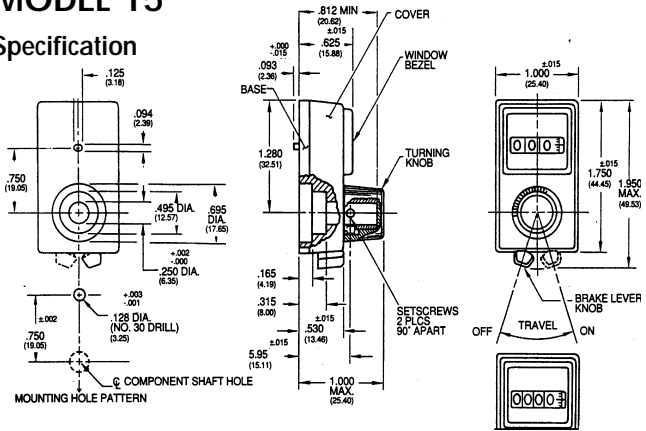
## MODEL 11 Specification



<b>Indication</b>	Single counter type wheel and a graduated circular dial registering a total count of 10 turns
<b>Rotation</b>	Increasing indication: CW direction Decreasing indication: CCW direction
<b>Runout</b>	Dial to be free running and without binds with axis of drive sleeve perpendicular or in any position within .004 per inch (0.10) out of perpendicular with the mounting face.
<b>Operation</b>	Single numeral in window (0 thru 10) indicates completed number of turns of the drive sleeve. Graduated circular dial indicates the percent of the partial turn of the drive sleeve.
<b>Accuracy</b>	Zero backlash between dial and the drive sleeve
<b>Mounting</b>	Directly to shaft with #2-56 spline socket set screw. Drive sleeve set screw on lower side of vertical centre line with a graduated circular dial reading of 0
<b>Transfer Point</b>	Between 97 and 0
<b>Numeral Size</b>	0.75 high (1.90) x 0.13 width (0.33) of line
<b>Graduation Size</b>	Numeral graduations .040 long (1.02), intermediate graduation .030 long (0.76), width graduations .010 (0.25)
<b>Weight</b>	0.7 oz. max. (19.84 gm)
<b>Mounting Hardware</b>	Lock washer, internal tooth, steel, nickel plated panel nut: brass, nickel plated



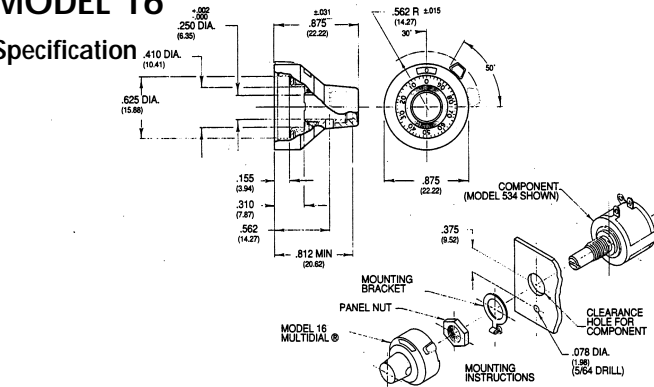
## MODEL 15 Specification



<b>Operation 3 Digit: (10 turn)</b>	The left digit indicates the number of complete revolutions of the turning knob and the right two digits indicate the percent of a revolution. The unit registers a total count of 999
<b>Operation 4 Digit: (100 turn)</b>	The left two digits indicate the number of complete revolutions of the turning knob and the right two digits indicate the percent of a revolution. The unit registers a total count of 9999.
<b>Accuracy</b>	Graduation lines adjacent to the numerals on the right digit wheel indicate settings of .2% of a revolution of the turning knob. The indication shall increase with clockwise rotation of the turning knob. The numerals shall be white on a black background and .130 high (3.30)
<b>Rotation</b>	The dial shall have the feature of being phased during the mounting operation by rotating the exposed component shaft to correspond with the desired reading on the dial prior to tightening the set screws.
<b>Mounting</b>	The spring detented knob shall be removed using a straight pull, exposing two No. 4-40 hex socket set screws for mounting the dial directly to the component shaft.
<b>Weight</b>	1.6 ounces (45.36 gm)



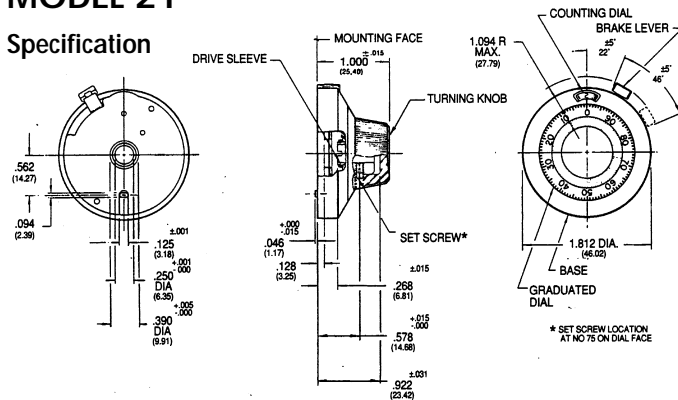
## MODEL 16 Specification



<b>Readout and Operation</b>	Unit shall register a total count of 15 turns. The number in the window (0 thru 14) indicates completed number of turns of the drive sleeve. Graduated circular dial indicates the percent of a partial turn of the drive sleeve.
<b>Transfer Point</b>	The number in centre of window shall change as graduated dial rotates between 95 and 0.
<b>Rotation</b>	Readout shall increase with clockwise and decrease with counterclockwise rotation.
<b>Brake Lever</b>	1st position (15° movement of Brake Lever) operates a high torque system for fine adjustment; 2nd position (15° additional movement of Brake Lever) actuates brake. Backlash shall be zero between graduated dial and drive sleeve.
<b>Accuracy</b>	Backlash shall be zero between graduated dial and drive sleeve.
<b>Mounting</b>	Install mounting bracket between panel and panel nut. Multidial shall mount directly to shaft with No. 2-56 spline socket set screw, located adjacent to No. 50 on graduated dial.
<b>Numeral Size</b>	.075 high
<b>Graduation Size</b>	Numeral graduations .045 long (1.14) intermediate graduations .030 long (0.76)
<b>Weight</b>	0.7 oz. max. (19.84 gm)



## MODEL 21 Specification



<b>Readout and Operation</b>	Unit shall register a total count of 1499. The number in the window (0 thru 14) indicates completed number of turns of the drive sleeve. Graduated circular dial indicates the percent of a partial turn of the drive sleeve.
<b>Transfer Point</b>	The number in centre of window shall change as graduated dial rotates between 94 and 0.
<b>Rotation</b>	Readout shall increase with clockwise and decrease with counterclockwise rotation.
<b>Accuracy</b>	Backlash shall be zero between graduated dial and drive sleeve.
<b>Mounting</b>	Unit shall mount directly to shaft with No. 4-40 hex socket set screw located adjacent to No. 75 on graduated dial.
<b>Numeral Size</b>	Counter wheel: .090 high x 0.13 (2.29 x 0.33) Graduated dial: .109 x .018 (2.77 x 0.46)
<b>Graduation Size</b>	Numeral and every fifth graduation .055 (1.40) long, intermediate graduations .035 long (0.89), width of graduation .012 (0.30)
<b>Weight</b>	3.0 oz. max. (85.05 gm)

