INSTALLATION INSTRUCTIONS

Model:	**RT8420**
Type:	Rotational Transducer
File No.:	RT8420 Installation.PDF
Revision:	01.20.2000

⚠ DO NOT ROTATE SHAFT BEYOND FULL RANGE!

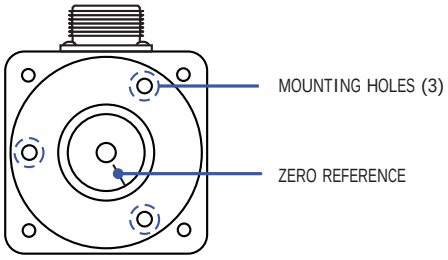
⚠ DO NOT APPLY EXCESSIVE LOADS TO SHAFT!

MOUNTING:

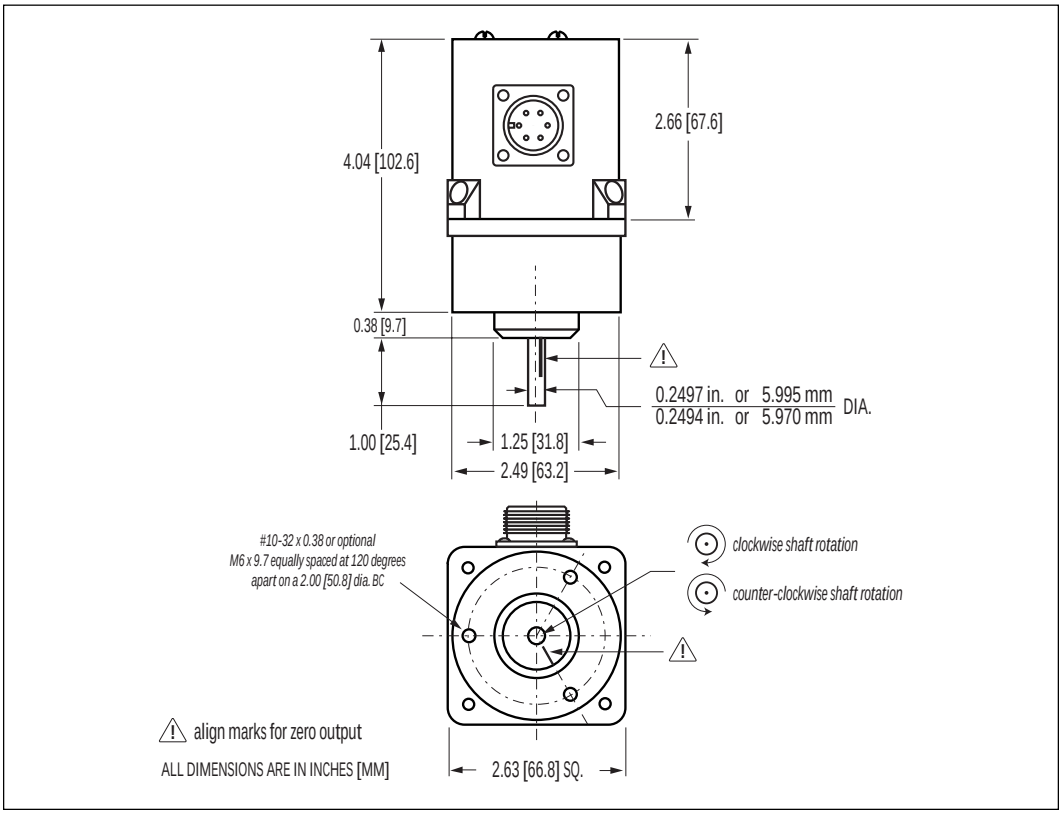
1. Note mechanical limitations of shaft rotations. Rotate shaft to full counter-clockwise position and align zero reference marks on shaft and housing.

2. Mount transducer via the 3 threaded mounting holes to a flat solid surface.

3. Attach shaft using appropriate flexible coupling assuring that shaft will not be rotated beyond mechanical limits.



OUTLINE DRAWING:

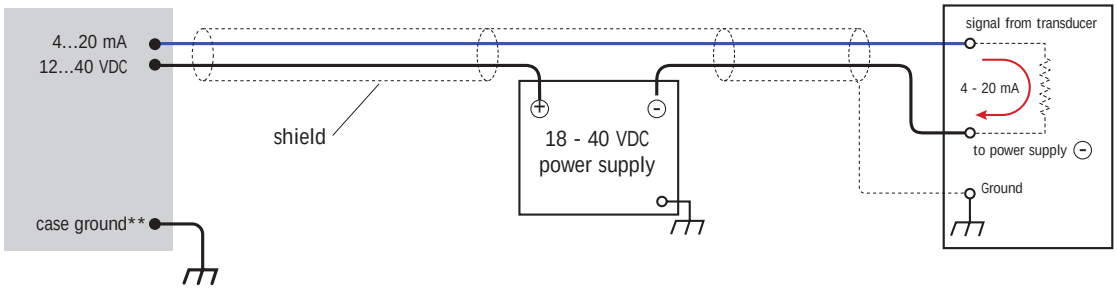


ELECTRICAL:

4. Connect system wiring.

"2-WIRE" SYSTEM

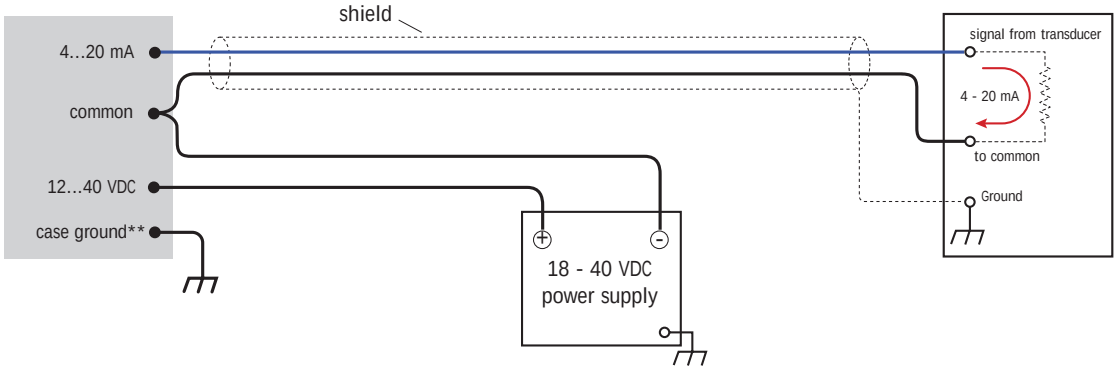
Celesco 4...20 mA Transducer | DC Power Supply | Controller or Numeric Display



**IMPORTANT ! transducer chassis must be earth grounded!

"3-WIRE" SYSTEM

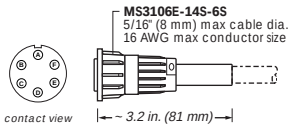
Celesco 4...20 mA Transducer | DC Power Supply | Controller or Numeric Display



**IMPORTANT ! transducer chassis must be earth grounded!

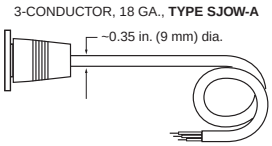
ELECTRICAL CONNECTION

6-Pin Connector



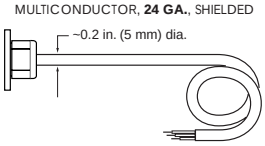
	2-wire	3-wire
12...40 VDC	A	A
4...20 mA out	B	C
common	n/a	B
case ground	D	n/a

Waterproof Cable



	2-wire	3-wire
12...40 VDC	WHT	n/a
4...20 mA out	BLK	n/a
common	n/a	n/a
case ground	GRN	n/a

Instrumentation Cable



	2-wire	3-wire
12...40 VDC	RED	RED
4...20 mA out	BLK	BLK
common	n/a	WHT
case ground	GRN	n/a

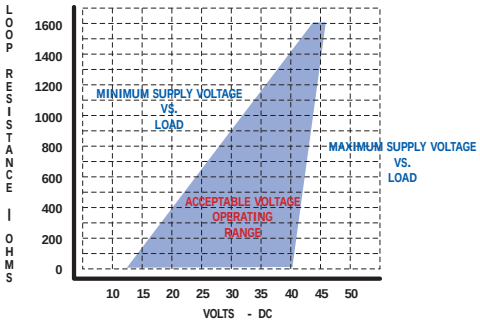
SUPPLY VOLTAGE:

To determine the required voltage supply, use either the graph below or calculate as follows:

The minimum allowable voltage = **12 x (0.02 x loop resistance*)**
The maximum allowable voltage = **40 x (0.004 x loop resistance*)**

loop resistance *is the sum of the total wire resistance + the impedance of each PLC or panel meter within the loop.*

supply voltage calculation graph



wire resistance for stranded copper wire

Gage AWG	Max. Resistance @68°F Ohms/1000 ft.
26	44.4
24	27.7
22	17.5
20	10.9
18	6.92
16	4.35
14	2.73
12	1.71

Even when wire resistance is negligible, we highly recommend using a power supply that's at least 18 VDC. This will allow for typical voltage drops that occur across most PLC's and panel meter displays that you may have connected to your loop.

5. After power is applied to the loop, you can adjust the output signal to precisely match the measurement range of your application.

CHANGING FACTORY CALIBRATED RANGE

A. Remove Philips-head plugs to expose flat head zero and span trimming potentiometers

B. Rotate shaft to beginning (home) position of stroke and adjust "zero" pot to desired output signal level.

C. Rotate shaft to end of stroke and adjust "span" to desired output signal level

D. Repeat steps B & C to verify settings are correct.

E. Replace plugs.