

## Model C801 “Tuff Tilt 420” Tiltmeter

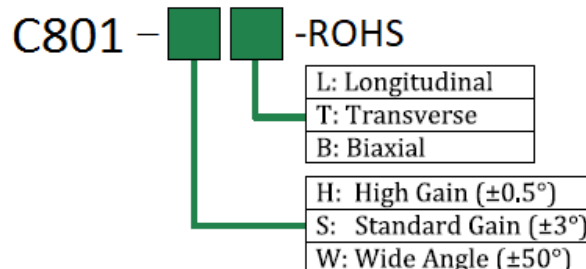
The model C801 “Tuff Tilt 420” delivers the same precision and durability of our A801, but with 4-20mA output. Units are available in single axis (uniaxial), and dual axis (biaxial) tilt configurations. The Tuff Tilt 420 is current loop powered, so tilt measurements are made using an economical 2-wire pair, and because output is 4-20mA there is no signal loss over long cables. Units also include an on-board thermistor for temperature measurements. All units are rated IP65 waterproof for advanced protection from the elements. Use the C801 for structural monitoring, 4-20mA PLC systems, industrial measurement and control, or anywhere long cable runs are necessary.



|                             | High-Gain                                                               | Standard  | Wide-Angle           |
|-----------------------------|-------------------------------------------------------------------------|-----------|----------------------|
| Angular Range               | ±0.5°                                                                   | ±3.0°     | ±50°                 |
| Resolution                  | <0.0001°                                                                | 0.0006°   | 0.01°                |
| Repeatability               | <0.0002°                                                                | 0.001°    | 0.02°                |
| Non-Linearity               | 1%                                                                      | 2%        | 0.5%                 |
| Scale Factor                | 0.0625°/mA                                                              | 0.375°/mA | 6.25°/mA             |
| Kz Temp Coefficient (deg/C) | ±0.0002°/°C (typical)                                                   |           | ±0.002°/°C (typical) |
| Ks Temp Coefficient (%/°C)  | <0.04%/°C (typical)                                                     |           | <0.1%/°C (typical)   |
| Time Constant               | 0.15 sec                                                                |           |                      |
| Output                      | 4-20mA Two-wire current loop (per axis)                                 |           |                      |
| Channels                    | Tilt, Temperature                                                       |           |                      |
| Load Impedance              | 270 ohms                                                                |           |                      |
| Temperature Output          | Temperature is measured with a 2500 Ohm thermistor, -50° to 150°C range |           |                      |
| Power                       | (0.02 Ampere x R + 10 VDC) < Vs < 29 VDC                                |           |                      |
| Environmental               | -40 to +85°C operation and storage. IP65                                |           |                      |
| Dimensions                  | 120 x 80 x 60 mm, 0.5 kg (1.1 lb.)                                      |           |                      |
| Materials                   | Diecast painted aluminum,                                               |           |                      |
| Cable                       | 3m (10 ft.), 5-conductor + one overall shield, PVC jacket, tinned ends  |           |                      |

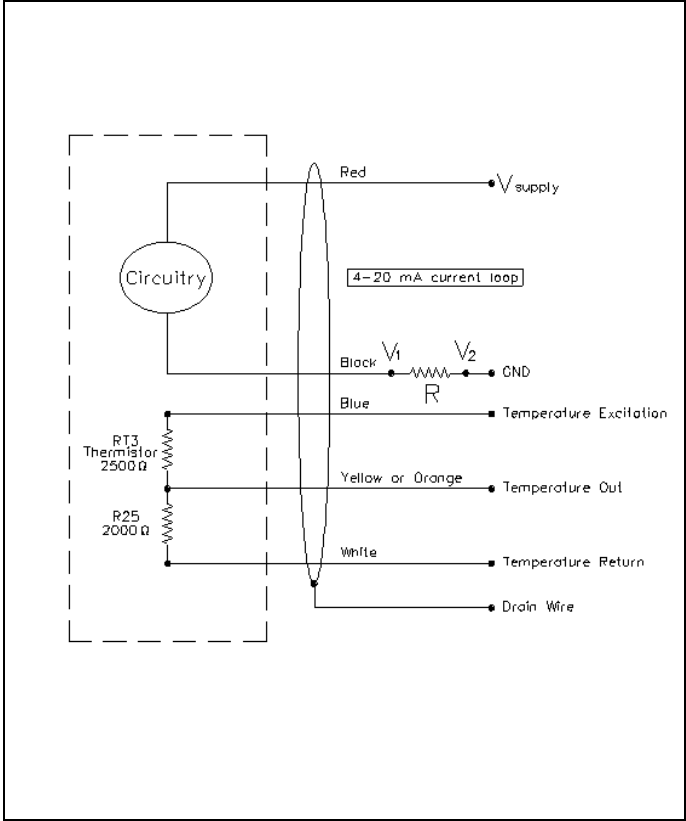
*Specifications subject to change without notice on account of continued product development*

### Ordering Code:

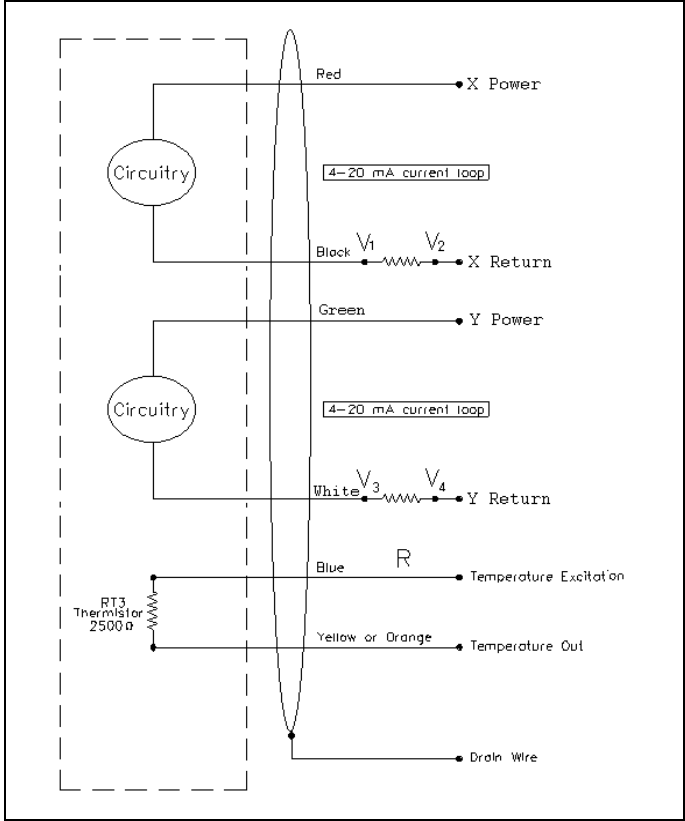


Circuit Diagram:

Model C801 (Uniaxial Versions)



Model C801 (Biaxial Versions)

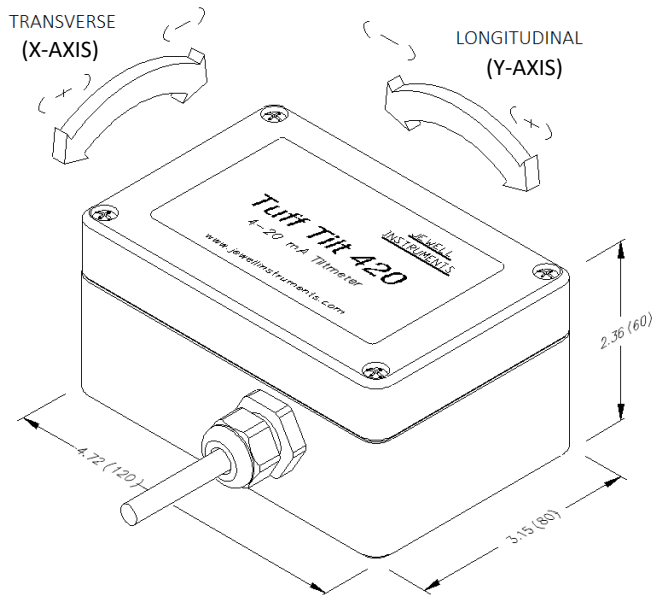


Wiring Diagram:

| Function          | Wire Color (Uniaxial Versions) | Wire Color (Biaxial Versions) |
|-------------------|--------------------------------|-------------------------------|
| Loop Power (V+)   | Red                            | Red (X), Green (Y)            |
| Loop Return (GND) | Black                          | Black (X), White (Y)          |
| Temp. Excitation  | Blue                           | Blue                          |
| Temp. Out         | Yellow                         | Yellow                        |
| Temp. Return      | White                          | Not Connected                 |
| Drain             | Bare (Clear)                   | Bare (Clear)                  |

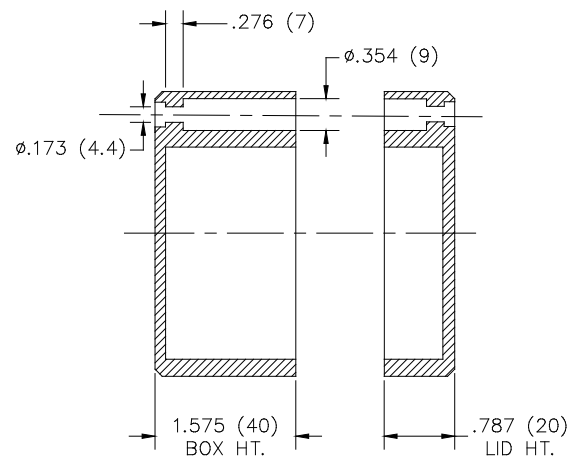
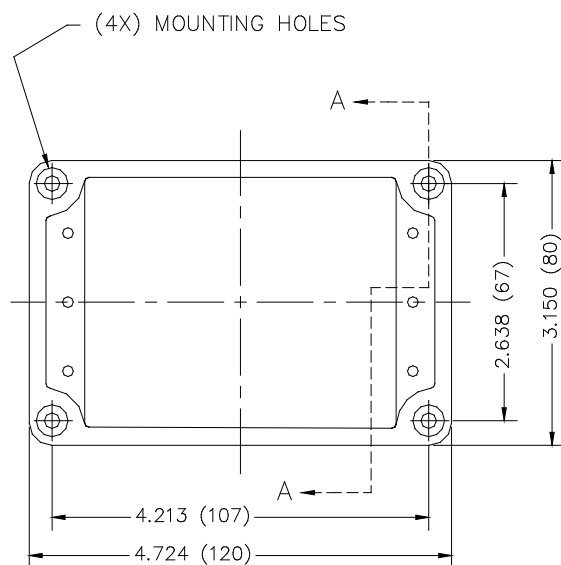
# Model C801 "Tuff Tilt 420" Tiltmeter

## Dimensions:



## Accessories

| Model     | Part Number  | Description                                                                                   |
|-----------|--------------|-----------------------------------------------------------------------------------------------|
| 84051     | 84051-01     | Horizontal Mounting Plate Kit w/Mounting Hardware (See plate dimensions)                      |
| 81439     | 81439-01     | Vertical Mounting Plate Kit w/Mounting Hardware (see plate dimensions)                        |
| 602-00013 | 602-00013    | Extra Mounting Kit (Includes Allen Wrench, four (4) Mounting Studs and Circular Bubble Level) |
| 62204     | 62204        | Optional 6-pin male receptacle (installed on tiltmeter cable)                                 |
| 62202     | 62101011-001 | Optional 6-socket in-line plug (mates to P/N 62204 connector)                                 |
| 70304     | 70304        | Power/signal 10-conductor Cable, 24 AWG, Polypropylene Jacket (Specify total length on order) |



SECTION A-A

Dimensions in inches (mm)

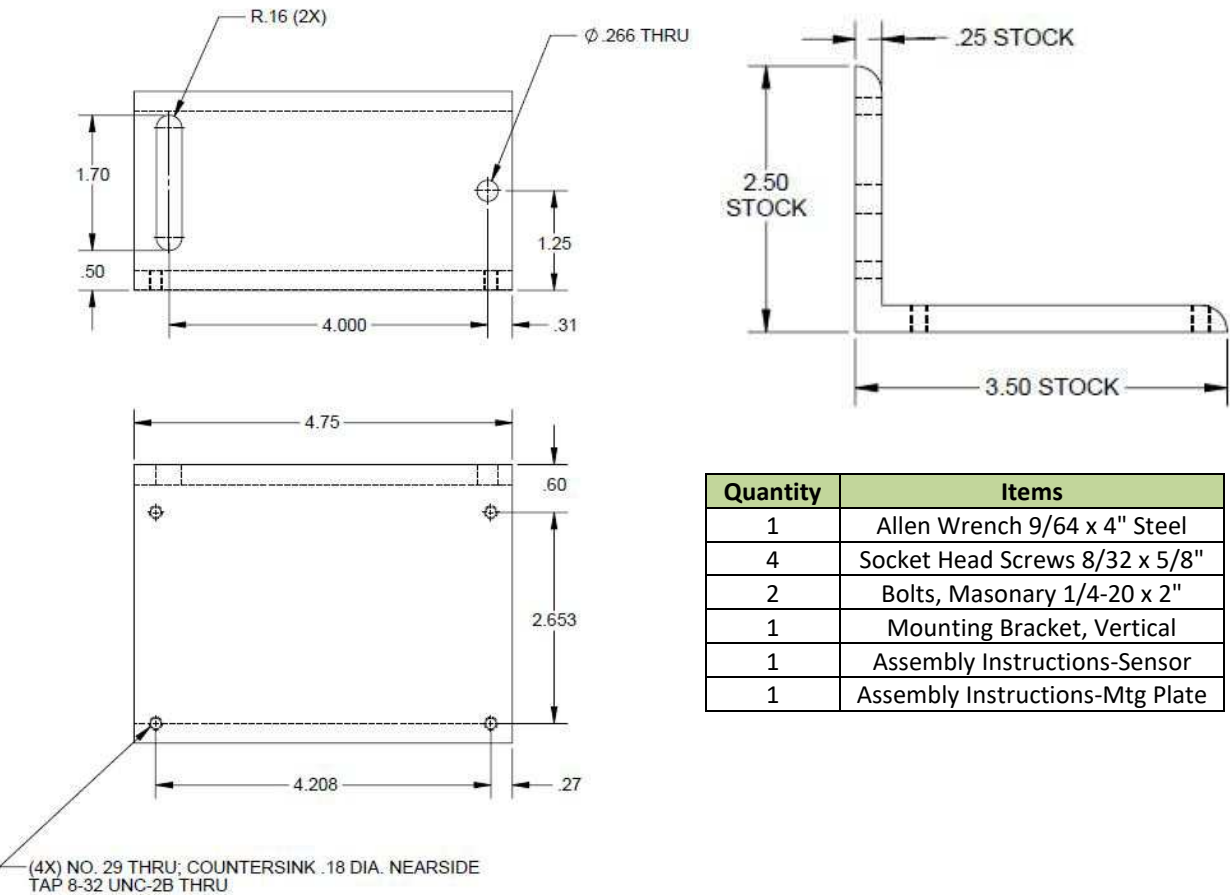
## Extra Mounting Kit, Tuff Tilt, Part Number 602-00013

| Quantity | Items                 | Item Description                                             |
|----------|-----------------------|--------------------------------------------------------------|
| 1        | Allen Wrench          | 9/64" x 4", Alloy steel                                      |
| 1        | Circular Bubble Level | Acrylic Circular Bubble Level                                |
| 4        | Stud Mounting Assys   | 2-Hex Nuts, 3-Flat Washers, 1-Socket Head Screw, & 1-Locknut |
| 1        | Assembly Instructions | Assembly Mounting Instructions                               |

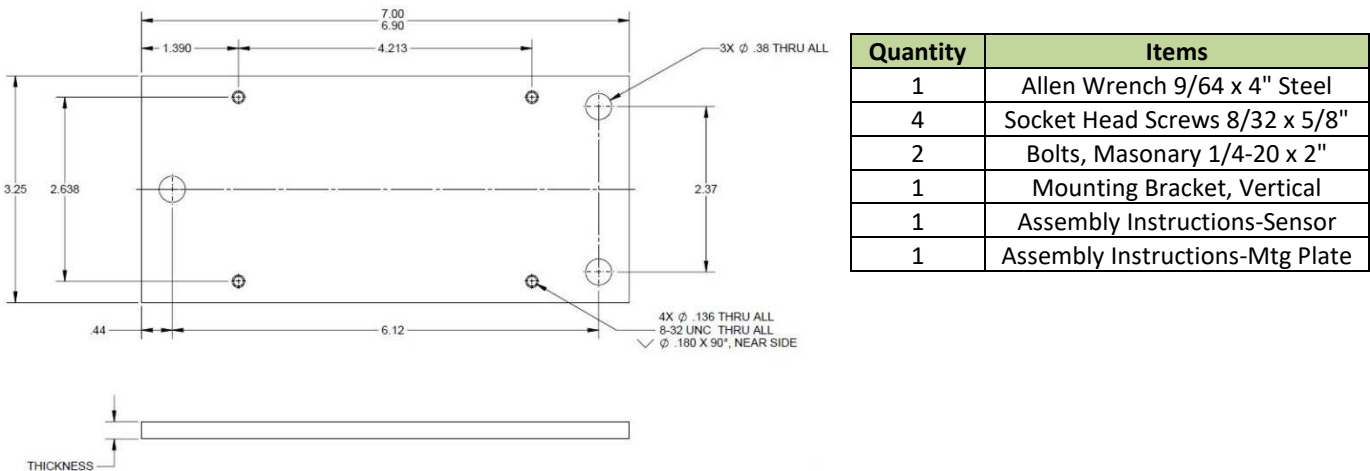
# Model C801 "Tuff Tilt 420" Tiltmeter



Right Angle Mounting Bracket Diagram - Model: 81439, Part Number: 81439-01



Horizontal Mounting Plate Diagram - Model: 84051, Part Number 84051-01



## Model C801 “Tuff Tilt 420” Tiltmeter



### Ordering Code

| Model No.    | Part No.      |
|--------------|---------------|
| C801-HL-ROHS | 98008-04-ROHS |
| C801-HT-ROHS | 98008-01-ROHS |
| C801-HB-ROHS | 98008-08-ROHS |
| C801-SL-ROHS | 98008-05-ROHS |
| C801-ST-ROHS | 98008-02-ROHS |
| C801-SB-ROHS | 98008-09-ROHS |
| C801-WL-ROHS | 98008-06-ROHS |
| C801-WT-ROHS | 98008-03-ROHS |
| C801-WB-ROHS | 98008-10-ROHS |