

## WTS-AM-1E WIRELESS STRAIN BRIDGE TRANSMITTER MODULE

The WTS-AM-1E transmitter connects to strain bridge transducers such as load cells, torque sensors, strain gauges and pressure modules and forms part of the WTS modular telemetry system. The data transmitted by the WTS-AM-1E can be received by multiple WTS receivers that include displays, handheld readers, analog outputs, relay modules and computer interfaces.

WTS transmitters have been designed for battery operation and support an ultra low-power sleep mode whilst offering class leading wireless coverage and range. Configurable transmission rates from once per day to 200 per second cope with a wide range of measurement and monitoring applications. A choice of enclosures enabling battery connection, field connectivity and environmental sealing up to IP67 ensure these modules provide a flexible solution to your wireless sensor requirements.

The WTS-AM-1E provides 5 V excitation to drive transducer loads down to 85 ohms. This transmitter is highly accurate, low noise and uses up to nine point linearization giving quality measurements from a wide range of strain bridge transducers.

### FEATURES & BENEFITS

- Simple wireless configuration and calibration
- Wireless range up to 800 m (2,625 ft)
- Low power mode for long battery life
- Free Visualization software

### INDUSTRY SOLUTIONS

- **Construction**
  - Monitoring tension & compression on shoring struts
  - Crane/Under Hook Scales
- **Automotive & Vehicle**
  - Torque measurement on rotating shaft
  - Wheel balance in high performance cars

### OPTIONS

#### **WTS-AM-1E-D**

Wireless strain bridge transmitter module in IP67 enclosure supporting two D batteries or external power supply

#### **WTS-AM-1E**

Wireless strain bridge transmitter module in IP67 enclosure for two AA batteries

#### **WTS-AM-4**

Wireless strain bridge transmitter module in miniature IP50 enclosure

### STANDARD CONFIGURATION



WTS-AM-1E (Shown) - (2) "AA" Size Batteries

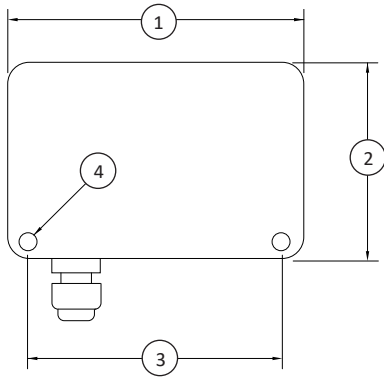


WTS-AM-1E-D (Shown) - (2) "D" Size Batteries

### SPECIFICATIONS

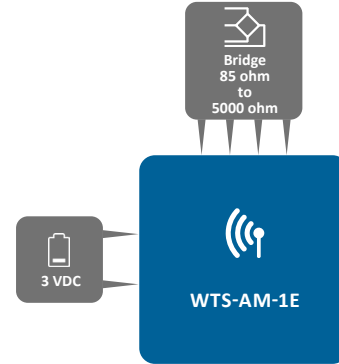
MEASUREMENT SPECIFICATIONS		
Strain Gauge Excitation System	4-wire	
Strain Gauge Excitation – VDC	5	
Strain Gauge Resistance (min) – Ω	85	
Strain Gauge Sensitivity (max) – mV/V	±4.5	
Offset Temperature Stability (max) – ppm/°C	4	
Gain Temperature Stability (max) – ppm/°C	5	
Nonlinearity Before Linearization (max) – ppm of FR	25	
Internal Resolution/Bits	16,000,000 / 24	
Noise Free Resolution at 1 Sample Per Second	400,000 / 18.75	
Transmission Rates – ms to day	From 5 to 1	
BATTERY LIFE		
Based on transmitting results at 3 per second , 350R strain bridge		
Pair AA Cells Constantly On – weeks	3	
Pair AA Cells 12 Sessions Per Day of 5 Mins – years	2	
Pair DD Cells Constantly On – months	3.5	
Pair DD Cells 12 Sessions Per Day of 5 mins – years	5	
POWER SUPPLY		
WTS-AM-1E – VDC	2.1 to 3.6	
WTS-AM-1E-D – VDC	5 to 18	
RADIO		
Radio Type	License exempt transceiver	
Radio Frequency – GHz	2.4	
Transmit Power – mW	10	
Range	m	Up to 800
	ft	Up to 2,625
ENVIRONMENTAL		
Operating Temperature Range	°C	-20 to 55
	°F	-4 to 131
Storage Temperature Range (no batteries)	°C	-40 to 85
	°F	-40 to 185
Maximum Humidity – %	95 non-condensing	
IP Rating (WTS-AM-1 & WTS-AM-1-D)	IP67/Nema4	

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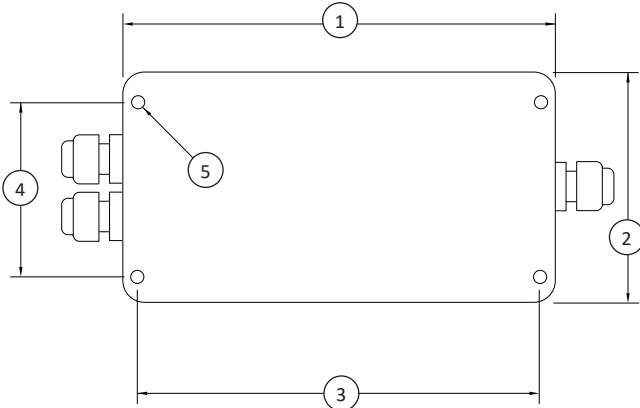
WTS-AM-1E (2) "AA" Size Batteries

### ELECTRICAL



### DIMENSIONS

See Drawing	Metric (mm)	U.S. (in)
(1)	80	3.1
(2)	62	2.4
(3)	66.5	2.6
(4)	Ø4.8	Ø0.2
<b>Height</b>	34	1.3



WTS-AM-1E-D (2) "D" Size Batteries

### DIMENSIONS

See Drawing	Metric (mm)	U.S. (in)
(1)	164	6.5
(2)	84	3.3
(3)	148	5.8
(4)	50	2.0
(5)	Ø4.5	Ø0.2
<b>Height</b>	57	2.2