U-GAGE T18U Ultrasonic Sensors

Product Specifications

Supply Voltage and Current	12 to 30V dc (10% max. ripple) **Emitters**:50 mA (exclusive of load) **Receivers**:35 mA (exclusive of load)
Range	**NORMAL resolution**:600 mm **HIGH Resolution**:300 mm
Sensing Beam	Ultrasonic, 230 kHz
Minimum Spacing (adjacent pairs)	50 mm for emitter-to-receiver separation of up to 150 mm. Add 10 mm of adjacent-pair spacing for every 100 mm of emmiter-to-receiver spacing beyond 150 mm
Output Configuration	NPN (current sinking) or PNP (current sourcing), depending on model
Output Rating	150 mA max. each output @ 25° C, derated to 100 mA @ 70° C (derate approximately 1 mA per ° C) **ON-state saturation voltage**:less than 1.5V @ 10 mA; less than 2V @ 150 mA **OFF-state leakage current**:less than 1 µA @ 30V dc
Output Protection Circuitry	Protected against false pulse on power-up and continuous overload or short circuit of outputs
Output Response Time	**NORMAL resolution**:2 milliseconds ON/OFF **HIGH resolution**:1 millisecond ON/OFF
Delay at Power-up	100 milliseconds
Rep. Rate	**NORMAL resolution**:125 Hz max. **HIGH resolution**:200 Hz max.
Repeatability	**NORMAL resolution**:less than 2mm @ 300 mm range **HIGH resolution**:less than 1 mm @ 300 mm range
Beam Angle (-3dB full angle)	15 ± 2°
Indicators	**Receivers, 2 LED indicators**:Green and Yellow Green ON steady:power ON Green flashing:output overload Yellow flashing:sonic signal received (flash rate is proportional to received signal strength; flash is from full to half intensity). **Emitters, 1 LED indicator**:Green Green ON steady:power ON
Environmental Rating	IEC IP67; NEMA 6P
Construction	T-style yellow PBT polyester housing with black PBT polyester back cover. Transducer housing is threaded M18 x 1. Mating jam nut is supplied for mounting. Acoustic face is epoxy reinforced. Circuitry is epoxy-encapsulated.
Connections	**Emitters**:2-wire 2 m or 9 m attached PVC cable, or 4-pin Euro-style quick-

	disconnect fitting. QD cables are ordered separately. **Receivers**:4-wire 2 m or 9 m attached PVC cable, or 4-pin Euro-style quick-disconnect fitting. QD cables are ordered separately.
Operating Conditions	**Temperature**:-40° to +70° C
Vibration and Mechanical Shock	Meets Mil.Std 202F requirements. Method 201A (Vibration: frequency 10 to 60 Hz, max., and double amplitude 0.06-inch, maximum acceleration 10G). Method 213B conditions H&I (Shock: 75G with unit operation; 100G for non-operation) Also meets IEC 947-5-2 requirements: 30G, 11 milliseconds duration, half sine wave.