

OM-CP-ULTRASHOCK-A Temperature, Pressure, Humidity & Tri-Axial Shock Data Logger



OM-CP-SHOCK300 Tri-Axial Shock Data Logger CE

- Compact size
- 3-axis shock
- Temperature, humidity, pressure (OM-CP-ULTRASHOCK-A only)
- Fully configurable measurements
- Long life rechargeable battery
- Large capacity event memory
- Programmable start time
- Real time operation
- CE compliant
- Separate low-g and high-g accelerometers



The OM-CP-ULTRASHOCK-A is a 3-axis shock / acceleration data logger with additional channels for temperature, humidity and barometric pressure. Each of the six channels may be made active or inactive as needed. Disabling channels will provide additional storage to the enabled channels.

The OM-CP-SHOCK300 is a 3-axis shock / acceleration data logger. Each of the three channels may be made active or inactive as needed. Disabling channels will provide additional storage to the enabled channels.

The OM-CP-ULTRASHOCK-A and OM-CP-SHOCK300 are specifically designed for documenting dynamic environments such as moving vehicles, trucks, containers, ships, etc. The device is also valuable in characterizing environments such as production and assembly lines of delicate electronics, IC fabrication, communications and computer components.

The OM-CP-ULTRASHOCK-A and OM-CP-SHOCK300 contain two separate accelerometers to provide high sensitivity and accuracy up to 15g or higher levels of shock monitoring up to 300g. One of three operating ranges must be chosen during setup for a logging session. Those ranges are +/- 15g (low g accelerometer), +/- 100g and +/- 300g (high g accelerometer).

OM-CP-SHOCK300 Specifications

| SHOCK | | | |
|-----------------------------|---|--------|--------|
| Accelerometer Type | MEMS Semiconductor | | |
| Acceleration Range (g) | ±15 g | ±100 g | ±300 g |
| Acceleration Resolution (g) | 0.02 g | 0.05 g | 0.2 g |
| Calibrated Accuracy (g) | ±0.3 g | ±2.0 g | ±6.0 g |
| Sampling Rate | 1000 Hz | | |
| Accelerometer Freq. Resp. | >1000 Hz (15 g) >500 Hz (100 g, 300 g) | | |
| Reading Rate | 1024 Hz to 5 minutes, selectable in software. | | |

OM-CP-ULTRASHOCK-A Specifications

| TEMPERATURE | | | |
|-----------------------------|---|--------|--------|
| Sensor | Semiconductor | | |
| Range | -20 °C to +60 °C | | |
| Resolution | 0.1 °C | | |
| Accuracy | ±0.5 °C (+5 °C to +60 °C) | | |
| HUMIDITY | | | |
| Sensor | Capacitive Polymer | | |
| Range | 0 %RH to 95 %RH | | |
| Resolution | 0.1 %RH | | |
| Calibrated Accuracy | ±3 %RH (±2 %RH typical at 25 °C) | | |
| Specified Accuracy Range | +20 °C to +40 °C; 25 %RH to 75 %RH | | |
| PRESSURE | | | |
| Sensor | Semiconductor Strain Gage | | |
| Range | 100 mbar to 1300 mbar | | |
| Resolution | 0.05 mbar | | |
| Calibrated Accuracy | ±1.5 mbar at 25 °C; at 750 mbar | | |
| SHOCK | | | |
| Accelerometer Type | MEMS Semiconductor | | |
| Acceleration Range (g) | ±15 g | ±100 g | ±300 g |
| Acceleration Resolution (g) | 0.02 g | 0.05 g | 0.2 g |
| Calibrated Accuracy (g) | ±0.3 g | ±2.0 g | ±6.0 g |
| Sampling Rate | 1000 Hz | | |
| Accelerometer Freq. Resp. | >1000 Hz (15 g) >500 Hz (100 g, 300 g) | | |
| Reading Rate | 1024 Hz to 5 minutes for shock, selectable in software. Temperature, pressure and humidity sampled approx. every 2 seconds at intervals shorter than 2 seconds. Otherwise, sampled at the reading rate. | | |

General Specifications

| GENERAL | |
|------------------------|---|
| Memory | 3,593,358 readings (598,893 per channel, all channels in use) |
| Start Modes | Software programmable immediate start or delay start, up to 6 months in advance |
| Real Time Recording | May be used with PC to monitor and record data in real time at a 1 second sample rate |
| Password Protection | An optional password may be programmed into the device to restrict access to configuration options. Data may be read out with the password. |
| Calibration | Digital calibration through software |
| Calibration Date | Automatically recorded within device |
| Battery Type | Internal Lithium Ion pack, charger included |
| Battery Life | 90 days typical at 64Hz rate |
| Data Format | Date and time stamped gravities (g and mg), temperature (°C, °F, K, °R), humidity (%RH, mg/ml water vapor concentration), pressure (PSIA, inHg, mmHg, bar, atm, Torr, Pa, kPa, MPa) |
| IP Rating | IP64 |
| Time Accuracy | 10 seconds/month (at 0 °C to 50 °C) |
| Computer Interface | USB-C cable required (included); 1Mbaud |
| Supported Software | Windows XP SP3/7/8/10 |
| Software Compatibility | Standard Software version 4.2.15.0 or later Secure Software version 4.2.14.0 or later |
| Operating Environment | -20 °C to +60 °C, 0 %RH to 95 %RH non-condensing |
| Dimensions | 3.4 in x 1.7 in x 1.3 in (86 mm x 43 mm x 33 mm) |
| Weight | 8 oz (227 g) |
| Enclosure | Anodized aluminum |
| Approvals | CE compliant EMC Directive 2014/30/EU RoHS Directive 2011/65/EU |

BATTERY WARNING: FIRE, EXPLOSION AND SEVERE BURN HAZARD. DO NOT SHORT CIRCUIT, CRUSH, PENETRATE, INCINERATE OR DISASSEMBLE. AVOID TEMPERATURES ABOVE THE MAXIMUM OPERATING TEMPERATURE OF THE PRODUCT. DISPOSE OF PROPERLY. CHARGE ONLY WITH THE PROVIDED OMEGA CHARGER, OR FROM OTHER USB POWER SOURCE VIA THE OMEGA PROVIDED CABLE.

| To Order | |
|--------------------|--|
| P/N | Description |
| OM-CP-ULTRASHOCK-A | Temperature, Humidity, Pressure and ±15 g / ±100 g / ±300 g Tri-Axial Shock Data Logger, Battery Charger and USB-C Interface Cable |
| OM-CP-SHOCK300 | ±15 g / ±100 g / ±300 g Tri-Axial Shock Data Logger, Battery Charger and USB-C Interface Cable |