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

Ω≡ OMEGA ™

OM-CP-SHOCK300
Tri-Axial Shock Data Logger
C €

- **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

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