



SAA232

Model 003

Interface units control communications between the ShapeArray and the data logger, as well as power. Unlike traditional geotechnical instruments that use only a few sensors, ShapeArrays often have hundreds of sensors in one instrument that require electricity. ShapeArray's unique power requirements determine tight regulation to ensure optimum function. A 12V battery system can produce a range of fluctuating voltage—10.5V to 15V—depending on their condition. SAA232 contains a high quality DC-to-DC converter that boosts and regulates voltage supplied by 12V battery systems to a constant 13.5V. The SAA232 unit also extends the length of cable that can be run between the ShapeArray and its data logger, providing a 16.5V boost for longer cables. SAA232 also protects against electrical surges and voltage strikes.

There are two versions of the SAA232 interface: the SAA232, and the SAA232-5. The SAA232 is used to connect a single ShapeArray to a single COM port on a Data Logger, while the SAA232-5 can be used to connect up to 5 ShapeArrays to a single COM port.

Related products: ShapeArray, SAASPD

SPECIFICATIONS



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DIMENSIONS	30 mm x 121 mm x 51 mm
MOUNTING	2 x 5 mm holes, spaced 102 mm
WEIGHT	0.18 kg
OPERATING TEMPERATURE	-40°C to +80°C
OPERATING HUMIDITY	0% to 95% Non-condensing
LED INDICATORS	1 – Power On
POWER REQUIREMENTS	9.5 V to 16 V
OUTPUT POWER	13.5 V automated software adjusted 16.5 V
STANDBY CURRENT CONSUMPTION	< 2 mA
OPERATING CURRENT CONSUMPTION	30 mA active
POWER UP TIME	10 ms
DATA RECEIVE DELAY TO POWER OFF	4 s (or program shut down)
SERIAL PROTOCOL	RS232 to RS485, slew rate limited
DATA RATE	38.4 kbps
SURGE SUPPRESSION	600 W (10/1000 μ s), 4 kW (8/20 μ s), 2kA (8/20 μ s) from gas discharge tubes
MATING 4-PIN TERMINAL BLOCK PLUG	Phoenix PN 1757035, DigiKey PN 277-1013-ND
MATING 5-PIN TERMINAL BLOCK PLUG	Phoenix PN 1757048, DigiKey PN 277-1014-ND

WIRING DIAGRAM

