



# Carlson MA7 Readout



The Carlson MA7 Readout is the intended readout for all Carlson Instruments.

Carlson Instruments are elastic wire strain meters containing two coils of highly elastic steel wire, one of which increases in length and electrical resistance when a strain occurs, while the other decreases. The ratio of the two resistances is independent of temperature (except for thermal expansion) and therefore the change in resistance ratio is a measure of strain. The total resistance is independent of strain since one coil increases the same amount as the other decreases due to a change in length of the meter. Therefore, the total resistance is a measure of temperature.

## specifications

DESCRIPTION	SPECIFICATION
Analog Circuit	Provides excitation circuit, A-D converter, and EMI & RFI protection. 24 bit A-D output accuracy equivalent to 5½ digits.
CMOS Digital Circuit	Stores output of A-D converter, performs necessary mathematical calculations, and displays data. Readings are automatically updated once per second.
Compatibility	Will read any CARLSON sensor in both 3 and 4 wire configuration.
Error Rejection	Displays error if improperly connected, faulty wiring, faulty sensor, or overrange.
Display	Graphic 128 x 64 pixels large character display
Display Backlight	High efficiency LCD with auto off
Max Instrument Locations	254
Memory Capacity	11,400 custom labelled points
Location Identification String	Up to 20 characters
Download Speed	15 seconds (full memory)
Battery	3 "AA" alkaline
Battery Indicator	On-screen, low battery indicator
Operating Temperature	-20°C to 60°C
Dimensions	W 22 cm x D 19 cm x H 9.5 cm (8.75 x 7.5 x 3.75in.)
Weight	1.1 kg (2.4 lbs)

## ordering info

ITEM	PART #
Carlson MA7 Readout	CAMA7



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## applications

- Auto selection of gauge type.
- Simple one button operation.
- Auto error detection.
- 3 and 4 wire compatible.
- Allows use of economical 3 wire cable.
- Sealed case.
- Rechargeable batteries.
- Field rugged and reliable.
- Auto off to conserve battery power.

## features

- Reads all Carlson Instruments.
- Displays data in: Degrees (F and C), Resistance in Ohms, Resistance Ratio
- Durable, compact design for excellent portability and field use.
- Large graphics display with a convenient backlight.
- Field-replaceable "AA" alkaline batteries eliminate the need for a large, bulky 12 V battery and a charger.
- Stores up to 254 instrument locations per route, each with a text label, calibration constants, previous data, and up to 11,400 time/date stamped data points.
- Data transfer to a host computer via USB in a compatible file format for Microsoft Excel® and other spreadsheets. User friendly host software for Microsoft Windows® included.