



DESCRIPTION

SG71 Plug-in Unit is a signal conditioner and power supply for strain gage bridge circuits. Each SG71 provides buffered, short-circuit protected DC excitation to the bridge circuit. It also amplifies the output to a level sufficient to operate most data gathering systems, tape recorders, etc.

The SG71 has two outputs. Output A provides +10 Vdc from as low as one millivolt per volt output from the bridge circuits.

A 15-turn control balances the bridge circuit. A 6-position gain switch selects the required gain, and a 10-turn potentiometer allows each gain step to be attenuated from 100% to 0%.

Internal terminals are provided for two shunt calibration resistors. A front panel switch allows selection of these resistors. For strain gages with less than four active elements, internal terminals are provided for mounting bridge-completion resistors. For ¹/₄-bridge transducers either 2- or 3-wire connections can be used.

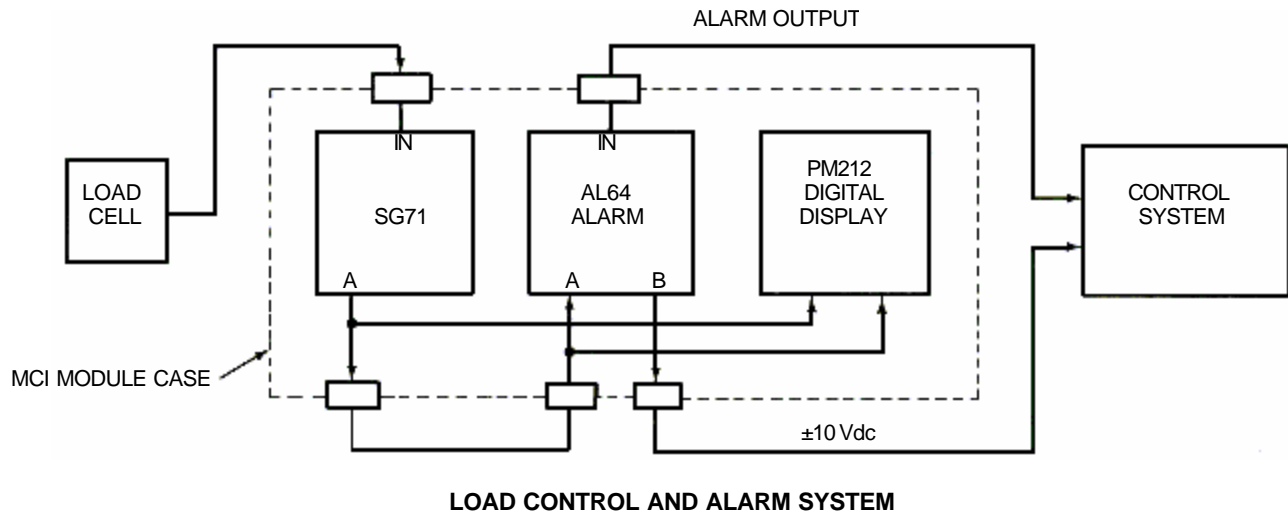
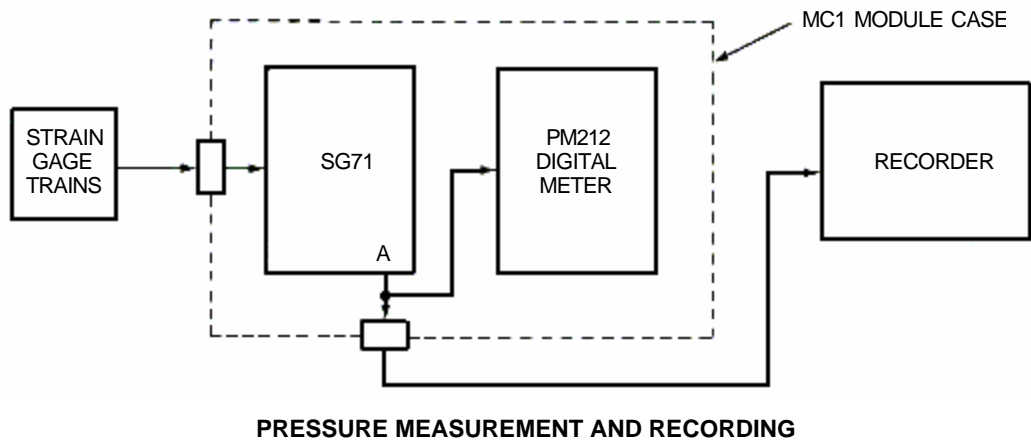
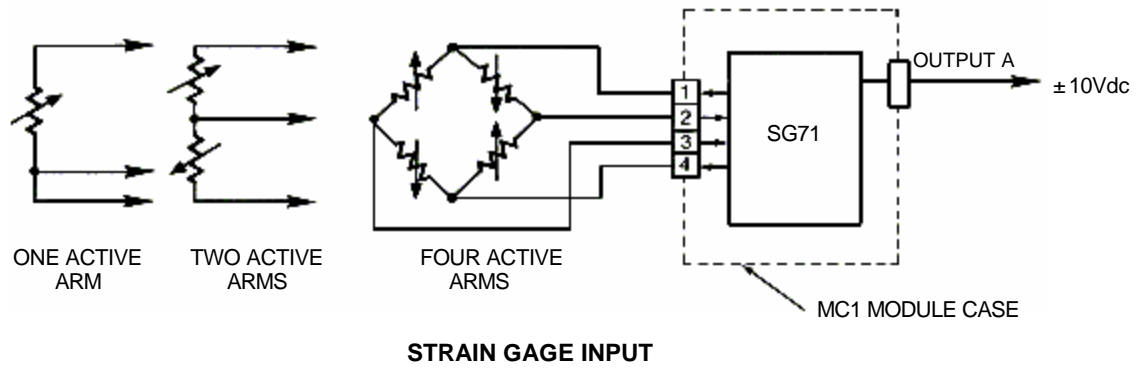
Features

- Buffered Short Circuit Proof DC Excitation
- Dual Independent Outputs
- High Frequency Response
- For Use with 1-, 2-, 3-, or 4-Arm Bridges
- Terminals for Calibration Resistors

Specifications

Input Sensitivity:	1 mV/V, 2.5 mV/V, 5 mV/V, 10 mV/V, 25 mV/V & 50 mV/V (Switch Selected)
Gain Vernier:	0 to 100%, calibrated dial
Bridge Excitation:	5 Vdc, 50mA maximum, minus side system ground, protected against short circuit
Differential Input Impedance:	Greater than 10 megohms
Bridge Balance:	15-tur screwdriver adjust, shunt type ± 2 mV/V range with 350-ohm bridge (range can be changed internally)
Output:	A: ± 10 Vdc at 10 mA
Output Impedance:	A: less than 10 ohms
Output Noise:	20 mVrms at 10 Vdc, 1 mV/V sensitivity
Frequency Response:	0 to 10 kHz, flat $\pm 5\%$
Linerity:	$\pm 0.05\%$ best straight line to ± 10 V output. Max \pm V input for liner output
Common Mode Rejection:	80 dB at 60 Hz and 120 Hz
Maximum Common Mode Voltage:	± 10 V
Common Mode Input Impedance:	Greater than 100 megohms
Temperature Range:	0°F to +160°F
Thermal Zero Shift:	0.02% FS/°F at maximum gain
Thermal Sensitivity Shift:	0.005%/°F
Power Requirements:	± 15 Vdc supplied from MC1 module case

TYPICAL APPLICATIONS



Accessories

P/N 7616-2 Plug-in Module Connection Extender

Specifications subject to change without notice.



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