Procon Engineering

(A Division of National Oilwell Varco UK Limited)

Model D1063S

Load Cell/Strain Gauge Bridge Galvanic Isolating Repeater

Up to four 350 Ω load cells in parallel or twelve 1000 Ω in parallel

High accuracy

High reliability, SMD components

EMC compatibility to EN61000-6-2, EN61000-6-4

ATEX approved

Simplified installation using standard DIN rail and plug-in terminal blocks

The D1063S acts as transparent and very accurate galvanic isolated interface installed between a weighing indicator/system in the Safe Area and a load cell (or group of load cells) in a Hazardous Location. The output to the indicator/system is a transparent reflection of a single load cell equivalent to the one/s in the field. The unit located in Hazardous Location repeats with isolation the mV signal output to drive the load in the Safe Area dependent upon the host system reference voltage. Up to four 350 Ohm load cells, or six 400 Ohm load cells, or twelve 1.000 Ohm load cells can be connected in parallel. In addition a field-wiring fault LED indicates any lead break in the Hazardous Location side. Approved for Div. 2 installation.

Hazardous area:
Up to four 6 wire paralleled load cells 350 Ohm, 5 V, 80 mA total capacity.

Safe area:
mV corresponding to Input Bridge voltage. Accuracy, after system calibration: 0.003 %.

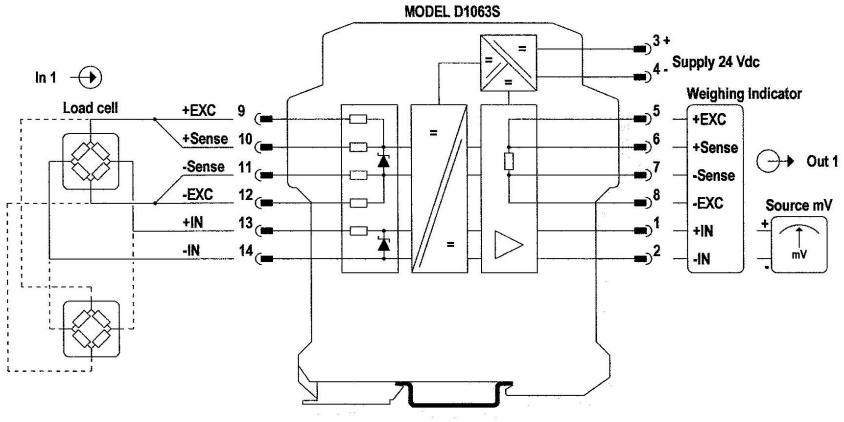
Function:
1 channel I.S. input from strain gauge signals, provides 3 port isolation (input/output/supply) and repeats, as a transparent unit, bridge signal output.

Model D1063S
Technical Specification Sheet

SPECIFICATIION		
Supply:		24 Vdc nom (20 to 30 Vdc) reverse polarity protected, ripple within voltage limits ≤ 5 Vpp.
	Current consumption @ 24 V:	80 mA with four 350 Ω load cells connected, typical.
	Power dissipation:	1.7 W with 24 V supply and four 350 Ω load cells connected typical.
	Max. power consumption:	At 30 V supply voltage and short circuit input, 2.8 W.
	Isolation (Test Voltage):	I.S. In/Out 1.5 KV; I.S. In/Supply 1.5 KV; Out/Supply 500 V.
Input:		Up to four 350 Ω load cells in parallel or up to six 450 Ω load cells in parallel or up to twelve 1000 Ω load cells in parallel
	Bridge supply voltage:	4.5 V nominal.
	Bridge output signal:	≤ 2 mV/V.
	Input range:	± 9 mV nominal span, ± 11 mV over range.
	Line resistance compensation:	≤ 10 Ω.
Burnout:		LED indication for field wire breakage.
Output:		± 10 mV nominal span, ± 12 mV over range (5 V reference voltage), ± 20 mV nominal span, ± 24 mV over range (10 V reference voltage).
	Output impedance:	350 Ω typical.
	Host reference voltage:	≤ 10 V typical, ≤ 11 V maximum.
	Internal reference voltage:	10 V typical, DIP switch settable.
	Internal impedance:	350 Ω typical, DIP switch settable.
	Transfer characteristic:	Linear based on mV input.
	Response time:	≤ 100 ms (10 to 90 % step change).
Performance:		Ref. Conditions 24 V supply, 23 ± 1 °C ambient temperature.
	Calibration accuracy after system calibration:	≤ ± 0.003 % of full scale of input range.
	Linearity accuracy:	≤ ± 0.002 % of full scale of input range.
	Supply voltage influence:	≤ ± 0.002 % of full scale for a min to max supply change.
	Temperature influence:	≤ ± 0.002 % of full scale of input range for a 1 °C change.
Compatibility:		CE mark compliant, conforms to 94/9/EC ATEX Directive and to 2004/108/CE EMC Directive.
Environmental conditions:	***Operating:***	Temperature limits -20 to + 60 °C, relative humidity max 90 % non condensing, up to 35 °C.
	Storage:	Temperature limits – 45 to + 80 °C.
Mounting:		T35 DIN Rail according to EN50022.
	Weight:	165 g.
	Connection:	By polarized plug-in disconnect screw terminal blocks to accommodate terminations up to 2.5 mm2.
	Location:	Safe Area/Non Hazardous Locations or Zone 2, Group IIC T4, Class I, Division 2, Groups A, B, C, D Temperature Code T4 and Class I, Zone 2, Group IIC, IIB, IIA T4 installation.
	Protection class:	IP20.
	Dimensions:	Width 22.5 mm, Depth 99 mm, Height 114.5 mm.

Function Diagram

Up to 4 load cells 350 Ω in parallel
Up to 6 load cells 450 Ω in parallel
Up to 12 load cells 1000 Ω in parallel



Procon Engineering's policy is one of continuous product enhancement.
We therefore reserve the right to incorporate technical modifications without prior notification. E&OE. *Issue No: 2018-01*

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