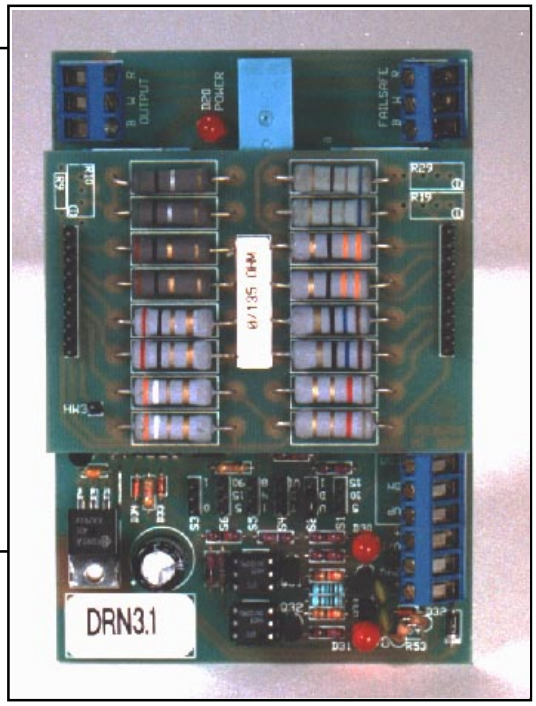
DRN3.1

PULSE/ANALOG/FLOATING POINT Input to Proportional Resistance Output

FEATURES

- 8 ANALOG Voltage/Current Input Signal Ranges
- 6 Selectable PULSE Input Ranges
- 6 Selectable FLOATING POINT Ramp Rates
- Electrically Isolated Resistive Output
- Failsafe to Original Controller
- Power and Signal Status Indicators
- Custom Pulse Ranges and Rates of Change Available
- No Wrap Around
- Removable resistive network
- Optional Offset Potentiometers for Resistive Network
- Selectable Output Resolution on Analog Only Version #3



APPLICATIONS

- Electric Actuator Control
- Electronic Potentiometer
- Resistive Sensor Simulation

PRODUCT DESCRIPTION

The DRN3.1 is an interface that allows microprocessor control of a variable resistance. The DRN3.1's isolated resistor network can be controlled by several different DDC signal types. It directly replaces a variable resistance controller and simulates the action of a slide wire or rotary potentiometer. All connections of the simulated potentiometer, the wiper and both ends of the resistance range, are available on the DRN3.1 terminal strip.

The DRN3.1 has on-board failback relays that lock out the original resistive controller during DRN3.1 operation. However, if the DRN3.1 supply power is lost, control of the circuit will revert back to the original controller or user installed shunt, switch, or fixed resistor. This feature allows for remote hand and system override. There are LED indicators for the power and input signals.

The DRN3.1 accepts an ANALOG, PULSE, or FLOATING POINT input signal (including triac) and converts it into a proportional resistive output. The output resistance does not wrap around if the input signal exceeds the highest or lowest selected input value. Custom pulse ranges and rates of change, along with custom resistive ranges are available upon request.

ANALOG The DRN3.1 accepts an analog voltage or current input and converts higher signals to a higher output resistance.

PULSE Jumper shunts allow selection of 3 ranges of pulse width modulated inputs.

FLOATING POINT The DRN3.1 increases or decreases the resistive output from digital up and down inputs, at a rate selectable by jumper shunts

ORDERING INFORMATION

Specify: DRN3.1 ___-___ ___ ___

- Version 1, 2, 3, or 4 (see page 2)
- Wattage
- Ending Resistance Value
- Beginning Resistance Value

* If you need a resistance range that cannot be met by one of the Resistor Networks at the end of the Specification section, you must also supply wattage and tolerance of the RN. Please specify with 1/4 watt 1% or 1/2 watt 5% resistances if possible. *Custom wattages and tolerances may increase cost and lead times.*

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SPECIFICATIONS

Electrical Requirements

Power Supply:

Supply Voltage	24 VAC +/- 10%, 24 VDC +6/-2V
Supply Current (Power Consumption)	250 mA maximum

Input:

Source	Relay contact closure, transistor, or triac	
Trigger Level	4.5 to 30 volts DC, 10 to 26.4 volts AC, 16mA maximum	
Pulse Ranges:	(Custom pulse ranges available also)	
Off Time	80 milliseconds minimum	
Version 1	.02 to 5 seconds/ .02 second increments	
	.1 to 25.5 seconds/ .1 second increments	
	.59 to 2.93 seconds/.01 second increments	
Version 2	.1 to 10 seconds	
	.023 to 6 seconds	
Version 4	0-10 second Duty Cycle Pulse (sampled in a 10 second window)	
Floating Point:	(Custom rates of change available also)	
Rates of change	Version #1: 30, 60, and 90 sec./Version #2: 45, 120 and 240 sec.	
Analog:	(Version #3 is analog only - has 4 selectable resolution ranges)	
Ranges - Versions 1, 2, & 3	0-5 VDC or 1-5 VDC	0-15 VDC or 3-15 VDC
	0-10 VDC or 2-10 VDC	0-20 mA or 4-20 mA
Impedances	Voltage/ 10,000 ohms	Current/ 250 ohms

Output:

Resolution	256 steps (No Wrap Around). Analog Only Version #3 has four selectable resolution ranges: 256, 128, 64 and 32 steps.

Mechanical Requirements

Relay Contacts:

Type	Form C, Gold-clad Silver
Rating	2 amp max. resistive @ 24V
Electrical Life	100,000 operations
Mechanical Life	10 million operations

Connections:

Wire Size	Up to one 14 gauge maximum
Terminal Type	Captive screw, moving clamp design
Dimensions	4.75"L x 3.25"W x 1"H
Weight	6 oz.
Mounting	Furnished with 4.75"L x 3.25"W snap track

Environmental Requirements

Operating Temperature	32 to 120 deg F
Storage Temperature	-20 to 150 deg F
Operating Humidity	10% to 95% non-condensing

STANDARD RESISTOR NETWORKS

RN- 0/135-3 watts (+/- 5%))	RN- 0/1500-1/4 watt (+/2%)	RN- 0/5K- 1/4 watt (+/- 2%)
RN- 0/270-3 watts (+/- 5%)	RN- 0/2K-1/4 watt (+/- 2%)	RN- 0/10K- 1/4 watt (+/- 2%)
RN- 0/500-1/4watt (+/- 2%)	RN- 0/3K- 1/4 watt (+/- 2%)	RN- 0/20K-1/4 watt (+/- 2%)
RN- 0/1000-1/4 watt (+/- 2%)	RN- 0/4K- 1/4 watt (+/- 2%)	RN- 0/40K-1/4 watt (+/- 2%)

Specifications may change without notice.

Call for other Ranges, Inputs, and Wattages

GREYSTONE
ACCURACY BY DESIGN

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