



ADTECH
Analog-Digital Technology, Inc.

The Adtech Model DCA 514 AC powered single alarm accepts standard process DC current or DC voltage input signals and provides a user configurable SPDT relay contact output. It provides a cost-effective way of protecting equipment for over or under-current or voltage conditions.

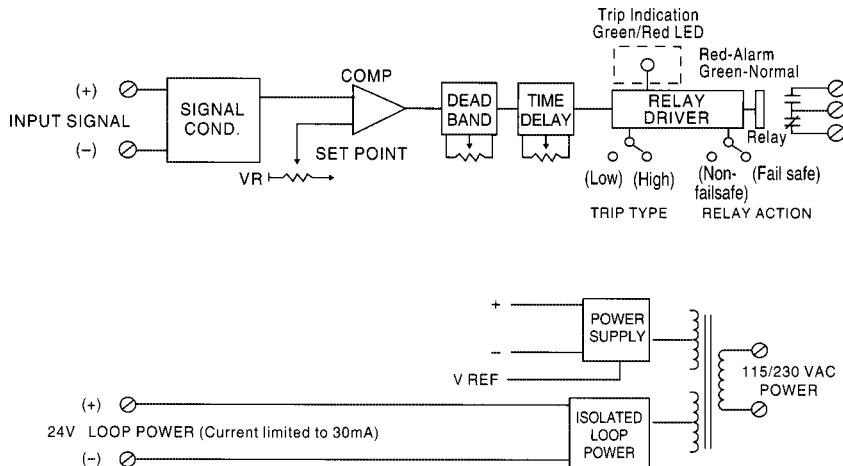
The basic full scale input range is 1 mA to 20 mA (e.g., 4-20 mA) or any voltage of 100 mV DC to 200 VDC (e.g., 1-5 VDC). The output contacts are SPDT rated at 10 amps, 30 VDC, or 250 VAC resistive.

An isolated 24 VDC output at 30 mA DC is provided as standard for powering a loop Two-Wire transmitter.

An integral dual color LED provides green indication for normal conditions and red indication on alarm and is independent of relay coil power.

The alarm is furnished as standard with the relay power fail-safe F.S. (i.e., relay coil energized) regardless of high or low alarm configuration. The user may specify the relay to be non-fail-safe N.F.S. (i.e., relay coil de-energized).

Adjustable dead band of 1 to 100% of input and adjustable time delay (T.D.) of 0-30 seconds is also provided as standard. The T.D. is useful in preventing false alarms due to signal transient noise interference.



Features

- **DC Current Inputs:** 1 mA to 20 mA DC: (e.g. 4-20 mA DC)
- **DC Voltage Inputs:** 100 mV to 200VDC: (e.g. 4-20 mA DC)
- **Zero or Live Inputs:** Current or voltage
- **Repeatability:** $\pm 0.1\%$ of span
- **Universal Relay Action:** Fail-safe or non-fail-safe for high or low trip
- **Contact Status:** LED indication: green--normal; red--alarm
- **Adjustable Dead Band:** 1-100% of input span-standard
- **Adjustable Time Delay:** 0-30 seconds-standard
- **Power:** 115 VAC or 230 VAC

DC Current/Voltage Alarm AC Powered

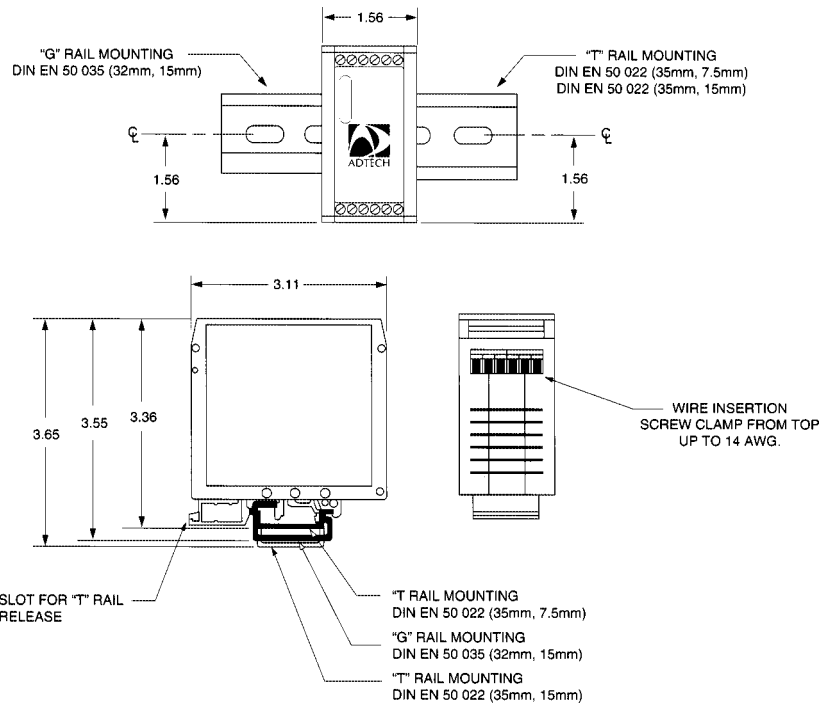
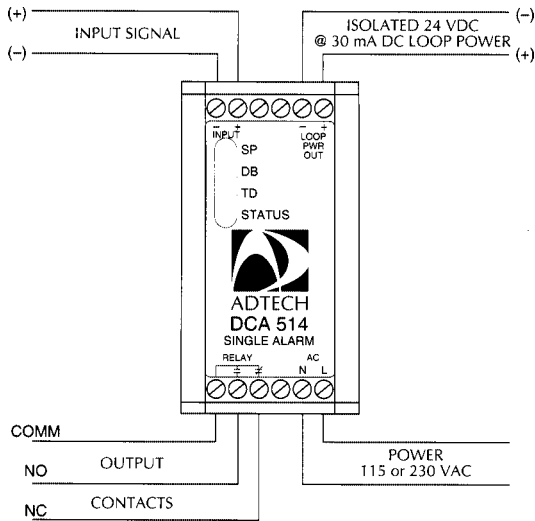
Model No. DCA 514 Single

Typical Applications

- **Limit detector of DC voltage/current inputs**
- **Tank-filling applications with dead band feature**
- **Contact inputs to annunciators, lights, and horns**
- **High or low-alarm or window monitor**
- **Alarm or shutdown of process variables**
- **Machine and process protection**
- **On/off controller**



Connections/Dimensions



Input/Output

Input Signals: Jumper Configurable
 0-1 mA DC (Z in 100 ohms)
 0-10 mA DC (Z in 10 ohms)
 0-20 mA (Z in 10 ohms)
 4-20 mA (Z in 10 ohms)
 0-100 mV DC (Z in 1 megohm)
 0-200 mV DC (Z in 1 megohm)
 0-5 VDC (Z in 1 megohm)
 1-5 VDC (Z in 1 megohm)
 0-10 VDC (Z in 1 megohm)

Input Signals:
 Any zero based voltage
 from 200 MV to 200 VDC.
 (Option I 14)

Output Signal: Standard:

SPDT contact rated 10 amps at
 30 VDC or 250 VAC resistive.

 Isolated 24 VDC at 30 mA DC
 Two-Wire transmitter excitation

Note: Jumper configurable
 Alarm type-high or low
 Relay Action F.S. or N.F.S.

Performance

Repeatability: $\pm 0.1\%$ of span
Trip Point Stability: $\pm 0.004\%/^{\circ}\text{F}$ typical,
 $\pm 0.01\%/^{\circ}\text{F}$ maximum for a 50°F
 change from ambient
Trip Adjustment: 0-100% of span
 continuously adjustable; blind set:
 infinite resolution
Adjustable Dead Band: 1-100% of span
 continuously adjustable; blind set:
 infinite resolution
Note: All accuracies are given as a percentage of span.

Adjustable Time Delay: 0-30 seconds
Power Supply Effect: $\pm 0.05\%$ for a
 $\pm 10\%$ power variation

Isolation: Input/output/power 1,500 VAC,
 50/60 Hz, 2100 VDC hipot
Response Time: Less than 200 milliseconds
Temperature Range:
 0° - 140°F (-18° to 60°C) operating;
 -40° to 185°F (40° to 85°C) storage

Power

115 VAC: 50/60 Hz, 0.7 PF (Standard) **230 VAC:** 50/60 Hz, 0.7 PF (Option P5)

Note: All units 3 watts maximum, and a $\pm 10\%$ power variation unless noted. For DC power, consult factory.

Mechanical

Electrical Classification: General purpose
Connection: Screw compression type accepts
 up to 14 AWG

Mounting: DIN, Surface: Optional Nema 4, 7
Weight: Net unit: 9.0 oz (257 grams)
 Shipping: 16.0 oz (455 grams)

Controls: Multiturn trip set, dead band
 and time delay controls.

Options

Option Number	Description
I 14	Voltage inputs to 200 VDC, 1 megohm min. impedance; current inputs of 100 mA max.
H 15D5	Explosion Proof: Class 1, Group B, C & D
H 23	Two (2) inch pipe mounting plate & clamps
H 27	NEMA 4 Enclosure
H 28	Single Instrument Surface Mounting
H 29	T35 DIN T-Rail 2 ft. long
H 30	T32 DIN G-Rail 2ft. long

Ordering Information

- Model number
- Input signal
High and/or low relay action
- Relay action, F.S. or non FS.
- Prime power with option no.
- Input/output/control(s) options
- Housing and miscellaneous options

Please refer to the Housing and/or Option Section for more specific and detailed information.

Represented by:



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Information subject to change without notice.

Printed in U.S.A.

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