

March 2018

## Affordable Alarm Trip

The ECA DIN-style Alarm features a solid metal housing that stands up to the continual rigors of process control and factory automation applications.

Rugged and reliable, the 4-wire (line-powered) ECA is the low-cost solution when alarm trip outputs are needed to indicate high or low process conditions.

Available models accept current and voltage input from field transmitters, transducers, and other process instruments. When the input falls outside of a pre-set limit (user configurable), the ECA provides contact closure outputs ideal for indicating a high and/or low condition via a bell, buzzer, light or other annunciating device.

**Configurable Dual Alarms**—The ECA is offered in a wide variety of dual alarm models. Choose any combination of high or low, failsafe or non-failsafe alarms, and the ECA will be factory-set for you. Internal jumpers allow for changes after it arrives at your plant.

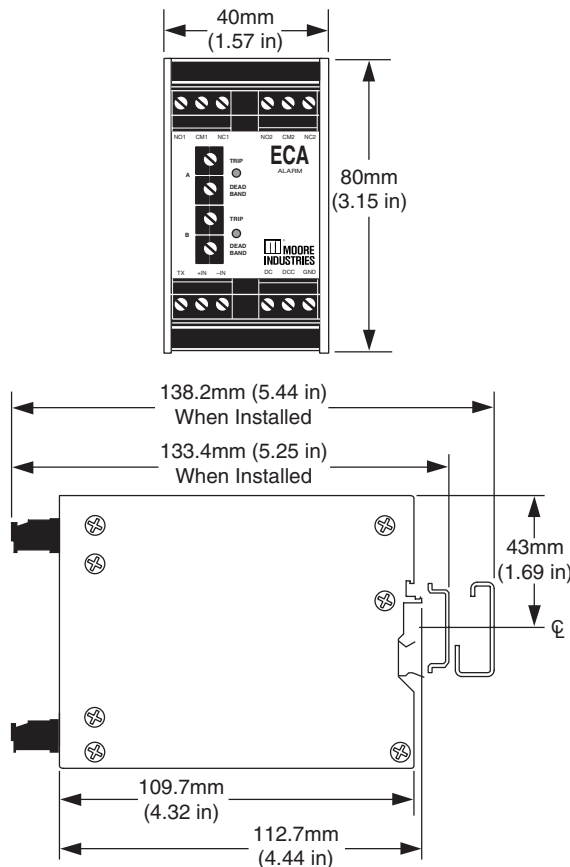


*Compact durable aluminum housing snaps quickly and securely onto standard G-type and Top Hat rails.*

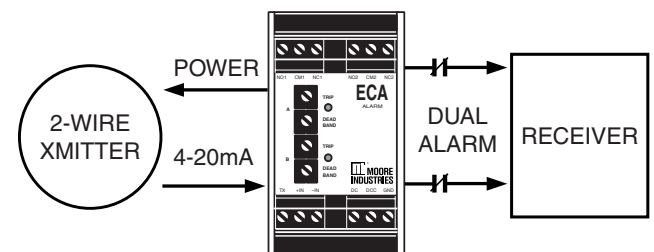
## Features

- **Independently configurable dual alarms.** Individually field-configure the ECA's dual alarms to low/low, high/high, low/high, or high/low output, and failsafe or non-failsafe trip operation.
- **Wide range of input options.** Available models accept common ac and dc input types.
- **RFI/EMI Protection.** The ECA provides an effective barrier against the unpredictable, harmful effects of radio frequency and electromagnetic interference.
- **Fully-adjustable trip point.** A potentiometer on the front panel will allow quick selection of trip point values from 0-110% of input span.
- **LED provides alarm indication.** The ECA's LED clearly indicates when the alarm trip changes from normal mode to alarm mode.

*Figure 1. ECA-DIN dimensions.*



*Figure 2. The ECA comes equipped with two alarm outputs, and will power a transmitter using the -TX option.*



# ECA-DIN

Current and Voltage Alarms

## Specifications

<p><b>Performance</b></p> <p><b>Repeatability:</b> Trip point repeats within <math>\pm 0.1\%</math> of full scale</p> <p><b>Stability:</b> Trip point within <math>\pm 0.2\%</math> of span per year</p> <p><b>Burden:</b> 4-20mA is 1V, max; 0-5A is 0.01V, max</p> <p><b>Power Consumption:</b> 1.5W, typical; 2.5W, typical with -TX option; 3.5W max, with -TX option</p> <p><b>Deadband:</b> 1-20% of span standard (see -AD100 option for 1-100% deadband range)</p> <p><b>Alarm Response:</b> 50 msec for a step change of 10-90% beyond trip point(s)</p> <p><b>Line Voltage Effect:</b> 0.005% per 10% line change</p>	<p><b>Performance (Continued)</b></p> <p><b>Isolation:</b> 1500Vrms between input, output and power</p> <p><b>Maximum Input Overrange:</b> 200% of full scale for DC Current input; 150% of full scale for DC Voltage and AC Current inputs</p> <p><b>Ambient Conditions</b></p> <p><b>Operating Range:</b> <math>-20^{\circ}\text{C}</math> to <math>+70^{\circ}\text{C}</math> (<math>-4^{\circ}\text{F}</math> to <math>+158^{\circ}\text{F}</math>)</p> <p><b>Relative Humidity:</b> 0-95%, non-condensing</p> <p><b>Ambient Effect:</b> <math>\pm 0.007\%</math> of span/<math>^{\circ}\text{C}</math>, typical; <math>\pm 0.015\%</math> of span/<math>^{\circ}\text{C}</math>, max</p> <p><b>RFI/EMI Protection:</b> Trip point not to be affected by more than 0.1% of span at 10V/m, 20-1000MHz</p>	<p><b>Adjustments</b></p> <p><b>Trip Points:</b> Multiturn front panel potentiometers adjust trip point from 0-110% of input span</p> <p><b>Deadband:</b> Multiturn front panel potentiometers adjust from 1-20% or 1-100% of full scale, depending on the option selected</p> <p><b>Indicators</b></p> <p>Front panel LED(s) is ON when relay is energized</p> <p><b>Weight</b></p> <p>454 grams (1lb.)</p>
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## Ordering Information

Unit	Input	Output	Power	Options	Housing
<b>ECA</b> 4-Wire Current and Voltage Alarm	<b>4-20mA</b> into 50 $\Omega$ <b>1-5V</b> into 1M $\Omega$ <b>0-5AAC</b> into 0.002 $\Omega$	Alarm Configuration (High or Low and Failsafe or Non-Failsafe are configurable via internal jumpers):  <b>DH1L1</b> Dual, High/Low, Failsafe <b>DH2L2</b> Dual, High/Low, Non-Failsafe <b>DH1H1</b> Dual, High/High, Failsafe <b>DH2H2</b> Dual, High/High, Non-Failsafe <b>DL1L1</b> Dual, Low/Low, Failsafe <b>DL2L2</b> Dual, Low/Low, Non-Failsafe <b>DL1H1</b> Dual, Low/High, Failsafe <b>DL2H2</b> Dual, Low/High, Non-Failsafe  (SPDT relays rated 5A @ 250Vac non-inductive or 30Vdc)	<b>24DC</b> , $\pm 10\%$ <b>117AC</b> , 50/60Hz, $\pm 10\%$ <b>230AC</b> , 50/60Hz, $\pm 10\%$ (117AC and 230AC are jumper selectable)	<b>-AD100</b> Adjustable deadband 1-100% of full scale <b>-EM</b> Externally-mounted input transformer for current input (available with 0-5AAC input type only) <b>-TX</b> 24V transmitter excitation for powering a 2-wire transmitter <b>-FMEDA</b> option is also available	<b>DIN</b> Aluminum, DIN-style housing mounts on both 32mm G-type (EN50035) and 35mm Top Hat (EN50022) rail

When ordering, specify: Unit / Input / Output / Power / Options [Housing]  
 Model number example: ECA / 4-20MA / DH1L1 / 117AC / -AD100 [DIN]

### Certifications



**CE Conformant** – EMC Directive 2014/30/EU  
 EN 61326; Low Voltage Directive 2014/35/EU  
 EN 61010



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