

July 1999

Low-Cost Alarm Trip

The 4-wire (line-powered) ECA Economy Alarm Trip is the low-cost solution when an alarm trip output is needed to indicate a high or low process condition.

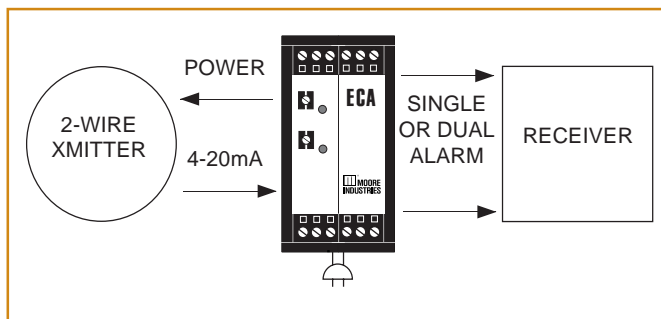
Available models accept current and voltage input from field transmitters, transducers, and other process instruments. When the input falls outside of a pre-set limit (user configurable), the ECA provides a contact closure output ideal for indicating a high and/or low condition via a bell, buzzer, light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

Single and Dual Alarms—The ECA is offered in both single and dual alarm models. The single alarm provides one output when a trip point is exceeded. The dual alarm accepts one input, and provides two separate trip points per module.



Compact thermoplastic housing snaps quickly and securely onto standard G-type and Top Hat rails.

Figure 1. The ECA comes with one or two alarm trip outputs, and will power a 2-wire transmitter when equipped with the -TX option.




Features

- **Wide range of input options.** Available models accept common ac and dc input types. See the Ordering Information section on the back page for details.
- **Field-configurable alarm output.** Internal jumpers allow field selection of high or low, and failsafe or non-failsafe alarm trip operation.
- **Fully-adjustable trip point.** Potentiometer(s) on the front panel allow quick selection of trip point values from 0-110% of input span.
- **LED provides alarm indication.** When configured for failsafe operation, the LED remains on during normal operation and turns off when in alarm. With non-failsafe operation, the LED is normally off and turns on when in alarm.

Certifications

 **Underwriters Laboratory Recognized**
(Canadian & United States Markets)

 **CE Conformant** – EMC Directive 89/336/EEC
EN 50081-2, 1993 and EN 50082-2, 1995

ECA

Economy Current and Voltage Alarm

Specifications

Performance Repeatability: Trip point repeats within $\pm 0.1\%$ of full scale Deadband: 1% of span standard (see -AD option for adjustable deadband) Alarm Response: 50 milliseconds for a step change of 10-90% beyond trip point(s)	Performance Line Voltage Effect: (continued) 0.005% per 10% line change Isolation: 1500Vrms between input, output and power Ambient Temperature Range: -20°C to +70°C (-4°F to +70°F) Effect: $\pm 0.015\%$ of span/°C	Adjustments Trip Points: Multiturn front panel potentiometers adjust trip point from 0-110% of input span Indicators Front panel LED(s) is ON when relay is energized Weight 240 grams (8.4 ounces)

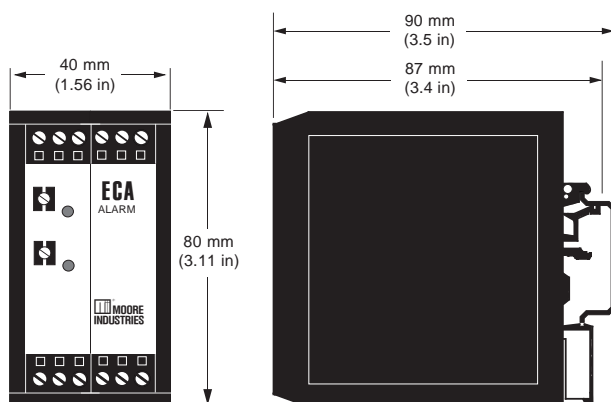
Ordering Information

Unit	Input	Output	Power	Option	Housing
ECA Economy Current and Voltage Alarm	4-20mA into 50 ohms 1-5V into 1M ohm 0-10V into 1M ohm 0-150AC into 150K ohms 0-250AC into 250K ohms 0-5AAC into 0.01 ohm (Other ac ranges also available.)	Alarm Configuration (High or Low and Failsafe or Non-Failsafe are configurable via internal jumpers): SH1 Single, High, Failsafe SH2 Single, High, Non-Failsafe SL1 Single, Low, Failsafe SL2 Single, Low, Non-Failsafe DH1L1 Dual, High/Low, Failsafe DH2L2 Dual, High/Low, Non-Failsafe DH1H1 Dual, High/High, Failsafe DH2H2 Dual, High/High, Non-Failsafe DL1L1 Dual, Low/Low, Failsafe DL2L2 Dual, Low/Low, Non-Failsafe (SPDT relays rated 5A @ 117Vac non-inductive or 28Vdc) NOTE: Failsafe is energized in the normal condition and de-energized either upon alarm or power loss to the unit. Combinations of Failsafe and Non-Failsafe for dual alarms are also possible by following the same method of designation.	24DC , $\pm 10\%$ 117AC , 50/60Hz, $\pm 15\%$ 230AC , 50/60Hz, $\pm 15\%$ (117AC and 230AC are jumper selectable) 1.5 Watts, typical, 2.5 Watts, typical with -TX option	-AD Adjustable deadband 1-20% of full scale (available up to 100%) -EM Externally-mounted input transformer for current input (available with 0-5AAC input type only) -HS Hermetically sealed relay(s) rated 1A @ 28Vdc and 0.5A @ 115Vac -TX 20mA 2-wire transmitter excitation (4-20mA input type only)	ECD Thermoplastic, economy 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 / -AD [ECD]

Figure 2. ECA Installation Dimensions.



Need Enhanced Features?

In addition to the economy ECA, Moore Industries also has a full line of 4-wire alarm trips with special features:

Superior Environmental Protection. Aluminum DIN-style and explosion-proof housings are ideal for rugged environments.

Primary Sensor and Unusual Inputs. We have alarm trips with and wide range of input possibilities (10-50mA, T/C, RTD, etc.).

RFI/EMI Protection. For applications that necessitate superior protection to stop the harmful effects of radio frequency and electromagnetic interference.

High Performance Options. We have alarm trips that feature integral LCDs, front panel programming, manual reset, and other convenient capabilities.

Custom Alarm Trips. If we can not meet your needs with a standard unit, our resourceful engineers are on-hand to modify our instruments to meet your unique applications.



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