



## Overview

The ESD line of energy storage devices is a cost effective solution to provide reliable power for circuit breaker tripping when station batteries are not present. The ESD converts ac input voltage into dc voltage and stores sufficient energy for up to 72 hours after ac is removed to trip the circuit breaker in the event of a system fault.

## Features

- Converts an ac input into dc for circuit breaker tripping power
- ESD-201 tripping power is maintained for up to 72 hours after the loss of the ac input.
- ESD-202 maintains tripping power for 12 seconds.
- LED indicates when a sufficient charge is available
- Compact package
- Economical design
- One unit for 120 or 240 Vac inputs

## Benefits

- Provides reliable circuit breaker tripping energy in a cost-effective package.
- Extremely rugged, potted design is well suited for harsh environments, ensuring reliable operation.
- User-friendly LED indicator provides confidence that sufficient energy is available for breaker operation.
- The ESD-201's ability to accept multiple voltage inputs makes it easy to adapt into a variety of applications.

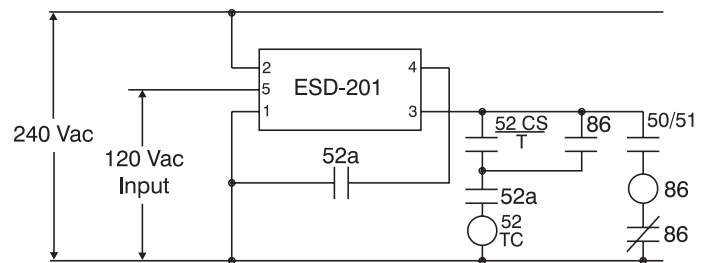


Figure 1 - ESD-201 Connection Diagram for a Typical Application

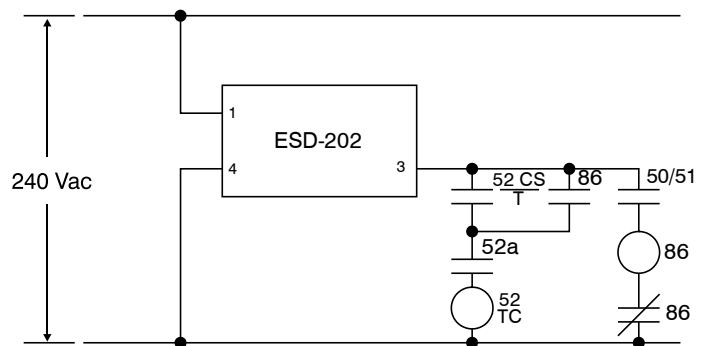


Figure 2 - ESD-202 Connection Diagram for a Typical Application

## Specifications

### Output Power

#### ESD-201:

Voltage Range:	330 to 430 Vdc
Minimum Energy:	27 joules at 330 Vdc
	36 joules at 380 Vdc
	46 joules at 430 Vdc

This output is maintained 72 hours after internal battery is fully charged.

#### ESD-202:

Voltage Range:	191 to 339 Vdc
Minimum Energy:	9.1 joules at 191 Vdc
	21.6 joules at 295 Vdc
	24.2 joules at 311 Vdc
	28.7 joules at 339 Vdc

This energy is available 12 seconds after a loss of ac input power.

### Input Power (1-phase)

#### Voltage Range:

ESD-201:	120 or 240 Vac, ±10%
ESD-202:	208 or 240 Vac, ±10%
Frequency:	50/60 Hz
Burden:	10 VA maximum

### Power Dissipation

ESD-201:	2.0 W continuous
ESD-202:	1.0 W continuous

### Agency/Certifications

CSA certified, UL recognized, China RoHS compliant

For complete specifications, download the instruction manual at [www.basler.com](http://www.basler.com).

### Environmental

Operating Temp:	-25°C to 65°C (-13°F to 149°F)
Storage Temp:	-40°C to 85°C (-40°F to 185°F)
Shock:	15 G in three perpendicular planes
Vibration:	2 G from 10 to 200 Hz in three perpendicular planes

### Physical

Weight:	
ESD-201:	1.3 lb (0.59 kg)
ESD-202:	0.56 lb (0.26 kg)
Dimensions (WxHxD):	
ESD-201:	5.52" x 4.92" x 2.46"
	(140.2 mm x 125.0 mm x 62.5 mm)
ESD-202:	3.94" x 2.66" x 2.46"
	(100.1 mm x 67.6 mm x 62.5 mm)

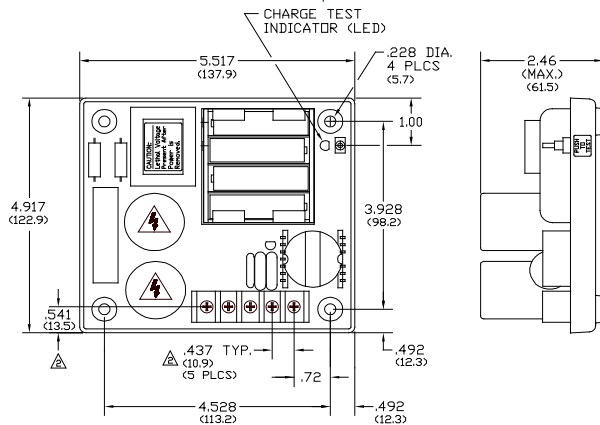


Figure 3 - ESD-201 Dimensions in Inches (millimeters)

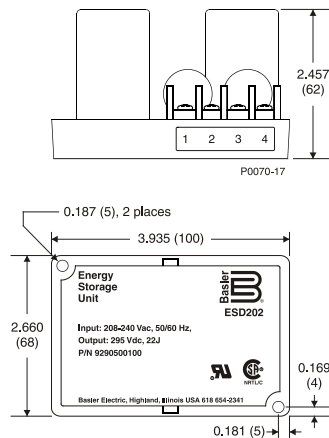


Figure 4 - ESD-202 Dimensions in Inches (millimeters)

## Related Products

### BE1-FLEX Protection, Automation and Control System

Designed to be configurable for nearly any Power System Application.

### BE1-50/51 Self-Powered Time Overcurrent Relay

A single-phase self-powered, microprocessor-based time/instantaneous overcurrent relay that provides cost-saving overload and fault protection for generators, transformers, feeders, and motors. Available in multiple-rack, panel, and retrofit mounting options.

## Accessories

### Conversion Mounting Plate

An adaptive mounting plate is available for retrofit applications for mounting of an ESD-201 in place of existing ESD products; order Basler Electric part number 9 1106 00 009.