Basler Electric	www.basler.com +1 618.654.2341 (USA) info@basler.com	Model **ESD202** Part Number **9290500100**

INTRODUCTION

The ESD202 Energy Storage Device supplies power to trip a circuit breaker when the station battery source is not available. The ESD202 stores sufficient energy to supply circuit breaker tripping power for 12 seconds following a loss of station power.

Warning!

Lethal voltage may be present at terminals after power is removed.

To prevent personal injury or equipment damage, only qualified technicians or operators should install, operate, and service this device.

SPECIFICATIONS

ESD202 Energy Storage Devices have the following electrical and physical characteristics.

Power Input

Configuration:	1-Phase
Voltage Range:	208 to 240 Vac, ±10%
Frequency:	50/60 Hz
Burden:	10.0 VA, maximum

Power Output

The ESD202 supplies tripping power over the range of 191 Vdc to 339 Vdc. At a minimum, 9.1 joules (at 191 Vdc) of energy is available 12 seconds after a loss of ac input power.

At 191 Vdc:	9.1 J, minimum
At 295 Vdc:	21.6 J, minimum
At 311 Vdc:	24.2 J, minimum
At 339 Vdc:	28.7 J, minimum

Power Dissipation

Continuous:	1.0 W, continuous

Temperature Range

Operation:	–25 to 65°C (–13 to 149°F)
Storage:	–40 to 85°C (–40 to 185°F)

Weight

9 oz (255 g)

Vibration

Withstands 2 G at 10 to 200 Hz in each of three mutually perpendicular axes.

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Shock

Withstands 15 G in each of three mutually perpendicular axes.

Agency Compliance

- Meets UL 508, *Industrial Control Equipment*
- Meets CSA C22.2, No. 14, *Industrial Control Equipment*

China RoHS

The following table serves as the declaration of hazardous substances for China in accordance with PRC standard SJ/T 11364-2014. The EFUP (Environment Friendly Use Period) for this product is 40 years.

PRODUCT:	ESD 202									
	有害物质 Hazardous Substances									
零件名称 Part Name	铅 Lead (Pb)	汞 Mercury (Hg)	镉 Cadmium (Cd)	六价铬 Hexavalent Chromium (Cr^{6+})	多溴联苯 Polybrominated Biphenyls (PBB)	多溴二苯醚 Polybrominated Diphenyl Ethers (PBDE)	邻苯二甲酸二丁酯 Dibutyl Phthalate (DBP)	邻苯二甲酸丁苄酯 Benzyl butyl phthalate (BBP)	邻苯二甲酸二酯 Bis(2-ethylhexyl) phthalate (BEHP)	邻苯二甲酸二异丁酯 Diisobutyl phthalate (DIBP)
金属零件 Metal parts	X	O	O	O	O	O	O	O	O	O
聚合物 Polymers	O	O	O	O	O	O	O	O	O	O
电子产品 Electronics	X	O	O	O	O	O	O	O	O	O
电缆和互连配件 Cables & interconnect accessories	O	O	O	O	O	O	O	O	O	O
绝缘材料 Insulation material	O	O	O	O	O	O	O	O	O	O

本表格依据 SJ/T11364 的规定编制。

O: 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。

X: 表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。

This form was prepared according to the provisions of standard SJ/T11364.

O: Indicates that the hazardous substance content in all homogenous materials of this part is below the limit specified in standard GB/T 26252.

X: Indicates that the hazardous substance content in at least one of the homogenous materials of this part exceeds the limit specified in standard GB/T 26572.

FUNCTIONAL DESCRIPTION

AC power applied to the ESD202 is rectified and used to charge internal capacitors to approximately 340 Vdc. The capacitors will retain a charge of at least 9.1 joules (at 191 Vdc) for at least 12 seconds after a loss of ac input power.

A light emitting diode (LED), located at the rear of the device, lights when the capacitors are charged and the ESD202 is ready for operation. The LED lights when a minimum charge of 5.6 joules at 150 Vdc is available at the ESD202 output. A lighted LED does not verify application of input power to the ESD202.

DISCHARGING THE ESD202

Over 300 Vdc may be present on the output terminals even though all input power is removed from the ESD202. The capacitors within the ESD202 should be discharged before working with the device. Perform the following steps to discharge the EDS 202 output.

1. Obtain a 470 ohm, 5 watt, wire-wound resistor and connect a length of 14 AWG, 600 V, insulated wire to each end of the resistor.
2. Remove the ac power applied at terminals 1 and 4 of the ESD202.
3. Carefully touch one wire to terminal 3 and the other wire to terminal 4. Hold the wires on the terminals for at least 5 seconds.

4. Verify that the ESD202 output is discharged by measuring the output (terminals 3 (+) and 4 (–)) with a dc voltmeter.

INSTALLATION

Warning!

Perform the discharging procedure before handling the ESD202.

An ESD202 should be used with a single circuit breaker. Control of more than one breaker (or other devices) by a single ESD202 is not recommended. If control of more than one breaker is desired, it must be demonstrated, through independent testing, that combinations of breakers (or other devices) can be reliably operated from a single ESD202.

Mounting

ESD202 mounting dimensions are illustrated in Figure 1. Dimensions are given in inches with millimeters in parenthesis.

Connections

Typical ESD202 connections are shown in Figure 2.

ESD202 terminals accommodate a maximum wire size of 12 AWG (3.31 mm^2). The terminal screws have a maximum torque rating of 9 in-lb (1 N•m).

STORAGE AND MAINTENANCE

This device contains long-life, aluminum electrolytic capacitors. For devices that are not in service (spares in storage), the life of these capacitors can be maximized by energizing the device for 30 minutes once per year.

No maintenance of the ESD202 is required other than periodically checking that all connections are clean and tight. The ESD202 is not field repairable. If repairs are required, return the ESD202 to Basler Electric.

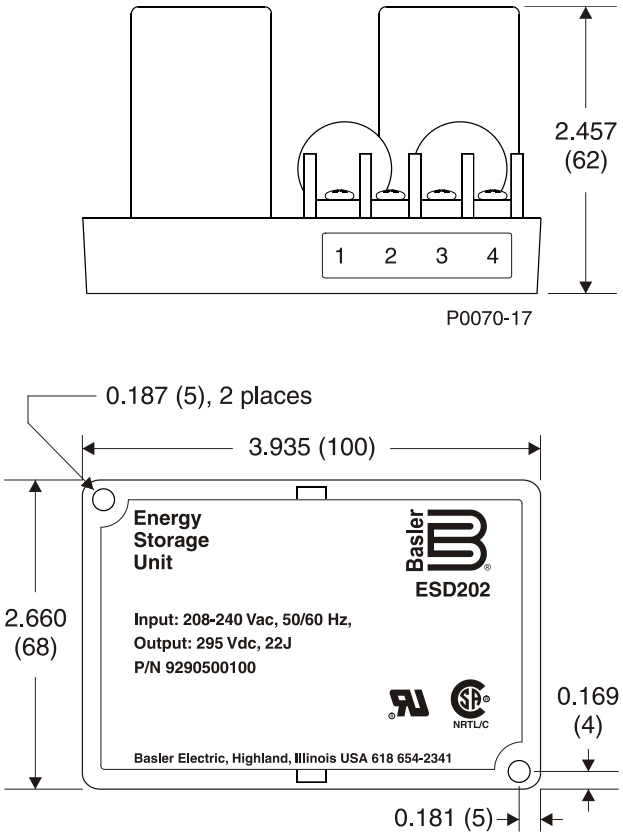
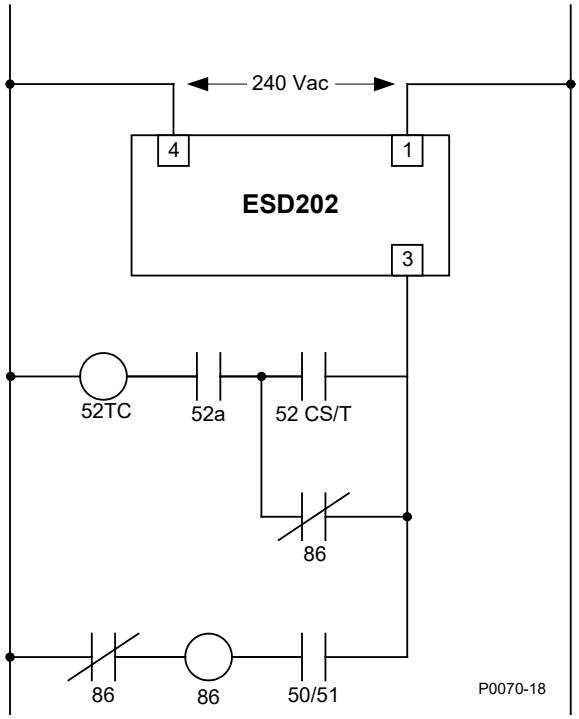


Figure 1. ESD202 Mounting Dimensions



Legend

50/51:	Overcurrent Relay
52:	Power Circuit Breaker
86:	Lockout Relay
a:	Breaker Auxiliary Contact
CS/T:	Control Switch, Trip

Figure 2. ESD202 Typical Connections