

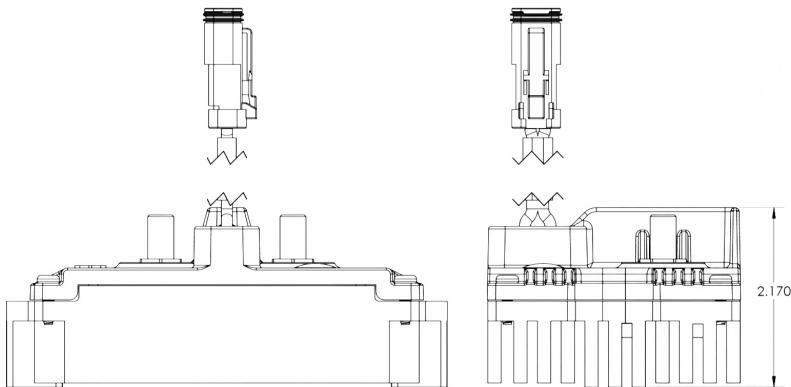
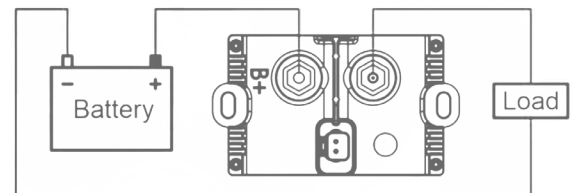
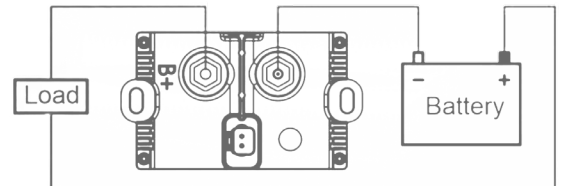
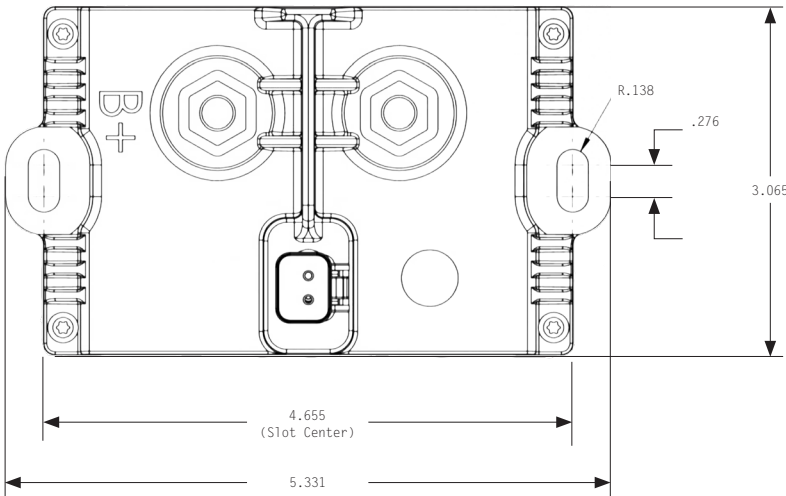
Description

With no moving parts to wear it out, Trombetta's 125 amp Solid State Relay offers a longer life-span than traditional electro-mechanical contactors and eliminates the possibility of frosted/iced contacts. The unit was designed for harsh environments, as it withstands vibration, moisture, large operating temperature ranges and debris. Trombetta's long history of incorporating power switching components within our products, along with our ability to properly control them, puts you in a Solid State of mind. Ask for part number SSR-125-004 as shown.

Features

- Minimum life of 1,000,000 cycles
- Short circuit protection at 450A
- 125A continuous current capacity
- -40°C to 85°C operating temperature range

Specifications



Recommended Operating Parameters & Limits

Parameter	Min	Typical	Max	Notes
Turn-on		400uS +/-10%		
Turn-off		10mS +/-10%		
Input Voltage Working Range	-40V		40V	Voltages outside of this range may damage unit
Input on threshold		6V	8V	Will not turn on with leakage currents below 10mA
Input off threshold	4V	6V		
Input control current (on)	10mA	25mA	35mA	Normal operation
Input control current (fault)	50mA	70mA	80mA	Overcurrent or Overtemperature shutdown fault
Switching Voltage	0V		48V	
Output leakage current			1mA	
Voltage carry capacity			125A	85°C, Air movement to ensure casting temperature must not exceed 125°C
Voltage drop (on)		110mV		At 25°C ambient, still air, and 125A load
Cycle Life	1,000,000 cycles			
Inrush current			450A	Up to short circuit for 200ms duration
Short circuit protection	450A@25C			Self protecting, cycle input power to reset. 400A up to 80°C, above 90°C 300A
Duty cycle	0%		100%	Maximum usable frequency = 15Hz
Ontime	0s		Continuous	Less than 125A load current at less than 85°C ambient
Jump start protection			48V	No time duration limit
Electrical isolation			100VDC	Metallic case to live circuit components, continuous
Operating Temperature	-40°C		85°C	Moving air immediately surrounding the unit must not exceed max temp. Casting temperature must not exceed 125°C
Storage Temperature			125°C	Non-operational
Unit mounting torque			15Nm (133 in-lb)	
High-current studs torque			15Nm (133 in-lb)	

All parameters at 25°C unless noted otherwise

Regulatory & Compliance Standards

Parameter	Specification	Notes
Loss of Ground		Unit functions in predictable manner
Salt Spray	SAE J1455 JUN06, section 4.3	96 Hrs
Random Vibe	SAE J1455 JUN06, section 4.9	6 Hours/Axis, Overall 15.3 Grms
Mechanical Shock, Handling	SAE J1455 JUN06, section 4.11.3.1	
Thermal Shock Air to Air	SAE J1455, Section 4.1.3	-50°C to 95°C, Transition Time < 1 Min, 2Hr Presoak 95°C, 1.5 hr Soaks Unpowered, 5 shocks
Chemical Testing	SAE J1455 JUN06, section 4.4	Automotive Fluids (engine oil, DEF, Diesel Fuel, Alkaline Degreaser)
Ingress Protection	IEC 60529	IP67
Radiated Immunity	ISO11452-2, ISO11452-5	Class I
Bulk Current Injection	ISO11452-4, SAEJ1113-4	Class I
Conducted Transients	ISO7637-2	
ESD Packaging and Handling	ISO10605	8kV Direct, 15kV Air Discharge
ESD Operating	ISO10605, EN61000-4-2	Direct & Indirect, 8kV Air Discharge
Radiated Emissions	CISPR25, ISO133766	Class 3 levels, IS13766 Levels -6dB
Magnetic Field Immunity	EN61000-4-8	30A/m
RF Injection 150Khz to 80MHZ	EN61000-4-6	10V/m
Burst	EN61000-4-4	+/-1kV 5/50 Tr/Th ns, 5Khz
Audio Frequency	MIL-STD-461F, CS101	Curve 2, Power Lines Only
Surge	EN61000-4--5	
Far Field Emissions	CISPR 16.2.3	
Marine Emissions	EC-29	
Load Dump	SAE J1113-11	Pulse 5A, Vs=151V, Ri = 3.5 Ohm, td = 350ms, tr = 10ms Pulse 5B, Vs=151V, Vs* = 50V, Ri = 1 Ohm, td = 350ms, tr=10ms
Inductive Switching	SAE J1113-11	Pulses 1, 2A, 2B, 3A, 3B
Compliance	RoHS, REACH, Conflict Free	



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