

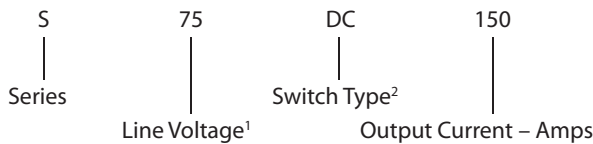
**FEATURES/BENEFITS**

- Latest generation MOSFET technology
- Ultra low on-state resistance
- Innovative isolated driver ensures fast power transistor turn on and off and thus low power transient
- Ultra low output leakage current
- Low control current consumption
- Triggered control input to avoid linear control risks
- Low conducted and radiated disturbances



Part Number	Description
S75DC150	150A, 42 Vdc Solid-State Relay

**Part Number Explanation**



**NOTES**

- 1) Line Voltage (peak): 42 = 42 Vdc
- 2) Switch Type: DC = DC

**ELECTRICAL SPECIFICATIONS**  
(+25°C ambient temperature unless otherwise specified)

**INPUT (CONTROL) SPECIFICATIONS**

	Min	Max	Units
Control Range	4.5	32	Vdc
Input Current Range	25	42	mAdc
Typical Turn-On Voltage	4.3		Vdc
Must Turn-Off Voltage	1		Vdc
Reverse Voltage		32	Vdc
Reverse Leakage Current		100	µA

**CONTROL CHARACTERISTIC**

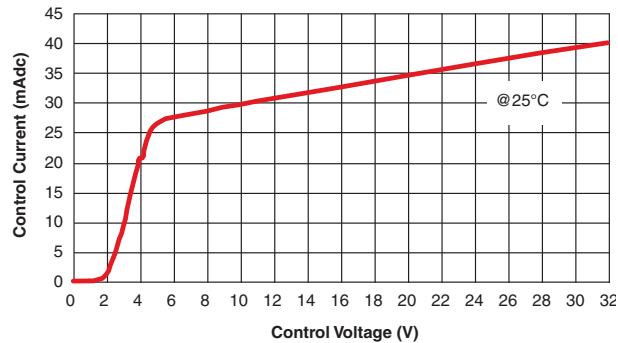
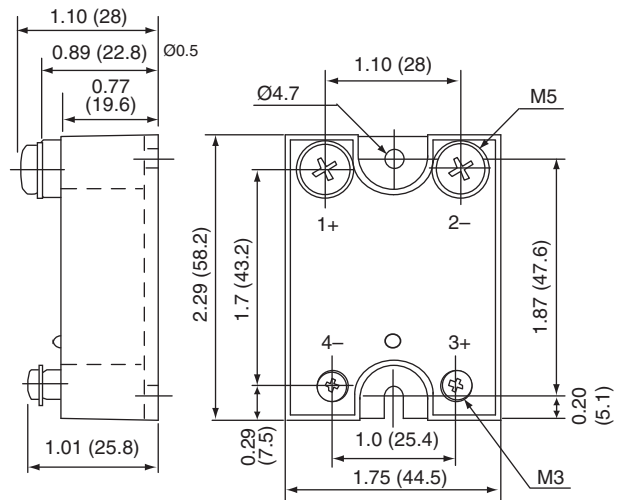


Figure 2

**MECHANICAL SPECIFICATION**



Tolerances: Ø0.3  
Dimensions in inches (mm)  
Weight: 3.52 oz. (100g)

Figure 1

**BLOCK DIAGRAM**

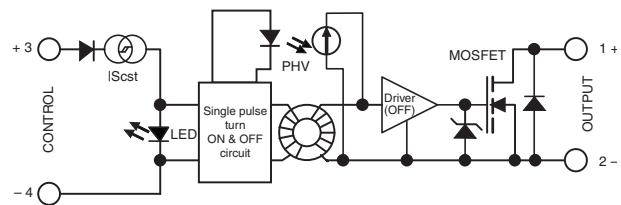


Figure 3

**ELECTRICAL SPECIFICATIONS**  
(+25°C ambient temperature unless otherwise specified)

**OUTPUT (LOAD) SPECIFICATIONS**

	Min	Max	Units
Operating Range	Depends on protection clamping voltage		
Peak Voltage		75	Vpeak
Reverse Voltage (Internal Diode)	0.92		V
Maximum Repetitive Avalanche Current		125	A
Maximum Single Pulse Avalanche Energy		1970	mJ
Maximum Repetitive Pulse Avalanche Energy		200	mJ
Maximum Nominal Currents (Resistive)		150	A
Leakage Current		500	µAdc
On-State Resistance		2.25	mΩ
Output Capacitance (Typical)	1.5		nF
Junction-Case Thermal Resistance		0.62	°C/W
Built-In Heat Sink Thermal Resistance (Vertically Mounted)		10	°C/W
Heat Sink Thermal Time Constant		10	min
Control Inputs/Power Outputs Insulation Voltage		4	kV
Turn-On Time		10	µs
Turn-On Delay		600	µs
Turn-Off Time		10	µs
Turn-Off Delay		100	µs
On-Off Frequency		700	Hz

**TIME DIAGRAMS**

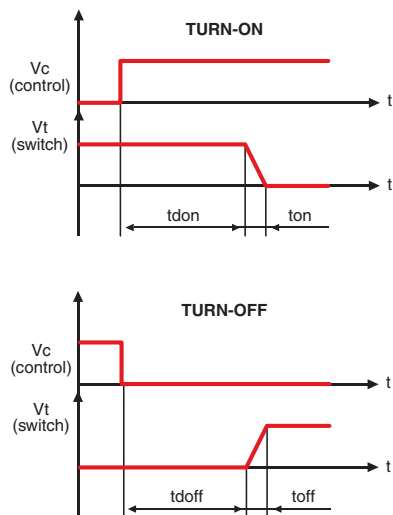


Figure 6

**HIGH SIDE WIRING DIAGRAM**  
(Load Connected to “-”)

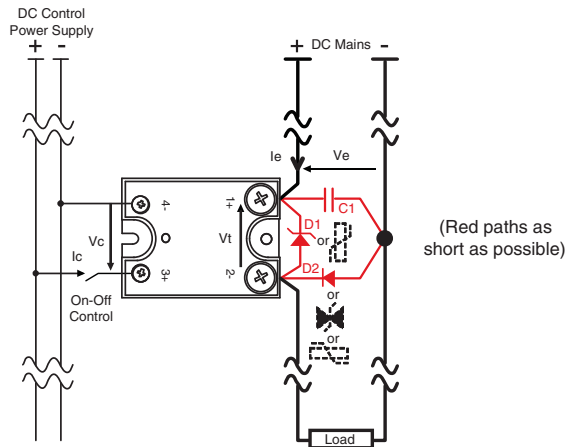


Figure 4

**LOW SIDE WIRING DIAGRAM**  
(Load Connected to “+”)

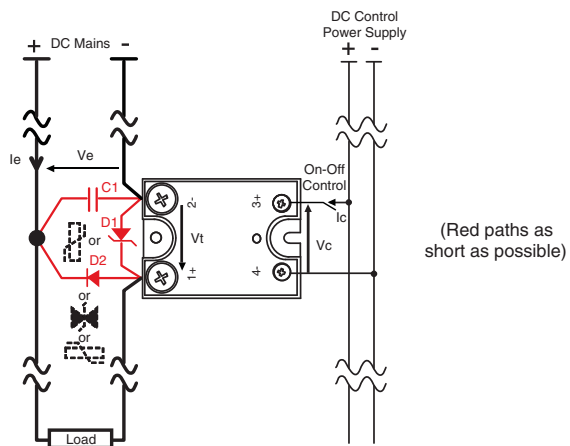


Figure 5

**ON RESISTANCE VS. TEMPERATURE**

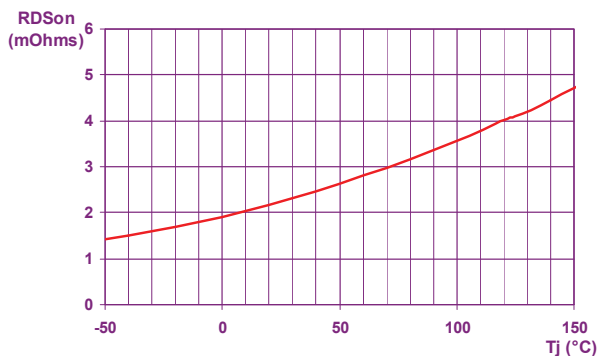


Figure 7

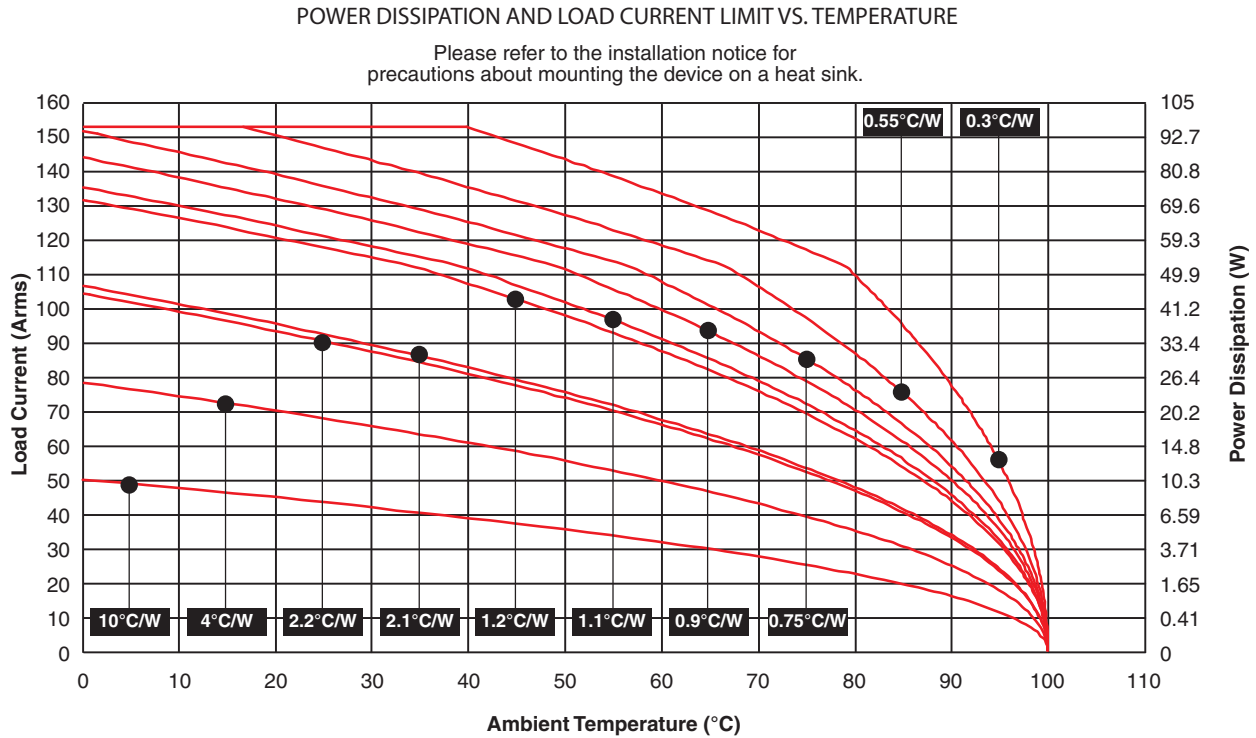


Figure 8

**GENERAL SPECIFICATIONS**  
(+25°C ambient temperature unless otherwise specified)

ENVIRONMENTAL SPECIFICATIONS			
	Min	Max	Units
Operating Temperature	-40	+90	°C
Storage Temperature	-40	+100	°C
Input-Output Isolation	4000		Vrms
Insulation Capacitance	8		pF
Junction Temperature		150	°C

**CONNECTIONS**

	Power	Control
Screwdriver	Phillips NR2	Phillips NR1
Tightening Torque	1.8 N.m	0.8 N.m
Insulated crimp terminals (Round Tabs, Eyelet Type)	M5	M3

**MISCELLANEOUS**

Display	Green LED (ON)
Housing	UL94V0
Mounting	2 screws (M4x12mm)
Noise Level	No audible noise

**GENERAL**

Standards	IEC60947-1
Protection Level	IP00
Protection Against Direct Touch	None
CE Marking	Yes
UL, cULUS & VDE Approvals	Pending

**E.M.C. EMISSION**

Radiated & Conducted Disturbances NFEN55011

**PROTECTIVE COVER AVAILABLE**  
Add -14 to part number

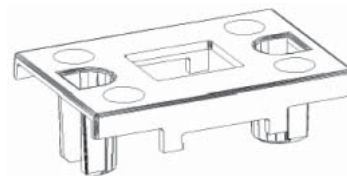


Figure 9

**NOTES**

1. For additional/custom options, contact factory.

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