

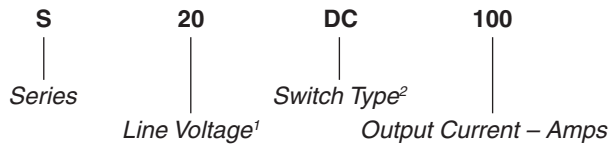
FEATURES/BENEFITS

- 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 |
|-------------|---------------------------------|
| S20DC100 | 100A, 200 Vdc Solid-State Relay |

Part Number Explanation



NOTES
1) Line Voltage (peak): 20 = 200 Vdc
2) Switch Type: DC = DC

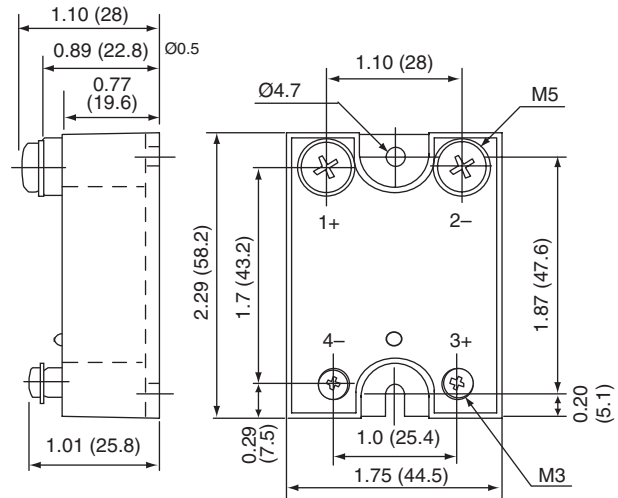
ELECTRICAL SPECIFICATIONS

(+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 |

MECHANICAL SPECIFICATION



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

Figure 1

CONTROL CHARACTERISTIC

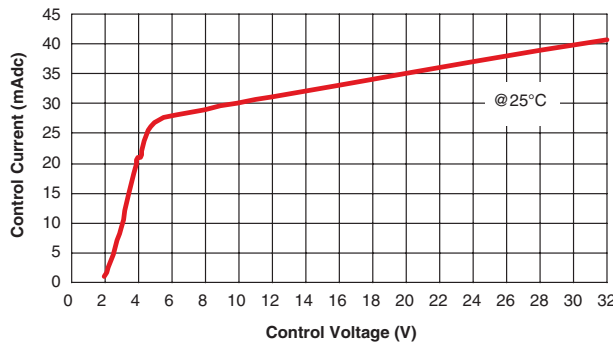


Figure 2

BLOCK DIAGRAM

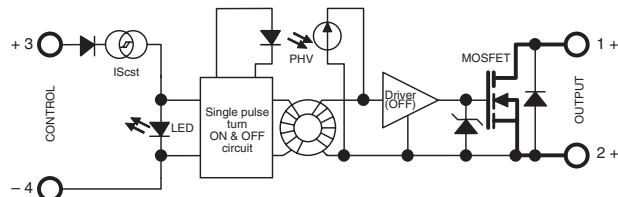


Figure 3

ELECTRICAL SPECIFICATIONS

(+25°C ambient temperature unless otherwise specified)

OUTPUT (LOAD) SPECIFICATIONS

| | Min | Max | Units |
|--|-----|-----|-------------------|
| Operating Range | 0 | 130 | Vdc |
| Peak Voltage | | 200 | V _{peak} |
| Reverse Voltage (Internal Diode) | 1.6 | | V |
| Maximum Repetitive Avalanche Current | 100 | | A |
| Maximum Single Pulse Avalanche Energy | | 750 | mJ |
| Maximum Repetitive Pulse Avalanche Energy | | 58 | mJ |
| Maximum Nominal Currents (Resistive) | 100 | | A |
| Non-Repetitive Peak Overload Current | 400 | | A |
| Leakage Current | | 250 | μA _{dc} |
| On-State Resistance | | 22 | mΩ |
| Output Capacitance (Typical) | 1.5 | | nF |
| Junction-Case Thermal Resistance | 0.4 | | °C/W |
| Built-In Heat Sink Thermal Resistance (Vertically Mounted) | 8 | | °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

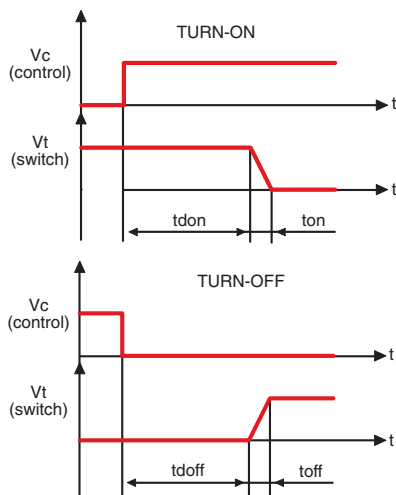


Figure 6

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

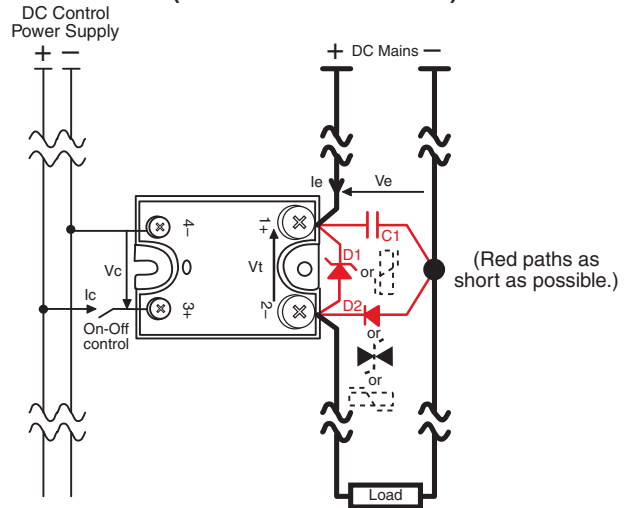


Figure 4

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

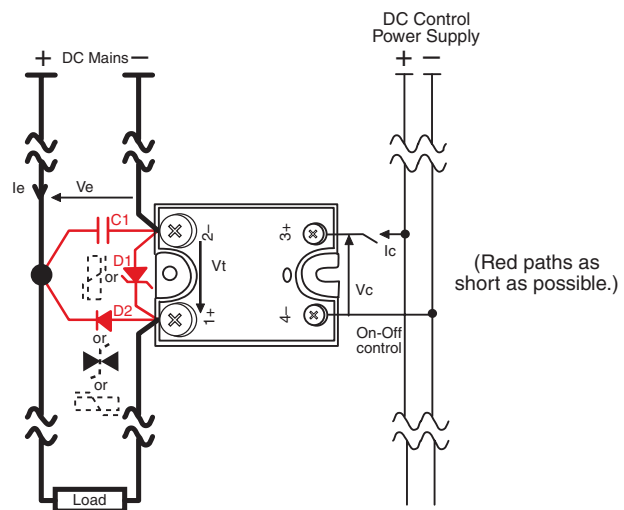


Figure 5

ON RESISTANCE VS. TEMPERATURE

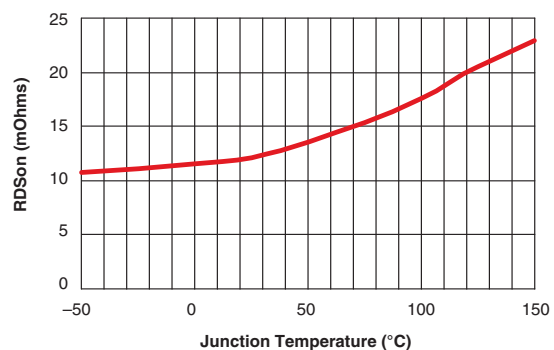
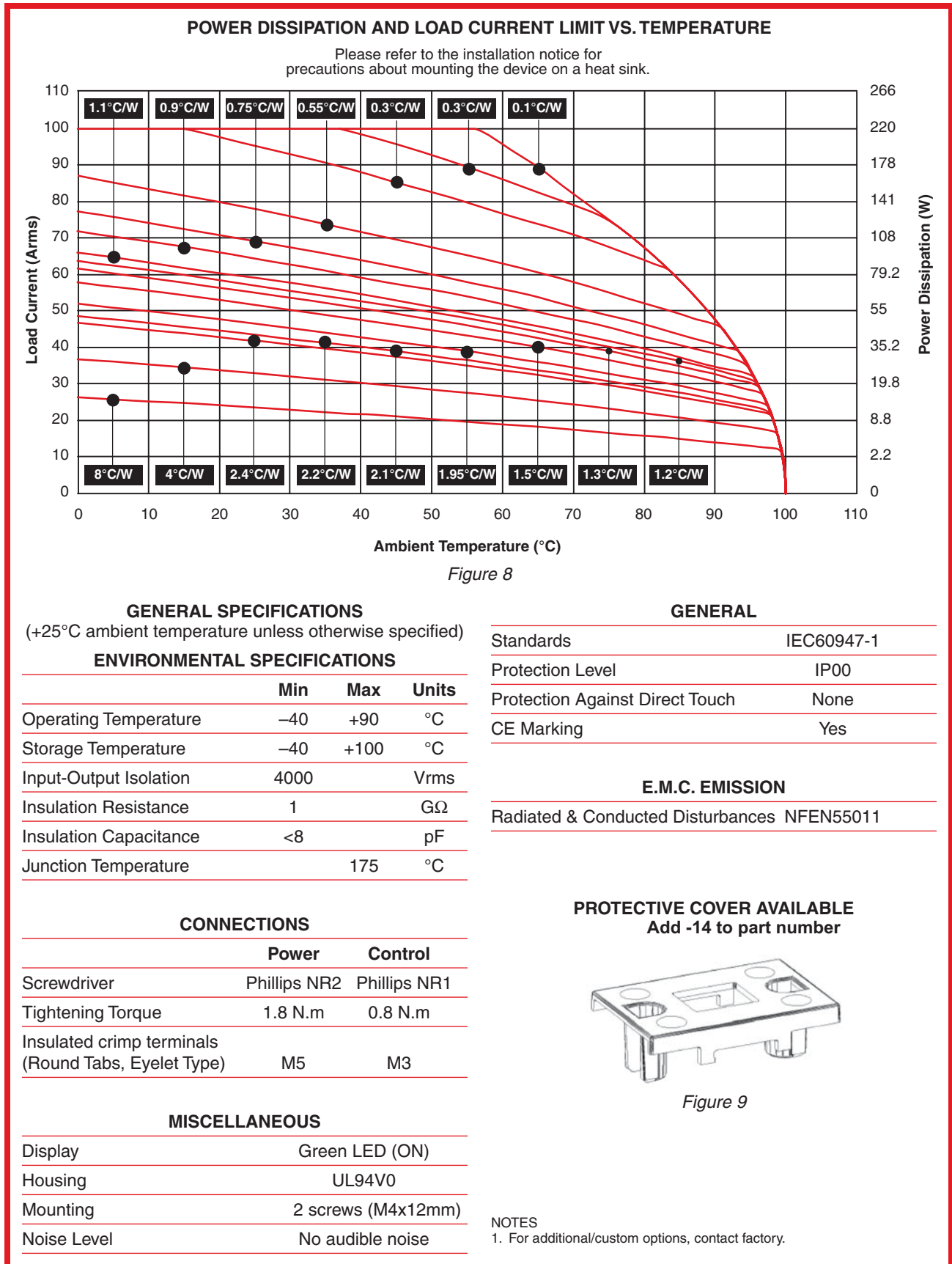


Figure 7



Mouser Electronics

Authorized Distributor

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