

Part Number	Description
DS6R3E	3A, 60 Vdc
DS22R1E	1A, 220 Vdc

Part Number Explanation

DS	6	R	3	E
Series	Line Voltage ¹	Switch Type ²	Output Current - Amps	Control Range ³

NOTES

1) Line Voltage (nominal): 6 = 60 Vdc; 22 = 220 Vdc

2) Switch Type: R = Random turn-on

3) Control Range: E = 3-30 Vdc

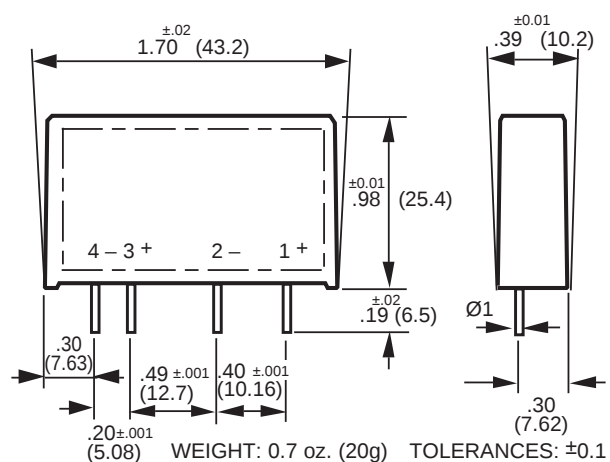
MECHANICAL SPECIFICATION


Figure 1 – DS relays; dimensions in inches (mm)

INPUT (CONTROL) SPECIFICATION

	Min	Max	Units
Control Range	3	30	Vdc
Input Current Range	1	30	mADC
Must Turn-Off Voltage		1	Vdc
Input Resistance (Typical)		1000	Ohms

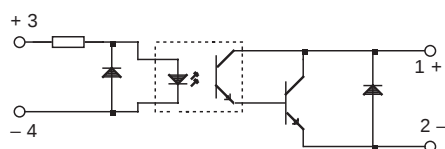
BLOCK DIAGRAM


Figure 2 – DS relays

FEATURES/BENEFITS

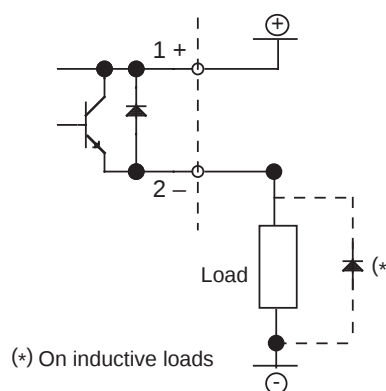
- Industry standard package
- Surge tolerant
- Compact size

DESCRIPTION

The DS 3-amp solid-state single inline package (SIP) four-pin relays are designed for mounting on printed circuit boards. The relays are designed for medium-power DC loads. The Series DS relay is an alternative to electromechanical and reed relays.

APPLICATIONS

- Programmable logic controllers
- Instrumentation
- Test equipment
- Solenoid drivers

TYPICAL APPLICATION


(*) On inductive loads

Figure 3 – DS relays

OUTPUT (LOAD) SPECIFICATION

	Min	Max	Unit
Operating Range			
DS6R3E	2	60	Vdc
DS22R1E	2	220	Vdc
Peak Voltage			
DS6R3E		60	Vpeak
DS22R1E		220	Vpeak
Load Current Range			
DS6R3E	.005	3	A
DS22R1E	.005	1	A
Maximum Surge Current Rating (Non-Repetitive)			
DS6R3E		10	Apeak
DS22R1E		5	Apeak
On-State Voltage Drop			
		1.6	Vdc
Off-State Leakage Current			
		1	mA
Turn-On Time			
DS6R3E	200		μs
DS22R1E	300		μs
Turn-Off Time			
DS6R3E	800		μs
DS22R1E	2000		μs
Off-State dv/dt			
	200		V/μs
Switching Frequency			
DS6R3E	0	500	Hz
DS22R1E	0	400	Hz

LOAD CURRENT RERATING CURVES

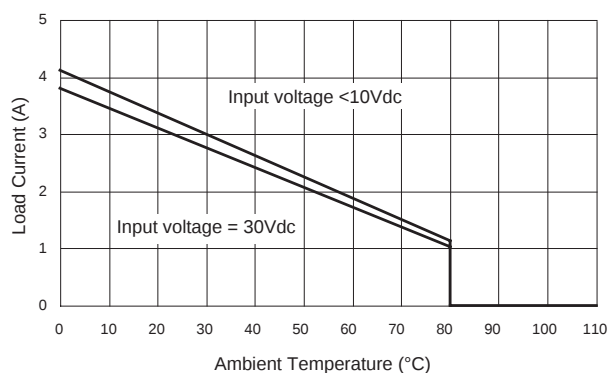


Figure 4a — DS6R3E thermal curves

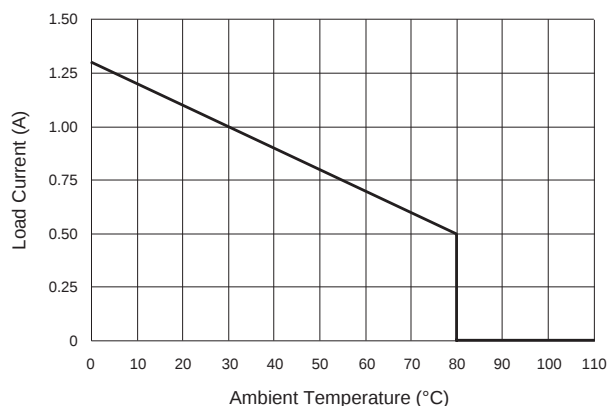


Figure 4b — DS22R1E thermal curves

ENVIRONMENTAL SPECIFICATION

	Min	Max	Unit
Operating Temperature	-40	80	°C
Storage Temperature	-40	105	°C
Input-Output Isolation		2500	Vrms
Input-Output Capacitance		8	pF

NOTES:

1. Electrical specifications at 25°C unless otherwise specified.
2. On inductive loads, a free-wheeling diode (or clamp) is recommended.
3. For additional/custom options, contact factory.