TELEDYNE RELAYS
A Unit of Teledyne Electronics and Communications

Series SQ

Quad Output 25A 280 Vac DC control

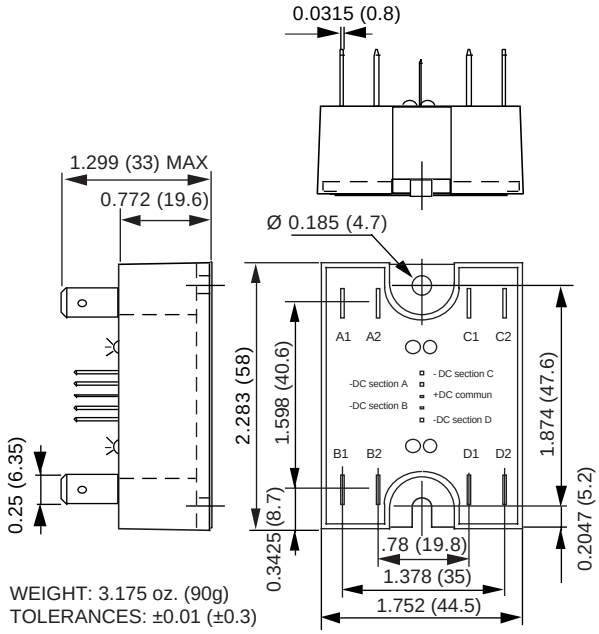
Part Number	Description
SQ24D25	25A, 230 Vac

Part Number Explanation

SQ — *Series*
24 — *Line Voltage*[1]
D — *Switch Type*[2]
24 — *Output Current - Amps*

NOTES
1) Line Voltage (nominal): 24 = 240 Vac
2) Switch Type: D = Zero-cross turn-on
3) Control LED and Random model available. Contact factory.

MECHANICAL SPECIFICATION



WEIGHT: 3.175 oz. (90g)
TOLERANCES: ±0.01 (±0.3)

Figure 1 — SQ relay; dimensions in inches (mm)

INPUT (CONTROL) SPECIFICATION

	Min	Max	Units
Control Range	3	32	Vdc
Input Current Range	See Figure 2		
Must Turn-off Voltage		1	Vdc
Reverse Voltage		32	V

FEATURES/BENEFITS

- Four independently controlled solid-state relays in an industry standard package.
- Tight zero-cross window for low EMI
- Constant current input for low current draw
- Faston terminals

DESCRIPTION

The Series SQ relay provides four independant 25A relays in a standard hockey-puck package. The SQ package conserves space while providing high-power switching. The tight zero-cross window reduces the EMI level. Optical isolation ensures complete protection of the control circuit from load transients.

APPLICATIONS

- Heating control
- Motor control
- Industrial and process controls
- On/Off controls of AC equipment

APPROVALS

Series SQ relays are UL recognized.
UL File Number: E128555.

CONTROL CHARACTERISTIC

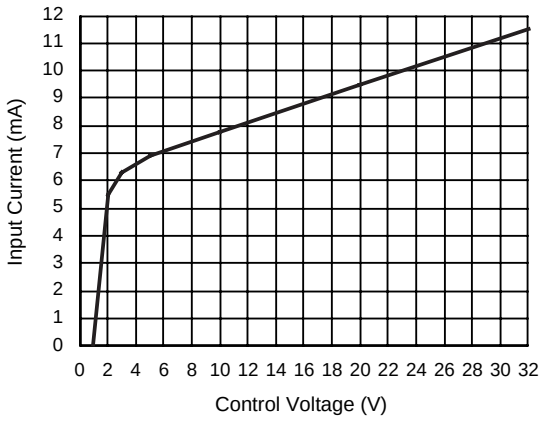


Figure 2 — Control Characteristic

THERMAL CHARACTERISTICS

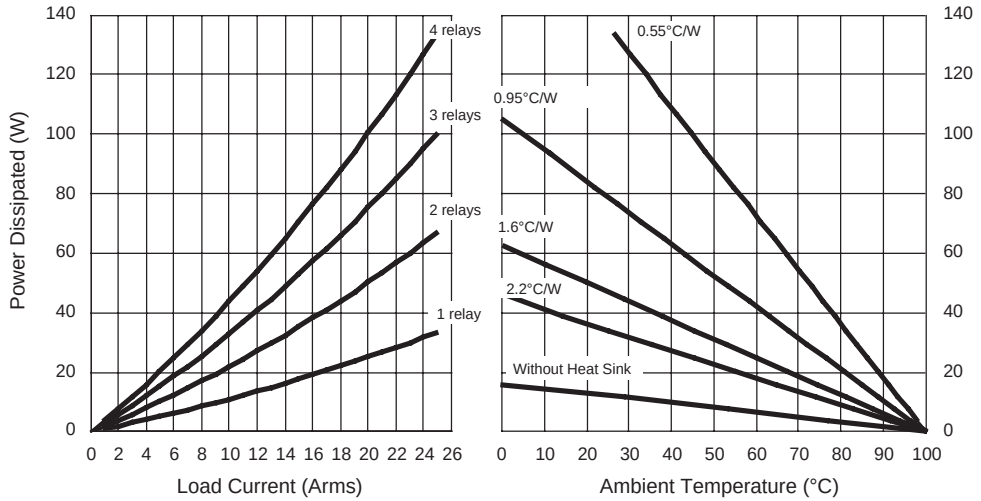


Figure 3 — Current Derating Curves

OUTPUT (LOAD) SPECIFICATION

	Min	Max	Unit
Operating Range	12	280	Vrms
Peak Voltage		600	V
Load Current Range (See Figure 3)	.005	25	Arms
Maximum Surge Current Rating (Non-repetitive, see Figure 5)		240	A
On-State Voltage Drop		1.2	V
Zero-Cross Window		±25	V
Off-State Leakage Current (60Hz)		0.5	mA
Turn-On Time		8.3	ms
Turn-Off Time		8.3	ms
Off-State dv/dt		500	V/µs
Operating Frequency Range	47	440	Hz
I^2t for match fusing (<8.3ms)		288	A^2S

ENVIRONMENTAL SPECIFICATION

	Min	Max	Unit
Operating Temperature	–40	100	°C
Storage Temperature	–40	100	°C
Input-Output Isolation	4000		Vrms
Output-Case Isolation	2500		Vrms
Rated Impulse Voltage	4000		V

TYPICAL APPLICATION

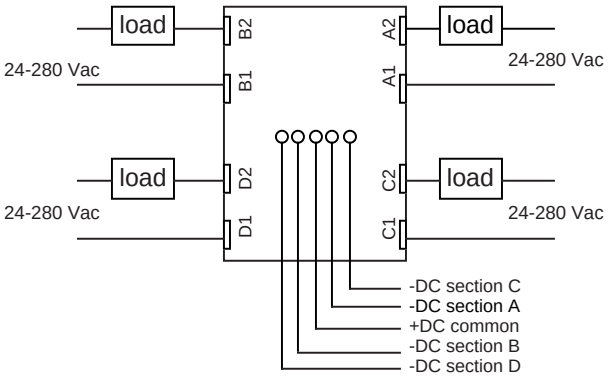


Figure 4 — Typical Application

SURGE CURRENT

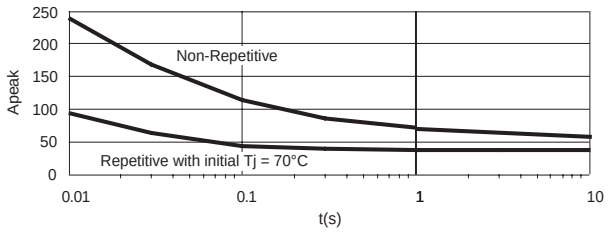


Figure 5 — Surge Current Curves

NOTES:
1. Electrical specifications at 25°C unless otherwise noted.
2. Control LED and Random models available. Contact factory.
3. For 800Hz applications, contact factory.
4. For additional/custom options, contact factory.

OPTIONAL ADD-ONS

Please order add-ons separately:
- -12 — Thermal pad installed.