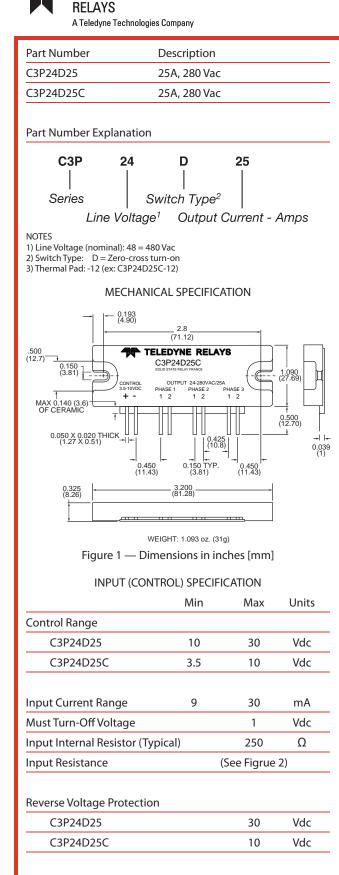
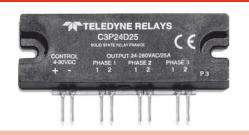
# Series C3P24D25C

Three-Phase Output to 25A 280 Vac DC Control



TELEDYNE



#### FEATURES/BENEFITS

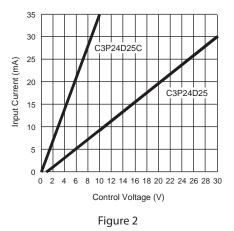
- Three-phase solid state relay in a compact SIP package
- High-temperature plastic housing for mechanical ruggedness
- Tight zero-cross window for low EMI
- Exposed ceramic baseplate for reduced thermal resistance

### DESCRIPTION

The Series C3P three-phase AC solid-state relays are designed to control medium amounts of power in threephase applications. Optical isolation ensures complete protection of the C3P's control circuit from load transients. The C3P's compact plastic housing provides a low-cost alternative to large metallic threephase contactors. The C3P is designed with heatsinking in mind. The ceramic baseplate provides excellent thermal performance. The relay's tight zero-cross window greatly reduces EMI.

#### **APPLICATIONS**

- Heating control
- HVAC controls
- Light/Lamp control
- Three-phase AC loads



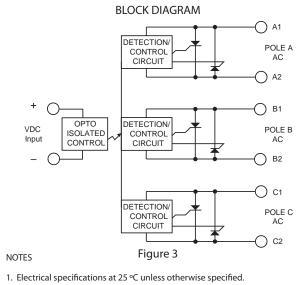
#### CONTROL CHARACTERISTIC



OUTPUT (LOAD) SPECIFICATION				
	Min	Max	Units	
Operating Range	24	280	Vrms	
Peak Voltage		600	Vpeak	
Load Current Range	.05	25	Arms	
(See Figure 4)				
Maximum Surge Current Rating (Non-Repetitive)				
(See Figure 5)		250	А	
On-State Voltage Drop	0.81 + (0.018 x l) V			
Zero-Cross Window (Typical)		±12	V	
Off-State Leakage Current (6	60 Hz) 1		mA	
Turn-On Time		8.3	ms	
Turn-Off Time		8.3	ms	
Off-State dv/dt		500	V/µs	
Operating Frequency Range	47	2000(*)	Hz	
I <sup>2</sup> t for Match Fusing (<8.3 ms)	)	260	A <sup>2</sup> S	
Thermal Resistance (One phase) R <sub>thj</sub> /c				
Junction-Case	-	0.85	°C/W	
Turn-On Time Turn-Off Time Off-State dv/dt Operating Frequency Range I <sup>2</sup> t for Match Fusing (<8.3 ms) Thermal Resistance (One pho	47	8.3 8.3 500 2000(*) 260	ms ms V/µ: Hz A <sup>2</sup> S	

### ENVIRONMENTAL SPECIFICATION

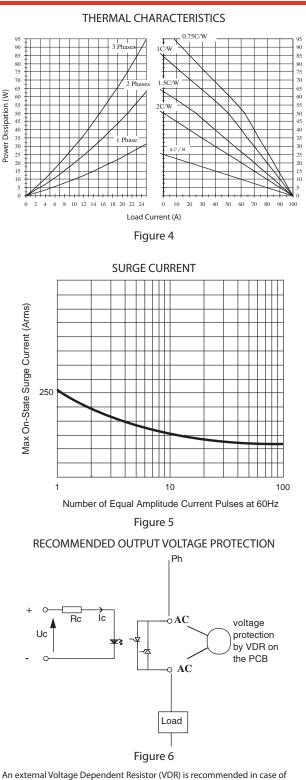
	Min	Max	Units
Operating Temperature	-40	100	°C
Storage Temperature	-55	100	°C
Input-Ouput Isolation	2500		Vi
Output-Case Isolation	2500		Vi
Rated Impulse Voltage	2500		V



- 2. See figure 6 for output protection recommendation
- 3. For additional/custom options, contact factory

# Series C3P24D25C

Three-Phase Output to 25A 280 Vac DC Control



An external Voltage Dependent Resistor (VDR) is recommended in case of voltage spike.

#### NOTES

(\*) Relay built with back-to-back thyristors and high performance optocouplers. Relays have been tested at Teledyne Relays with frequencies higher than 2000 Hz on a resistive load. For other loads the user will have to check functionality in final application.