

**CONTROL UNIT UPGRADE FOR**

# Square-D Masterpact™ Breakers



- » Replacement for STR-28D, STR-38S, STR-58U and STR-68U
- » RMS sensing
- » Adaptable to all frame sizes with no need for ratings plugs
- » LSIG protection with defeatable protection bands
- » Digital display with 3-phase ammeter and detailed trip logging
- » Uses original CT's and flux trip device

**etc-12**  
Q SERIES

**satinAMERICAN**

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FUNCTION RANGE	PICK UP RANGE	DELAY RANGE	NOTES
Available current sensor tap ratings	N/A	N/A	40A, 70A, 80A, 100A, 120A, 150A, 200A, 225A, 300A, 400A, 600A, 800A, 1000A, 1200A, 1600A, 2000A, 2400A, 2500A, 3000A, 3200A, 4000A, 4200A, 5000A, 6000A
Long-time (overload) protection	From 25% to 110% of the current sensor tap rating	MIN (5 sec), INT (13 sec), MAX (27 sec) or custom value between 1 and 30 seconds. Delay is reverse I <sup>2</sup> t and defined by time to trip at 600% of the long-time pickup value.	For 100 mA inout, minimum pickup is 50% of tap rating
Short-time protection	From 150% to 1000% of the longtime pickup value.	Selectable constant or reverse I <sup>2</sup> t ramp with delays of .070, .100, .150, .200, .300, .400, or .500 seconds	Function can be defeated provided that the Instantaneous protection band is enabled. Delay can be selected either as a fixed delay or reverse I <sup>2</sup> t.
Instantaneous protection	From 150% to 1200% of the longtime pickup value	Initiates breaker trip in less than .050 seconds.	Function can be defeated provided that Short-time protection is enabled.
Ground Fault protection	From 20% to 200% of the sensor tap rating, provided that this value does not exceed 1200A. Increments are of 5% of the sensor tap rating up to 100% of tap rating. Above 100% of tap rating, increments are in 10% of tap rating.	Selectable constant or reverse I <sup>2</sup> t ramp with delays of .100, .150, .200, .300, .400 or .500 seconds.	Function can be defeated Delay can be selected either as a fixed delay or reverse I <sup>2</sup> t. For 100, 400, 500 mA inputs, minimum pickup is 20% of sensor tap.
Phase Imbalance protection.	From 15% to 50% ratio of minimum / maximum phase current	Between 1 and 90 seconds	Function can be defeated.
flashSAFE Instantaneous Pickup	Same as Instantaneous	Initiates breaker trip in less than .050 seconds.	May be defeated. Must be lower than the previously entered instantaneous pickup. May be enabled even if instantaneous is defeated.
flashSAFE Ground fault pickup.	Same as Ground Fault	Fixed at .100 seconds w/ no I <sup>2</sup> t ramp	May be defeated. Must be lower than the previously entered ground fault pickup. May be enabled even if ground fault is defeated.
Long-time thermal memory	ON or OFF	N/A	
Ground-fault thermal memory	ON or OFF	N/A	

