



Features:

- Protects motor from:
 - Overload or jammed impeller
 - Underload or dry well
 - Current unbalance
 - Current single phase
 - Reverse phase
 - Rapid cycling
- 3-digit LED diagnostic display
- Last fault diagnostics
- Automatic or manual reset
- Remote reset capability
- UL listed
- CSA approved
- 5-year warranty
- Made in USA

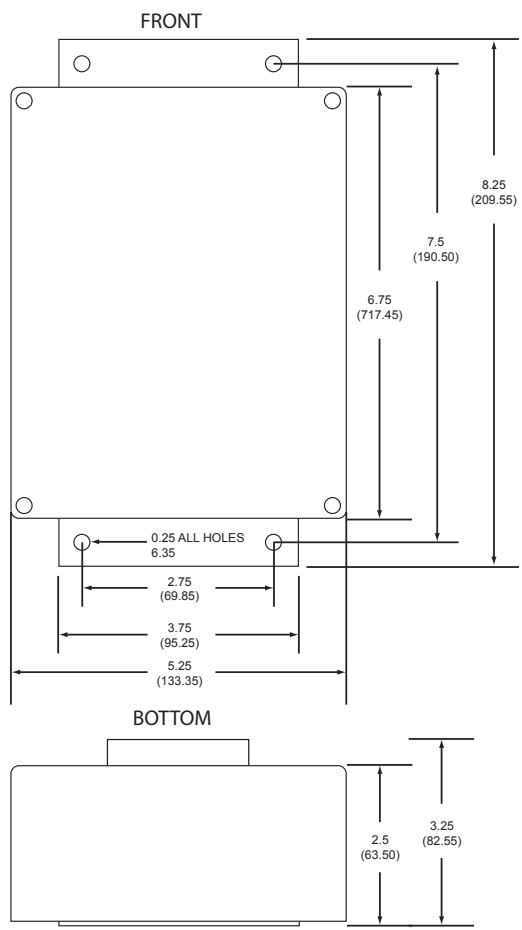
SymCom's Model 520CP is a fully programmable, microcontroller-based, current sensing device designed to monitor 3-phase pumps or systems with ramp up times of 4 seconds or less. Applications include submersible pumps, booster pumps, reverse osmosis systems, centrifugal pumps, vertical turbine pumps, oil well pumps, chemical pumps or other similar systems.

Three external current transformers must be utilized in conjunction with the Model 520CP. The following 9 set points can be set and viewed from the 3-digit alphanumeric LED: overcurrent trip point, undercurrent trip point, current unbalance trip point, trip delay, rapid cycle timer (RD1), overload restart delay (RD2), underload restart delay (RD3), number of restarts after an overload, and number of restarts after an underload fault. Last fault diagnostics is also viewable. When a harmful condition is detected, the 520CP's output relay is deactivated after the specified trip delay. The output relay reactivates after the appropriate RD2 or RD3 timer has expired. If the pump is started on a single-phase or a reverse-phase condition, the Model 520CP deactivates its output relay in 0.5 seconds.

Specifications

Functional Specifications	
Programmable Operating Points	
Overcurrent Trip Point (jammed impeller)	UC trip point to 5 Amps
Undercurrent Trip Point (dry well)	0.00 to OC trip point
Current Unbalance Trip Point	2-50%
Trip Delay	2-50 sec. for all faults except phasing faults
RD1 Restart Delay on Power Up & Rapid-cycle Timer	0-500 seconds
RD2 Retart Delay after all faults except undercurrent (motor cool-down timer)	2-500 minutes
RD3 Restart Delay after undercurrent (dry-well recovery timer)	2-500 minutes
#RF Number of restarts after all faults (except undercurrent)	0, 1, 2, 3, 4 or 999 for unlimited
#RU Number of restarts after undercurrent	0, 1, 2, 3, 4 or 999 for unlimited
Fixed Operating Point	
Reverse and single-phase trip delay	0.5 second from start up
Motor Acceleration Time (OC, UC, UB ignored)	4 seconds
Input Characteristics	
Supply Voltage	400-500VAC
Frequency	50/60Hz (Note: 50Hz will increase all delay timers by 20%)
Maximum Full Scale Current	5 Amps
Output Characteristics	
Output Contact Rating- SPDT	470VA @ 600VAC
General Characteristics	
Operating Temperature	0° to 70° C (32° to 158° F)
Maximum Input Power	5 W
Trip Point Accuracy	±2%
Timing Accuracy	±15%
Standards Passed	
Electrostatic Discharge (ESD)	IEC 61000-4-2, Level 3, 6kV contact, 8kV air
Radio Frequency Immunity, Radiated	150 MHz, 10V/m
Fast Transient Burst	IEC 61000-4-4, Level 3, 3.5kV input power & controls
Surge	
IEC	IEC 61000-4-5, Level 3, 4kV line-to-line
ANSI/IEEE	Level 4, 4kV line-to-ground
Hi-potential Test	C62.41 Surge and Ring Wave Compliance
Safety Marks	to a level of 6kV line-to-line
UL/ULC Listed	Meets UL508 (2 x rated V + 1000V for 1 minute)
Dimensions	8.25" H x 5.25" W x 3.25" D
Weight	2 lbs.
Mounting Methods	Surface mountable, #8 screws

Enclosure Dimensions



230 Volt Motors		400 Volt Motors		575 Volt Motors	
Horsepower	CT Size	Horsepower	CT Size	Horsepower	CT Size
0.5 - 1	5:5	0.5 - 1	2.5:5	0.5 - 1	2.5:5
1.5 - 5	50:5	1.5 - 2	5:5	1.5 - 3	5:5
7.5 - 20	75:5	3 - 10, 25 - 30	50:5	5 - 15, 30	50:5
25 - 30	100:5	15 - 20, 40	75:5	20 - 25, 40 - 50	75:5
40	150:5	50 - 60	100:5	60 - 75	100:5
50 - 60	200:5	75	150:5	100	150:5
75 - 125	400:5	100 - 125	200:5	125 - 150	200:5
		150 - 260	400:5	200 - 325	400:5

Current Transformer Selection

How to order:

Part Number: 520CP-460

(external current transformers required)



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