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BCPSAVER

Residential Water

CentriPro

PumpSaver® Plus Insiders

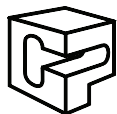
PumpSaver® Plus 111, 233 and 235

777KWHP – 3 Phase



FEATURES

- Quickly and easily calibrates any submersible or centrifugal pump to jobsite conditions (voltage and current).
- Available installed in new QD style, NEMA 3R Rainproof (outside) enclosures or shipped loose for installation in existing control panels.
- Single phase units work with the hand held Informer for simple, fast troubleshooting and system diagnostics.
- Available in single and three phase models.
- Insider Plus models fit in CentriPro, Pentair and Franklin Electric Quick Disconnect type control boxes from 1/2 - 1 HP. Insider Plus units include a Fiber Optic Kit as standard. It is used to signal the optional Informer.
- Protect against dry wells, low and high voltage, over and under current, rapid cycling, jammed pump, dead heading (flow restriction).
- Automatic reset selectable, 2-225 minutes or can be set on manual reset.
- Adjustable underload sensitivity on Plus models.



CentriPro®

CentriPro is a brand of ITT Corporation.

www.centripro.com

Engineered for life

PUMPSAVER PLUS 111 / 233, 23315 AND 235



APPLICATIONS – SINGLE PHASE ONLY

- All submersible pumps, regardless of motor manufacturer
- Centrifugal pumps
- Circulating pumps
- Cooling pumps
- Environmental pumps
- Residential water wells
- Commercial water wells
- Irrigation wells
- Golf course systems

Protects From:

- Dry well (run dry condition)
- Flow restrictions (dead head)
- Over current (jammed impeller)
- Over voltage
- Under voltage
- Rapid cycling

PLUS MODEL FEATURES

- Can be calibrated to specific pump / motor combinations and various conditions
- Will work with destaged pump models ending in 05R
- Infrared LED communication with the INFORMER makes diagnostics simple
- "Run Light" indicates the unit is functioning
- "Run Light" and "Cal. Light" used as diagnostic indicators
- Restart delay can be set up to 225 minutes or placed in manual reset mode
- Micro-controller provides better accuracy and higher reliability than analog designs
- Plus units feature more data storage memory which is viewable using an Informer
- Sensitivity adjustment for dry well trip point
- Installing PumpSaver Plus equipment on all your installations allows fast, simple troubleshooting with an Informer, eliminate guesswork, get all the data within minutes of arriving at a jobsite.
- 5-year warranty

ORDER NUMBERS AND SPECIFICATIONS

Order No.	SymCom New Part Numbers **	Phase	Notes	HP Range	Voltage	Enclosure Provided	
						Yes / No	Type
111Insider	111-Insider-P	1	1	$\frac{1}{3}$ - 1	115	N/A	N/A
231Insider	231-Insider-P		1		230	N/A	N/A
111	111P		—		115	No	—
1113RL	111P-ENCL		2		115	Yes	QD – ENCL
23315	233P-1.5		—	$\frac{1}{3}$ - 1½	230	No	—
233153RL	233P-1.5-ENCL		2		230	Yes	QD – ENCL
233	233P		—	$\frac{1}{3}$ - 3	230	No	—
2333RL	233P-ENCL		2		230	Yes	QD – ENCL
2353RL50	235P-ENCL + CT0050D10		2, 3	5 - 7½	230	Yes	QD – ENCL
2353RL75	235P-ENCL + CT0075D10		2, 3	10	230	Yes	QD – ENCL
2353RL100	235P-ENCL + CT0100D10		2, 3	15	230	Yes	QD – ENCL
235	235P		4	5 - 15	230	No	—
777KWHP		3	—	$\frac{1}{3}$ - 150	200-480	No	—

** – P signifies the Plus version which has enhanced electronic features and memory.

** – ENCL denotes the new, N3R QD Enclosure effective July/August 2009.

NOTES:

1 – The Insiders install in submersible single phase quick disconnect control boxes and require no enclosure.

2 – Models with a ...3RL suffix are installed in a NEMA 3R enclosure which has both Run and Calibrate lights.

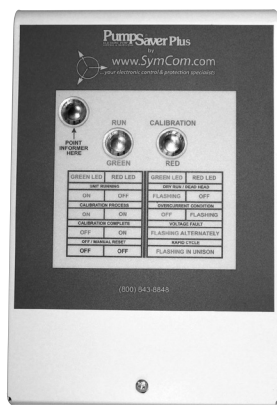
3 – Models contain a current transformer.

4 – The 235 always requires a Current Transformer, use this model for repairs. Order the 2353RL- _ _ units which contain current transformers for new applications.

ACCESSORY ORDER NUMBERS

CT0050D10	Model 235, 5 - 7.5 HP, 50 Amp Current Transformer
CT0075D10	Model 235, 10 HP, 75 Amp Current Transformer
CT0100D10	Model 235, 15 HP, 100 Amp Current Transformer
INFORMER	Hand Held Diagnostic Tool

OUTSIDE OF NEW N3R - ENCL



INSIDE OF NEW N3R- ENCL WITH A 233P INSTALLED



Dimensions: 3.5" deep, 5.4" wide, 8" high

Knockouts: ½" (1 each side, 2 bottom)

¾" (1 each side, 1 bottom)

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PumpSaver Plus

PUMPSAVER 111INSIDER (115V) AND 231INSIDER (230V) INFORMER



APPLICATION

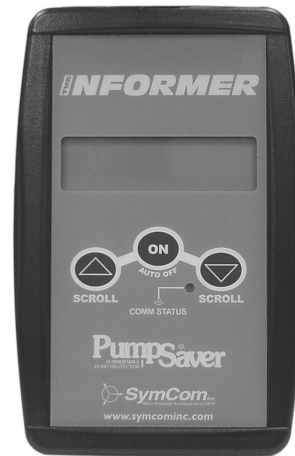
- Submersible pump with a quick disconnect style control box

Protects From:

- Dry well (run dry condition)
- Flow restrictions (dead head)
- Over current (jammed impeller)
- Over voltage
- Under voltage

FEATURES

- Fits inside a 3 wire quick disconnect style control box
- Can be calibrated to specific pump / motor combinations and various conditions
- Will work with destaged pump models ending in 05R
- Infrared LED communication with the INFORMER makes diagnostics simple
- Quick and easy installation – less than 30 seconds
- “Run Light” indicates the unit is functioning
- “Run Light” and “Cal. Light” used as diagnostic indicators
- Restart delay can be set up to 225 minutes or placed in manual reset mode
- 5-year warranty



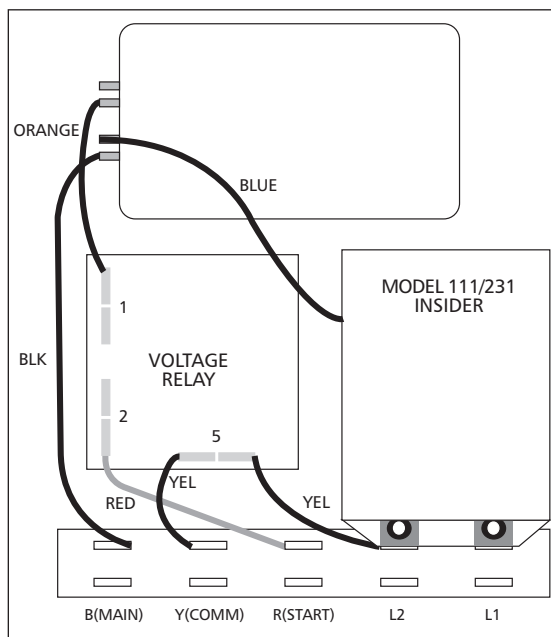
FEATURES

- The Informer is a handheld diagnostic tool designed for use with single-phase PumpSaver models.
- The Informer uses an infrared receiver to access data sent from the PumpSaver, which can be helpful for troubleshooting the system.

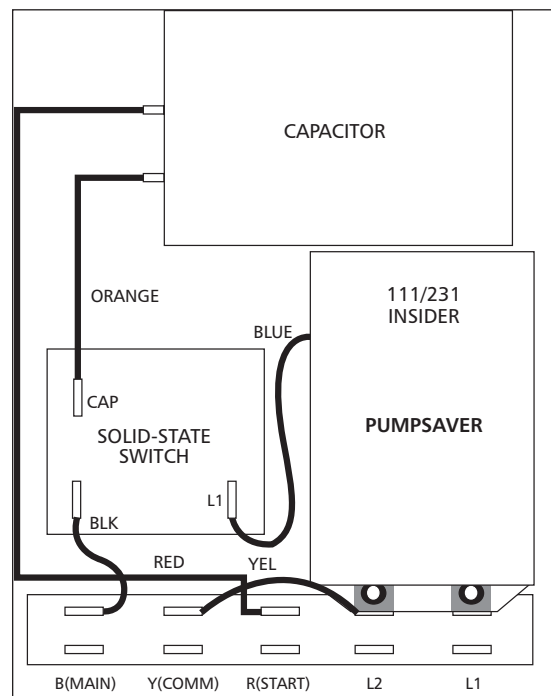
The Informer displays parameters including:

- Real-time voltage, current and power
- Dry-well and overload trip points
- Calibration voltage
- Last 20 fault conditions
- Voltage, current and power at last fault condition
- Highest/lowest voltage and current since last calibration
- Line power and dry well trip point
- Total pump run time
- Number of pump starts
- Restart delay setting and time maining (if tripped)
- Pump amperage

CENTRIPRO CONTROL BOX WITH INSIDER INSTALLED



INSIDER MOUNTED IN FE, Q-D SUBMERSIBLE CONTROL BOX



To install in CP, QD control box:

- Remove the cover from the front of the 3-wire CentriPro control box.
- Remove the yellow wire from the terminal strip at L2.
- Remove the black wire between L1 and the capacitor.
- Press the PumpSaver onto the L1 and L2 terminals.
- Reconnect the yellow wire to L2 on the PumpSaver.
- Connect the blue wire attached to the Pump-Saver to the dual-lug terminal (with the black wire) of the capacitor.

To install in FE, QD control box:

- Remove blue wire from terminal strip and solid state switch (blue relay) and set aside.
- Remove yellow jumper wire from terminal L2.
- Install Insider by aligning tabs with upper L2 and L1 tabs and pushing onto tabs.
- Connect yellow wire onto L2 terminal on Insider.
- Connect blue wire attached to Insider to L1 on solid state switch (blue relay).

PUMPSAVER 777KWHP



APPLICATIONS

The Model 777-KW/HP can be used on ANY 3-phase motor. Some examples include: Can Pumps, Mag Drive Pumps, Fractional Horsepower Pumps and Motors, Submersible Pumps and Coal Bed Methane Wells.

DESCRIPTION

The Model 777-KW/HP is a fully-programmable motor and pump protection relay with power-monitoring capability. Voltage, current and power measurements are displayed on the three-digit display, as well as fault information and setpoints. The display simplifies troubleshooting and allows the user to easily and precisely configure setpoints. The Model 777-KW/HP has the following adjustable protection features:

STANDARD FEATURES OF 777KWHP

- UL Listed as an overload device
- Digitally programmable for precise customization
- 15 parameters can be programmed for maximum protection
- Alphanumeric LED diagnostic display
- Last fault memory provides instant troubleshooting diagnostics
- Recordable voltage, current, last four faults, KWh usage, and power factor with communications package.
- Compact design saves panel space
- Agency Listings: UL, cUL, CSA, CE

- RS485 communication port
- Tamper guard
- Remote reset
- Surface and DIN rail mount
- 5-year warranty
- Made in U.S.A.

ADJUSTABLE PROTECTION FEATURES OF 777KWHP:

- Low voltage
- High voltage
- Voltage unbalance
- UL Listed/CSA approved overload
- Trip class (5, 10, 15, 20, 30)
- Current unbalance
- Ground fault
- Low power
- High power (via network only)
- Rapid-cycle timer
- Fault/overload restart delay
- Underload restart delay
- Underpower/overpower trip delay

Other user adjustable features include:

- CT/loop multiplier so overcurrent and power setpoints can be made in actual amps, kW or HP.
- Number of restarts after faults - manual, automatic and semiautomatic options.
- Number of restarts after underload - manual, automatic and semiautomatic options
- Network address

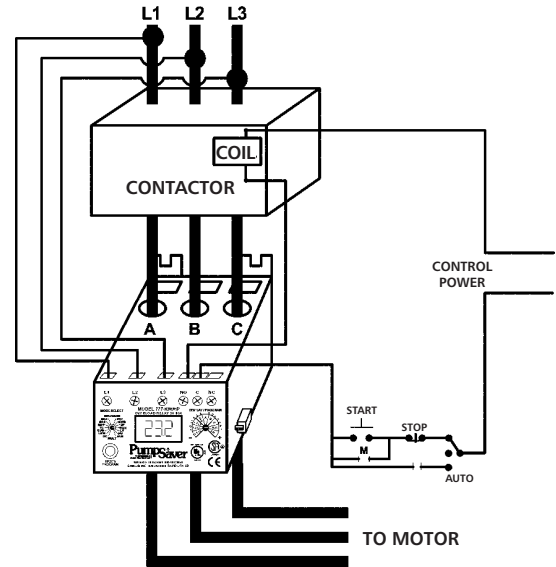
Adding the optional RS485MS-2W communications module activates the built-in Modbus RTU bus capabilities.

PUMPSAVER 777KWHP (continued)

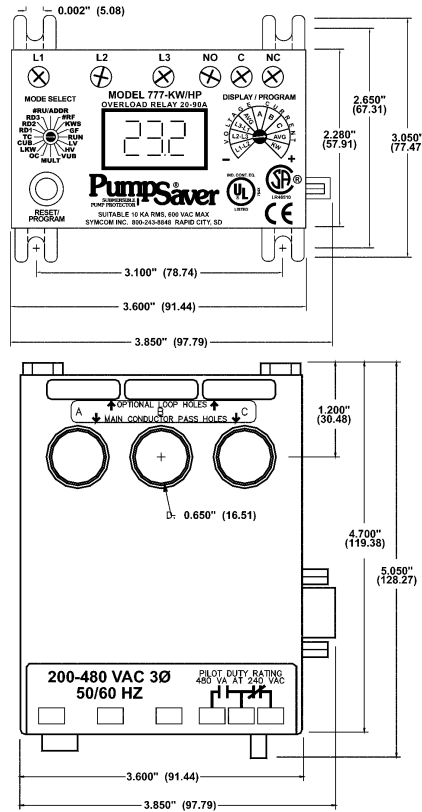
WIRING CONFIGURATION BASED ON MOTOR AMPS

Model	Full Load Amps	# of Loops	# of Conductors through A, B and C	MULT to Program (CT Ratio)
777-LR-KW/HP	1-2	1	2	2
	2-9	0	1	1
777-KW/HP	8-12	2	3	3
	12-25	1	2	2
	25-90	0	1	1
External CTs required. See wiring diagram for external CTs.	80-110	4	5	100 (100.5)
	110-160	4	5	150 (150.5)
	160-220	4	5	200 (200.5)
	220-320	4	5	300 (300.5)
	320-420	4	5	400 (400.5)
	400-520	4	5	500 (500.5)
	480-600	4	5	600 (600.5)
	560-800	4	5	800 (800.5)

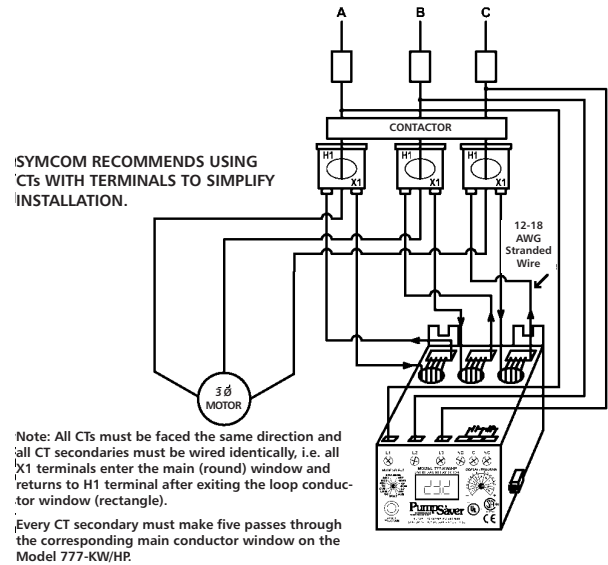
TYPICAL WIRING DIAGRAM FOR MODEL 777-KW/HP (20-90 AMPS) AND 777-LR-KW/HP (2-9 AMPS)



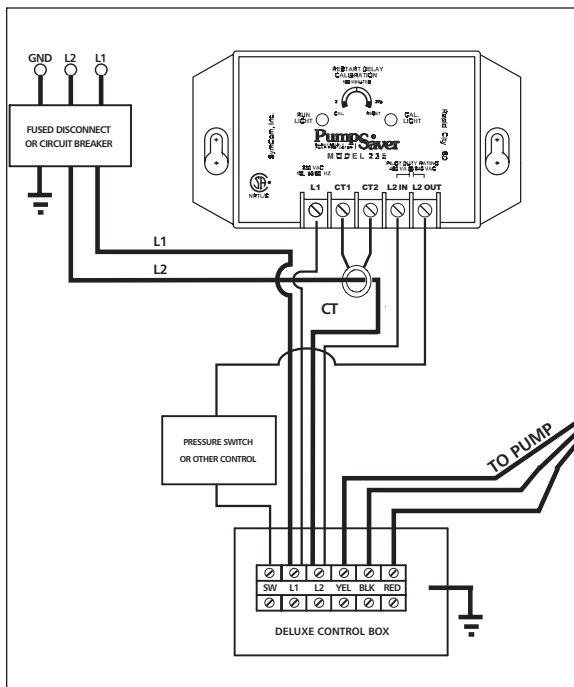
Dimensions for All 777-KW/HP Units



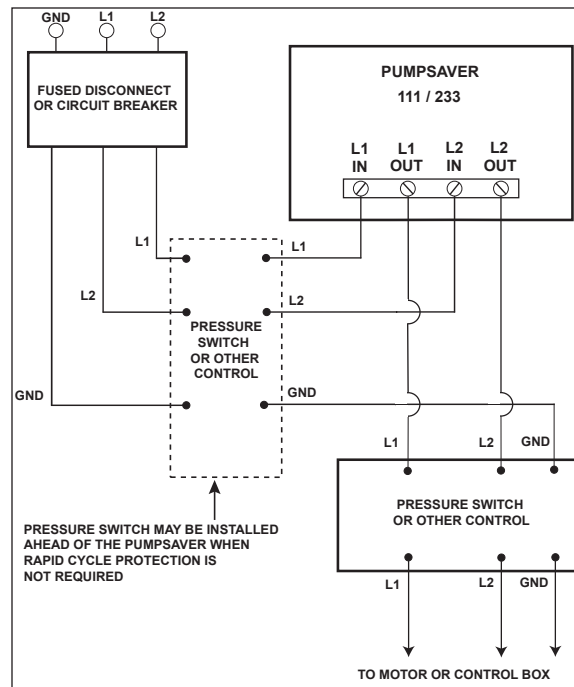
CURRENT TRANSFORMER WIRING DIAGRAM FOR MODEL 777-KW/HP (80-800 AMPS)



PUMPSAVER 235 TYPICAL WIRING DIAGRAM WITH DELUXE CONTROL BOX



PUMPSAVER 111 / 233 TYPICAL WIRING DIAGRAM



Complete instruction manuals are available in the units,
at www.symcom.com and www.centripro.com.



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