



ITTT

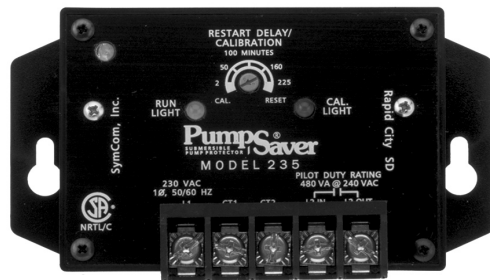
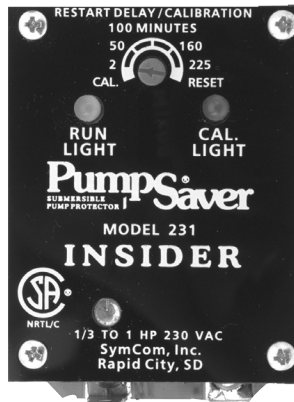
Residential Water

CentriPro

PumpSaver® Insiders

PumpSaver® 111, 233 and 235

777KWHP – 3 Phase



FEATURES

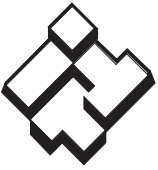
- Quickly and easily calibrates any submersible or centrifugal pump to jobsite conditions (voltage and current). Unlike other protection devices which only work with one brand of submersible motors.
- Most models available installed in NEMA 3R Rainproof (outside) enclosures or shipped loose for installation 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 models fit in CentriPro, Goulds Pumps, Pentair and Franklin Electric Quick Disconnect type control boxes from 1/2 - 1 HP.
- Protects against dry wells, low and high voltage, rapid cycling, jammed pump, dead heading (flow restriction)
- Automatic reset selectable, 2-225 minutes or can be set on manual reset.



CentriPro is a brand of ITTT Water Technology, Inc. - a subsidiary of ITTT Industries, Inc.

www.centripro.com

Engineered for life



ITT

CENTRIPRO Residential Water

ORDER NUMBERS AND SPECIFICATIONS

Order No.	Phase	HP Range	Voltage	Enclosure Provided		Notes	
				Yes / No	Type		
111Insider	1	1/3 - 1	115	N/A	N/A	1	
231Insider			230	N/A	N/A	1	
111			115	No	-	-	
1113RL			115	Yes	N3R	2	
23315		1/3 - 1 1/2	230	No	-	-	
233153RL			230	Yes	N3R	2	
233		1/3 - 3	230	No	-	-	
23333RL			230	Yes	N3R	2	
235			5 - 15	230	No	-	-
2353RL50			5 - 7 1/2	230	Yes	N3R	2, 3
2353RL75		10	230	Yes	N3R	2, 3	
2353RL100		15	230	Yes	N3R	2, 3	
777KWHP		3	1/3 - 150	200-480	No	-	-

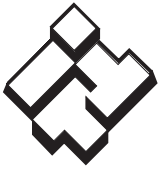
1 The Insiders install in submersible single phase quick disconnect control boxes and require no enclosure.

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.

ACCESSORY ORDER NUMBERS

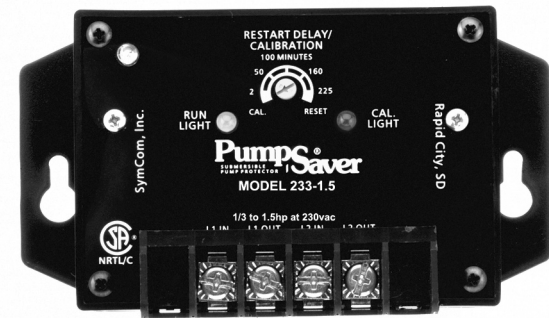
CT0050D10	Model 235, 5 - 7.5 HP, 50 Amp Current Transformer
CT0075D10	Model 235, 10 HP, 75 Amp Current Transformer
CT0100D10	Model 235, 15 HP, 100 Amp Current Transformer
INFORMER	Hand Held Diagnostic Tool



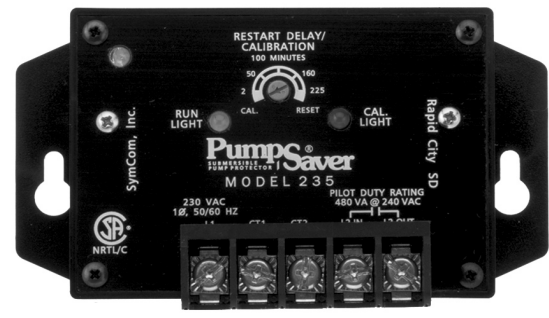
ITT

CENTRIPRO Residential Water

PUMPSAVER 111 / 233



PUMPSAVER 235



N3R PUMPSAVER ENCLOSURE



APPLICATIONS – SINGLE PHASE ONLY

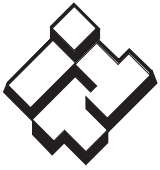
- All submersible pumps, regardless of motor manufacturer
- Centrifugal pumps
- Circulating pumps
- Cooling pumps
- Environmental pumps
- Residential water wells
- Commercial water wells
- Irrigation wells
- Golf course systems

Protects From:

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

FEATURES

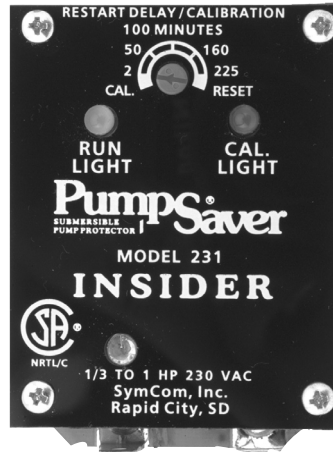
- Can be calibrated to specific pump / motor combinations and various conditions
- Will work with destaged pump models ending in 05R
- Infrared LED communication with the INFORMER makes diagnostics simple
- "Run Light" indicates the unit is functioning
- "Run Light" and "Cal. Light" used as diagnostic 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
- 5-year warranty



ITT

CENTRIPRO Residential Water

PUMPSAVER 111INSIDER AND 231INSIDER



APPLICATION

- Submersible pump with a quick disconnect style control box

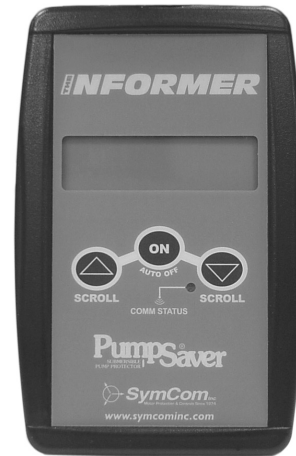
Protects From:

- 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

INFORMER

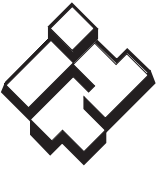


FEATURES

- 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:

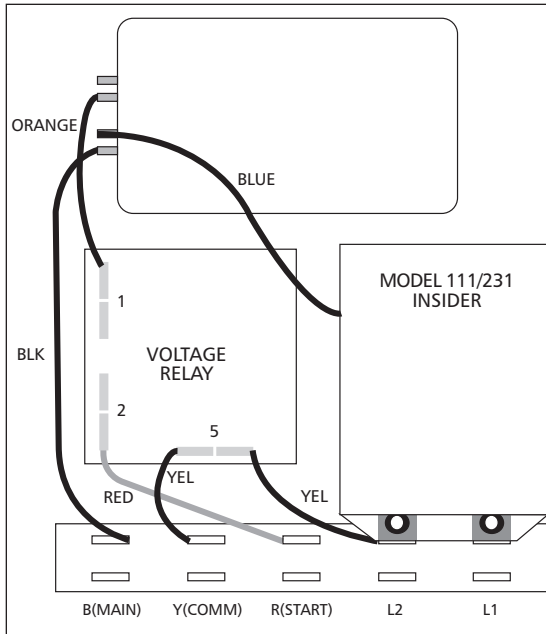
- Real-time voltage, current and power
- Dry-well and overload trip points
- Calibration voltage
- Last fault condition
- Voltage, current and power at last fault condition
- Highest/lowest voltage and current since last calibration



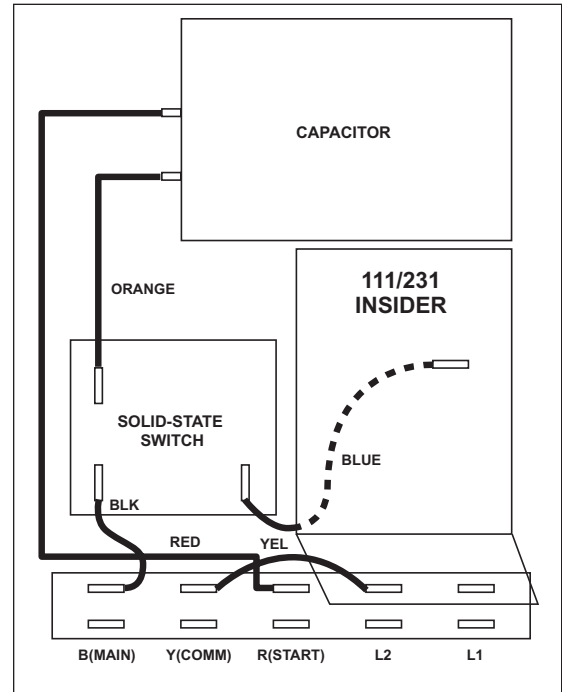
ITT

CENTRIPRO Residential Water

CENTRIPRO CONTROL BOX WITH INSIDER INSTALLED



INSIDER MOUNTED IN FE, Q-D SUBMERSIBLE CONTROL BOX

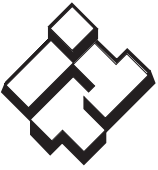


Connections:

- 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 PumpSaver to the dual-lug terminal (with the black wire) of the capacitor.

To install in FE, Q-D 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 solid state switch (blue relay).



ITT

CENTRIPRO Residential Water

PUMPSAVER 777KWHP



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

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

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.



ITT

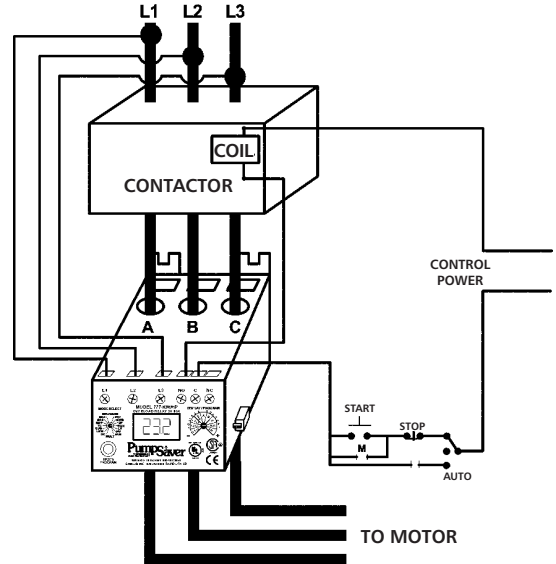
CENTRIPRO Residential Water

PUMPSAVER 777KWHP (continued)

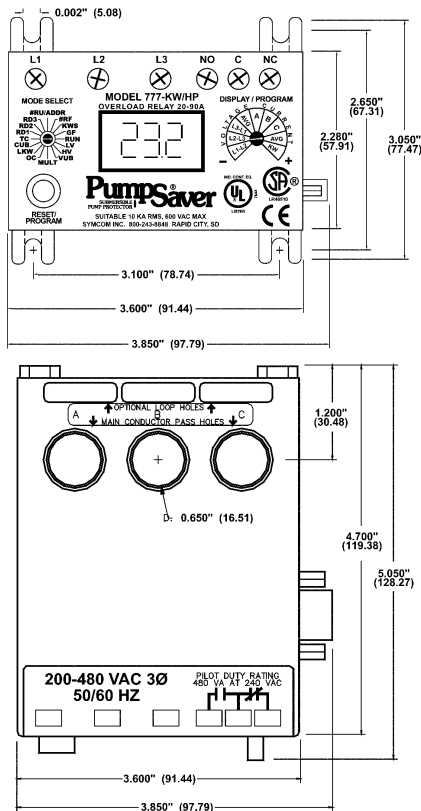
WIRING CONFIGURATION BASED ON MOTOR AMPS

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)

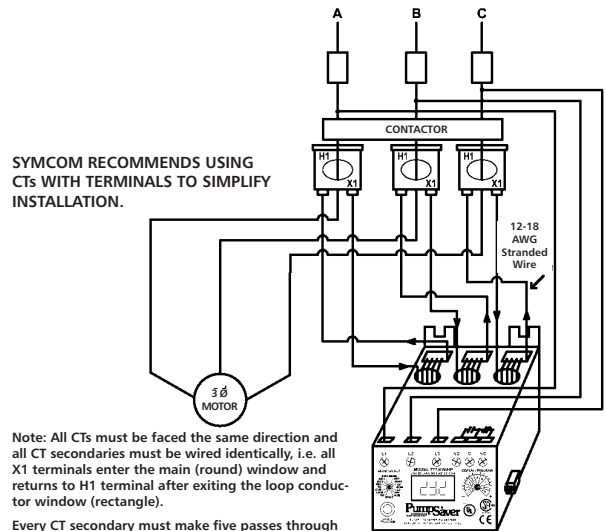
TYPICAL WIRING DIAGRAM FOR MODEL 777-KW/HP (20-90 AMPS) AND 777-LR-KW/HP (2-9 AMPS)



Dimensions for All 777-KW/HP Units



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



Note: All CTs must be faced the same direction and all CT secondaries must be wired identically, i.e. all X1 terminals enter the main (round) window and returns to H1 terminal after exiting the loop conductor window (rectangle).

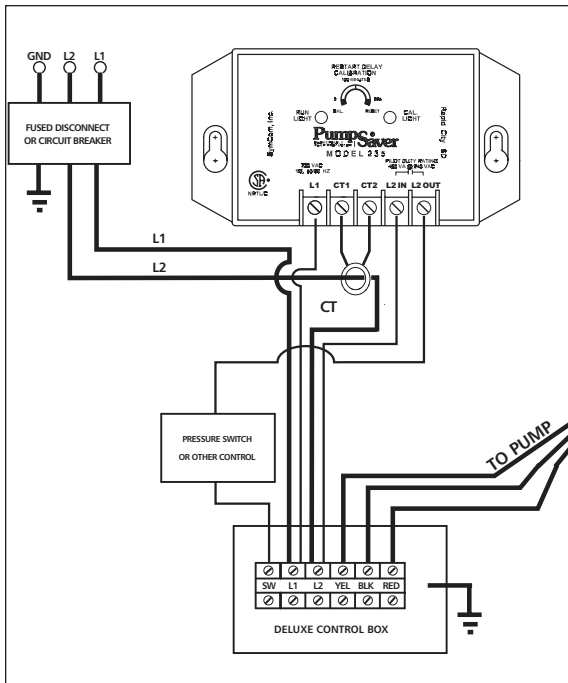
Every CT secondary must make five passes through the corresponding main conductor window on the Model 777-KW/HP.



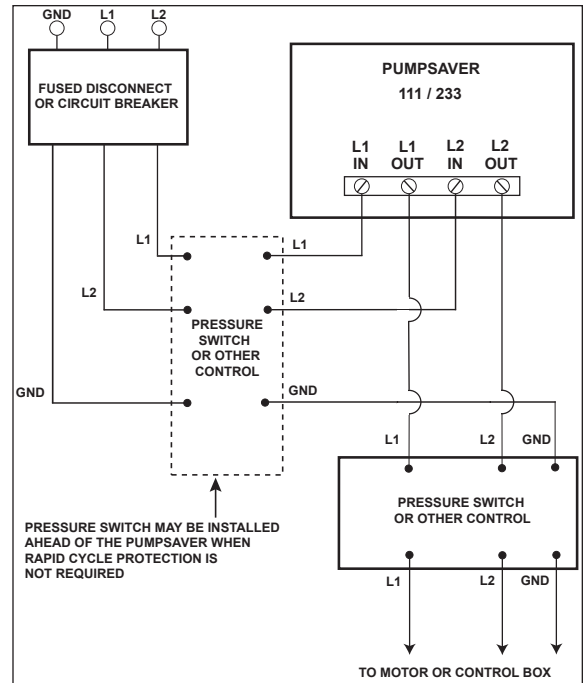
ITT

Residential Water

PUMPSAVER 235 TYPICAL WIRING DIAGRAM WITH DELUXE CONTROL BOX



PUMPSAVER 111 / 233 TYPICAL WIRING DIAGRAM



CentriPro and the ITT Engineered Blocks Symbol are registered trademarks and tradenames of ITT Industries Inc. PumpSaver is a registered trademark of SymCom, Inc. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

BCPSAVER April, 2006

© 2006 ITT Water Technology, Inc.

Engineered for life