

IRRIGATION PUMP PANELS

Features:

Specified By Fortune 500 Companies, ESP100 Or Thermal Starters Offer Prolonged Service Under Severe Duty Conditions. NEMA Rated, These Starters Utilize Large Silver Cadmium Oxide Contacts and Wide Copper Heat Sinks To Ensure Rapid Heat Dissipation and Maximum Electrical Life. **ESP100 Solid State Overload Relays** Provide Phase Loss Protection For The Motor By Tripping Within Three Seconds Upon Complete Loss Of One Phase In A Three Phase Circuit. Each Overload Has A 2:1 (4:1 In Lower Ranges) FLA Adjustment Range With An Adjustment Dial Reading Out In FLA. This Feature Allows For Extreme Fine Tuning. Their Heaterless Construction Minimizes Energy Costs and Costs of Cabinet Ventilation Or Cooling.

The Ambient Compensated Bimetal Overload Relays Are Designed To Parallel Thermal Characteristics Of Typical Pump Motors. They Prevent Nuisance Trips That May Result From Operation Of The Control In A Higher Ambient Temperature Than The Pump. These Relays Are Trip-Free, Tamperproof and Can Be Set To Reset Automatically Or Manually.

HOA and Start Pushbutton

Every Panel Comes With An HOA and A Start Pushbutton.

Half Size Starters - Motor Matched Starters Feature All Rugged Performance Characteristics Of Our NEMA Rated Starter Sizes, But Are Fractionally Sized To More Closely Match Your Exact Motor Rating. As A Result, Significant Economic Savings Are Made Possible Without Sacrificing The Reliability You Expect From A Heavy Duty Starter. These Additional Starter Sizes Have The Reserve Capacity To Handle Occasional Plugging and Jogging Without De-Rating The Device. Motor Matched Starters Can Save Hundreds, Even Thousands Of Dollars Per Project. Motor Matched Starters Comply With NEMA, UL and CSA Standards.

Application:

Heavy Duty Pump Control Panels Are Designed To Withstand The Most Demanding Environments. Typical Applications Include Irrigation, Agriculture, Petrochemical, Wastewater Treatment and Wherever The Motor Control Is Challenged By Harsh Elements.

Class 87 Pump Control Panels Become Jockey Pump Panels With The Addition Of A Pressure Switch. The Jockey Pump's Primary Function Is To Maintain Water Pressure At A Preset Level and Thus Compensate For Possible Shortage Of Water In The Pumping System. When The Water Pressure Drops Below The Present Level, The Pressure Switch Energizes The Starter Which In Turn Activates The Jockey Pump. The Water Pressure Is Then Brought Back Up To The Desired Level. This Insures The Maintenance Of Proper Water Pressure At All Times. Rugged Pump Control Panels Utilize The Cold Forming "Tox Process". They are More Rainproof, Sleet and Ice Resistant Than In The Past.

Installation Is Easy. Panels Are Factory Wired To Provide Flexible Control and Protect Against Short Circuits and Overloads. Ample Space Is Provided For Field Modifications and Installation Of Accessories.

The Pump Control Panels Feature A Full Sized, Removable Auxiliary Panel For The Mounting Of Accessories. The Fusible Version Features Fuse Clips For Full Sized RK5 Or Compact Class J Fuses and Accessory Mounting Space For The Most Commonly Used Accessories.

Benefits:

Panels Are Predrilled For Easy Repositioning Of The Fuse Trailer Block To Accommodate 250 and 600 Volt Fuses and Full Sized RK Or Compact J Fuses. Circuit Breakers Are Also Available.

Heavy Duty Fusible Disconnect Switch Has Been Made Even Better To Give You Greater Advantages:

- Visible Blades For The Highest Level Of Safety.
- Double Break Switching Action To Reduce Arcing, Increase Lifetime and Eliminate The "Electric Hinge".
- Oversized Lugs Are Standard.
- Line Side Shield To Help Guard Personnel From Contact With Live Parts.

Motor Circuit Protector Provides Fast, Accurate Fault Clearing That Will Minimize Damage To The Motor and Control Apparatus and Protect Branch Circuit Conductors. Continuous Current Ratings and Adjustable Trip Ranges Meet NEC Requirements For Full Load and Locked Rotor Currents. The Adjustable Instantaneous Trip Point Can Be Set Precisely To Assure Fault Protection and Eliminate Nuisance Tripping.

Removable Door May Be Lifted Off To Make Wiring Easier.

Mounting Flanges At Top and Bottom Of The Enclosure Provide Easy Mounting. They Fit Pole Or Flat Surfaces Using Keyhole Slots.

Quarter Turn Latches Are Utilized To Secure The Door.

Wind Catches Are Provided To Prevent The Door From Slamming Shut (Or Open) Due To High Wind Conditions.

Safety Disconnect Handle - Up To Three Padlocks Can Be Used To Lock The Disconnect In The OFF Position. Maintenance Work Can Be Performed Without Hazard To Personnel.

External Reset - The Overload Relay May Be Quickly Reset By Means Of A Button On The Front Of The Enclosure.

Bold Pilot Legend Provides Positive Indication Of The Selector Switch Position For Use To Stop The Pump Motor.

Ground Lugs Insure Proper Connecting Of Ground Wires And Lightning Arrestors.

UL Listed - Assures Proper Construction Throughout The Control Panel.

Auxiliary Equipment:

Pilot Lights Are Easily Installed On The Enclosure. Oil Tight and Heavy Duty, They Meet NEMA A600 Requirements.

Lightning Arresters Protect The Control Panel From Lightning Induced Surges.

Undervoltage and Phase Sensing Relays Protect The Pump Against Low Voltage, Voltage Imbalance, Loss Of Phase and Phase Reversal.

Anti-Backspin Timers Prevent The Motor From Starting During Motor / Shaft Backspin.

Pressure Switches Provide Easy Installation, Inspection and Adjustment With The 69ES Pro Control Pressure Switch.

GARD-IT, For Low Water Condition Protection.

HI-GARD, Used In Conjunction With A Standard Pressure Switch To Protect Against Undesirable Pressure Rises in Your System.

The TOX Box - The TOX Process Is Used To Manufacture The Enclosures For The Pump Panels.

Advantages Of The TOX Process:

- Joints Are 50-70% Stronger.
- Since The TOX Process Compresses The Metal At The Joint, It Does Not Leave The High Stresses In The Metal.
- Increased Corrosion Resistance. The Protective Layer On The Metal Is Not Damaged In The Process, But Instead Flows With The Material

IRRIGATION PUMP PANELS

Across-Line Starters

Soft Start Starters

Contactors & Overload Relays

Pressure Switches, Alternator Relays & Drum Controllers

Safety Switches & Transfer Switches

Pilot Devices



Features:

- Fully Gasketed NEMA 3R Rainproof Enclosures
- 100,000 Amp Interrupting Capacity With Class R Fuses
- Heavy Duty NEMA Starters
- Solid State Or Ambient Compensated Bi-Metal Overload Relays
- Heavy Duty Disconnect Handle
- Bold Pilot Legend On Front
- Generous Accessory Space
- Copper Grounding Lug For Three #6 Wires
- UL Listed For Outdoor Use and Service Equipment File #E14900
- CSA Certified File #LR6535

Max. HP				Size	Solid State Overload				Ambient Compensated Overload		
					O/L Amp Range	Fuse / Breaker Size	Model Number	List Price	Fuse / Breaker Size	Model Number	List Price
200 V	230 V	460 V	575V								
Fusible Disconnect											
		10	10	1	9-18	30	IPP1-460-ESP	\$1,090.94	30	IPP1-460	\$972.66
7.5	7.5			1	13-27	30	IPP1-230-ESP	\$1,074.84	30	IPP1-230	\$957.80
		15	15	1.75	13-27	30	IPP1.75-460-ESP	\$1,280.83	30	IPP1.75-460	\$1,147.98
10	10			1.75	20-40	60	IPP1.75-230-ESP	\$1,280.83	60	IPP1.75-230	\$1,147.98
		25	25	2	22-45	60	IPP2-460-ESP	\$1,470.67	60	IPP2-460	\$1,324.28
10	15			2	22-45	60	IPP2-230-ESP	\$1,446.00	60	IPP2-230	\$1,301.50
		30	30	2.5	22-45	60	IPP2.5-460-ESP	\$1,881.15	60	IPP2.5-460	\$1,874.99
15	20			2.5	30-60	60	IPP2.5-230-ESP	\$1,829.25	100	IPP2.5-230	\$1,913.04
		50	50	3	45-90	100	IPP3-460-ESP	\$2,125.28	100	IPP3-460	\$2,122.78
25	30			3	45-90	100	IPP3-230-ESP	\$2,081.07	100	IPP3-230	\$2,077.91
		75	75	3.5	57-115	200	IPP3.5-460-ESP	\$3,614.24	200	IPP3.5-460	\$3,633.90
30	40			3.5	57-115	200	IPP3.5-230-ESP	\$3,584.47	200	IPP3.5-230	\$3,603.66
		100	100	4	67-135	200	IPP4-460-ESP	\$3,910.32	200	IPP4-460	\$3,934.37
40	50			4	67-135	200	IPP4-230-ESP	\$3,880.50	200	IPP4-230	\$3,904.13
		200	200	5	100-270	400	IPP5-460-ESP	\$8,501.17			
75	100			5	100-270	400	IPP5-230-ESP	\$8,323.38			
		250		6	200-540	600	IPP6-460-ESP	\$21,464.44			
Circuit Breaker											
7.5	7.5	10	10	1	13-27	30	IPPCB1-230/460-ESP	\$1,372.01	30	IPPCB1-230/460	\$1,232.17
		15	15	1.75	13-27	30	IPPCB1.75-460-ESP	\$1,537.18	30	IPPCB1.75-460	\$1,384.70
10	10			1.75	20-40	50	IPPCB1.75-230-ESP	\$1,537.18	50	IPPCB1.75-230	\$1,384.70
10	15	25	25	2	22-45	50	IPPCB2-230/460-ESP	\$1,702.39	50	IPPCB2-230/460	\$1,537.24
		30	30	2.5	22-45	50	IPPCB2.5-460-ESP	\$1,991.71	50	IPPCB2.5-460	\$1,988.16
15	20			2.5	30-60	100	IPPCB2.5-230-ESP	\$1,991.71	100	IPPCB2.5-230	\$1,988.16
25	30	50	50	3	45-90	100	IPPCB3-230/460-ESP	\$2,155.10	100	IPPCB3-230/460	\$2,153.02
30	40	75	75	3.5	57-115	125	IPPCB3.5-230/460-ESP	\$4,265.98	125	IPPCB3.5-230/460	\$4,295.79
40	50	100	100	4	67-135	150	IPPCB4-230/460-ESP	\$4,562.01	150	IPPCB4-230/460	\$4,595.79
		200		5	55-250	400	IPPCB5-460-ESP	\$10,374.64			
75	100			5	55-250	400	IPPCB5-230-ESP	\$10,374.64			
		250		6	160-540	400	IPPCB6-460-ESP	\$22,706.62			
100	125			6	160-540	400	IPPCB6-230-ESP	\$22,706.62			

Please Refer To Heater Tables On **PAGE 1-13** For Heater Selection
Heaters = List Price \$21.74 Each

Please Refer To **PAGE 1-14** For Replacement Coils
Sizes 1-4 Will Be Provided With 230/460 Volt Coil As Standard

