

Jockey Pump Controllers

JOCKEY
Touch™

Microprocessor Based with Color Touchscreen



Product Description

ACROSS THE LINE

JOCKEY PUMP CONTROLLERS

The JOCKEY Touch - Jockey Pump Controllers operate across-the-line. Full voltage is applied to the motor for starting by the use of a single motor starter. Starting inrush current is approximately 600% of rated full load amperes.

WYE-DELTA (Star-Delta)

JOCKEY PUMP CONTROLLERS

When six or twelve-lead delta connected jockey pump motors are started wye (star) connected, approximately 58% of line voltage is applied to each winding. The motor develops 33% of full-voltage starting torque and draws 33% of normal locked-rotor current from the line. After an adjustable time delay (during which the motor accelerates), it is reconnected for normal operation.

Product Features

Combination Motor Controllers

All JOCKEY Touch controllers are supplied with EATON combination motor controllers, which combine the circuit breaker and overload in one device.



Sealed Rotary Handle Mechanism

The rotary handle mechanism can be padlocked in the OFF position.

XT Power Controls

The JOCKEY Touch - Jockey Pump Controllers incorporate Eaton's XT Power Controls which are designed for the global marketplace. The XT controls carry global ratings, are small in size and are available in a wide variety of operating voltages. They are easy to install and maintain, due to their modular, plug-in design.

Universal Supply Voltage

The controllers will auto-detect three phase voltage supply from 200VAC to 600VAC, 50/60Hz and single phase from 110VAC to 240VAC, 50/60Hz, without the use of a control transformer.

NEMA 2 Enclosures

Enclosures have an oven baked powder paint finish and are supplied with NEMA 2 rating, unless otherwise ordered. Available options include: NEMA 3R, 4, 4X, 12.

Programmable Functions

Inputs, Outputs, Timers and Virtual LED's are programmable via the touchscreen display.

Starting Methods

There are four methods of starting the controller: Auto, Hand, Remote Start and Pump Start.

Diagnostics / Statistics

Eight diagnostics and seven statistics parameters can be monitored.

Alarm Setpoints

Four alarm setpoints can be programmed from the Alarm Setpoints sub-menu.

Color Touchscreen Display

The JOCKEY Touch - Jockey Pump Controllers are supplied with a microprocessor based, color touchscreen. The touchscreen display allows the user to monitor and program functions and values.

Pressure input is provided by a 4-20mA pressure sensor.



Technical Data

ACROSS-THE-LINE (Direct On Line)

JOCKEY PUMP CONTROLLERS

Line Voltage							
200-208V	220-240V	380-415V	440-480V	550-600V	120V-1Ph	240V-1Ph	
Motor Horsepower							
1/3-20Hp	1/3-20Hp	1/3-40Hp	1/3-50Hp	1/3-50Hp	1/3-2Hp	1/3-5Hp	

WYE-DELTA (Star-Delta)

JOCKEY PUMP CONTROLLERS

Line Voltage				
200-208V	220-240V	380-415V	440-480V	550-600V
Motor Horsepower				
1/3-40Hp (0.74-29.42Kw)	1/3-40Hp (0.74-29.42Kw)	1/3-50Hp (0.74-36.78Kw)	1/3-50Hp (0.74-36.78Kw)	1/3-50Hp (0.74-36.78Kw)

Standards & Certification

The JOCKEY Touch - Jockey Pump Controllers meet the requirements of the latest edition of NFPA 20 as well as meeting CE mark requirements. They meet or exceed the requirements of UL 508 [Underwriters Laboratories (UL)] and are approved by [Canadian Standards Association (CSA)].



Microprocessor - Color Touchscreen Display

Supply Voltage

3 phase – 200VAC to 600VAC, 50/60Hz
1 phase – 110VAC to 240VAC, 50/60Hz
True RMS measurement of 3 phase voltage inputs

Power Supply Output

Two 24VDC outputs	
1	Power the pressure sensor
2	Energize the contactor coil

Ratings

NEMA 4 / 4X

Memory

Programmed settings saved in Non Volatile memory

Battery Backup

Real Time Clock kept intact during power failures

Ambient Temperature Rating

0C to 55C

Languages *

English
French
Spanish
Portuguese
Turkish

* Other languages available - consult factory for details

USB Port

Download Message History
Upload Firmware Updates

Programmable Inputs (2)

Each input can be programmed for one of seven different functions.

1	Interlock
2	Motor Overload
3	Fail to Start
4	Remote Start
5	Pump Start
6	Input = Output
7	Disabled

Programmable Outputs (2)

Each output can be programmed for one of twenty three different functions.

1	Power On	13	Undervoltage
2	Pump Run	14	Transducer Failure
3	Hand Mode	15	Motor Overload
4	Off Mode	16	Common Alarm
5	Auto Mode	17	Acceleration Timer
6	Low Pressure Alarm	18	Remote Start
7	High Pressure Alarm	19	Pump Start
8	Below Start Point	20	Interlock On
9	Phase Reversal	21	Input #1
10	Phase Failure	22	Input # 2
11	Fail to Start	23	Disabled
12	Undervoltage		

Timers (5)

Programmable Types

1	Minimum Run Timer
2	Sequential Start Timer
3	Pump Run Restart Timer
4	Acceleration Timer
5	Fail to Start Timer

Virtual LED's (2)

Programmable Functions (22)

1	Power On	12	Undervoltage
2	Pump Run	13	Overvoltage
3	Hand Mode	14	Transducer Failure
4	Off Mode	15	Motor Overload
5	Auto Mode	16	Common Alarm
6	Low Pressure Alarm	17	Remote Start
7	High Pressure Alarm	18	Pump Start
8	Below Start Point	19	Interlock On
9	Phase Reversal	20	Input #1
10	Phase Failure	21	Input # 2
11	Fail to Start	22	Disabled

Programmable Indication (5)

1	Red
2	Orange
3	Yellow
4	Green
5	Blue

Operation

Starting Methods (4)

1	Auto
2	Hand
3	Remote Start
4	Pump Start

Alarm Set Points (4)

1	Phase Reversal
2	Phase Failure
3	Over Voltage Alarm
4	Under Voltage Alarm

Message History (10K)

Messages time and date stamped

Diagnostics (8)

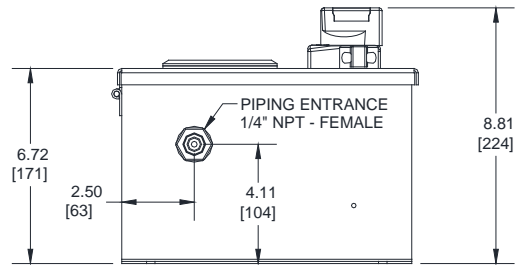
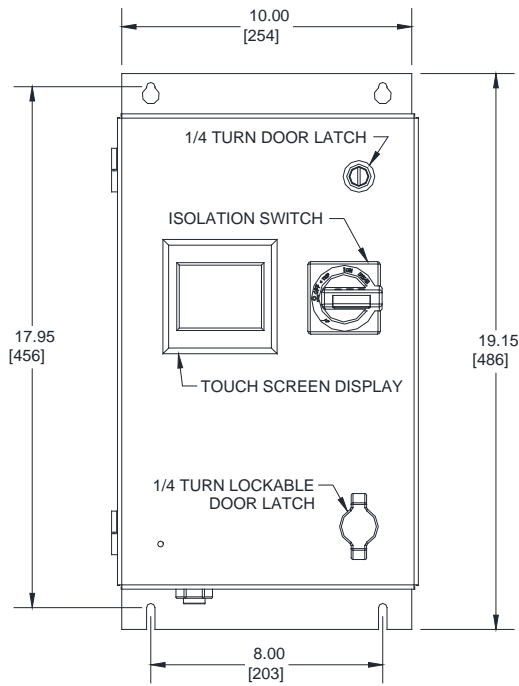
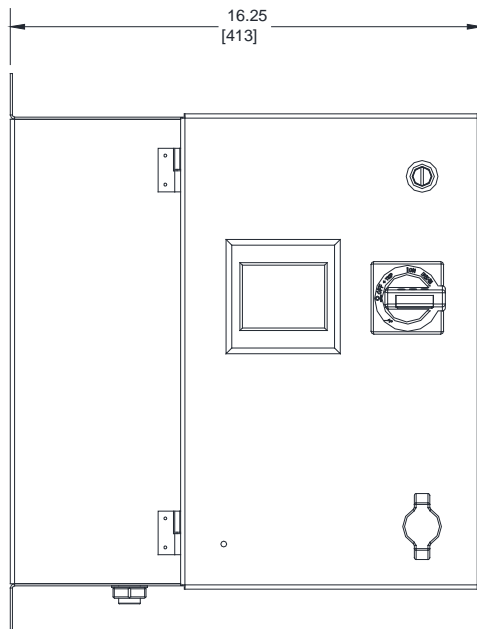
1	Firmware Version
2	Transducer Output
3	Transducer Current 1
4	Transducer Current 2
5	Input #1 Status
6	Input #2 Status
7	Relay #1 Status
8	Relay #2 Status
9	24VDC Output

Statistics (7)

1	Total Powered Time
2	Pump Run Total Time
3	Motor Starts
4	Minimum Voltage
5	Maximum Voltage
6	Minimum Pressure
7	Maximum Pressure



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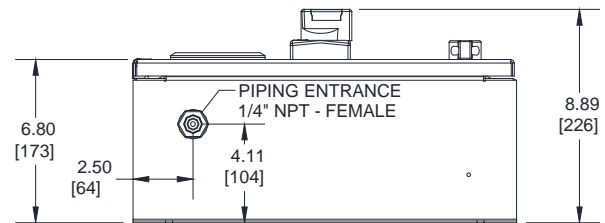
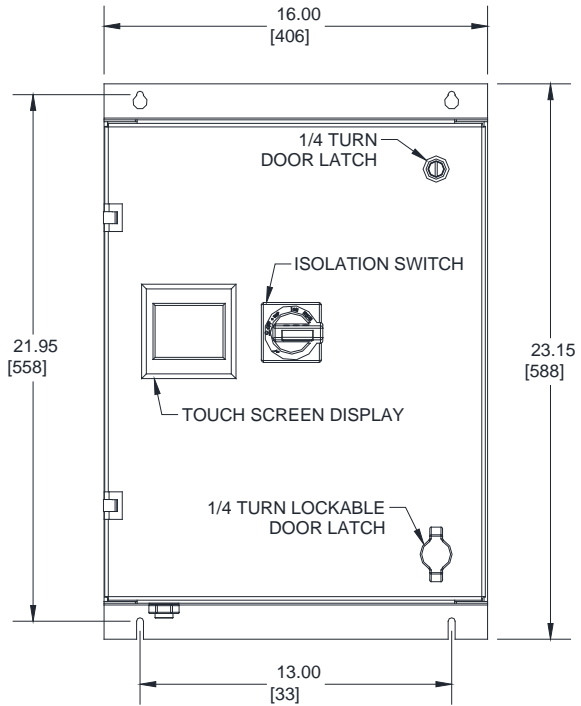
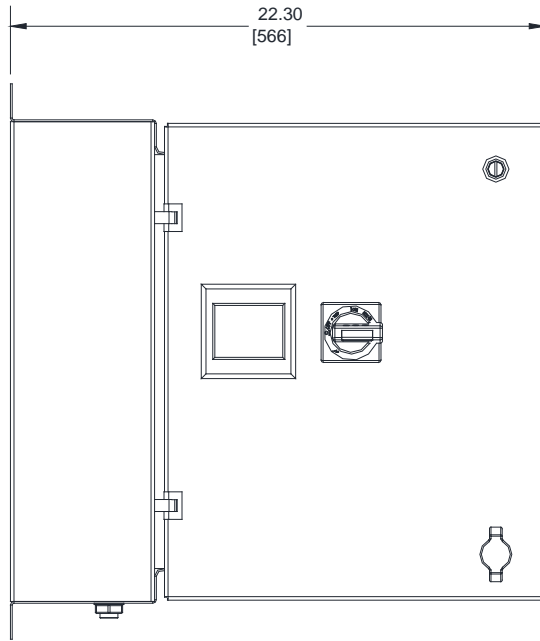


200-208V		220-240V		380-415V		440-480V		550-600V	
Motor Hp	Withstand Rating (kA)	Motor Hp	Withstand Rating (kA)	Motor Hp	Withstand Rating (kA)	Motor Hp	Withstand Rating (kA)	Motor Hp	Withstand Rating (kA)
0.33 - 0.75	50	0.33 - 0.75	50	0.33 - 1.5	50	0.33 - 2	50	0.33 - 7.5	50
1 - 2	65	1 - 3	65	2 - 5	65	3 - 5	65	10 - 30	10 *
3 - 4	42	4 - 5	42	7.5	42	7.5 - 10	42		
5 - 10	18	7.5 - 10	18	10 - 15	18	15 - 20	18		

120V 1ph		208V 1ph		240V 1ph		Approx. Weight
Motor Hp	Withstand Rating (kA)	Motor Hp	Withstand Rating (kA)	Motor Hp	Withstand Rating (kA)	Lbs (Kg)
0.33 - 0.5	65	0.33 - 1	65	0.33	50	18 (8)
0.75 - 1	42	1.5 - 2	42	0.5 - 1.5	65	
1.5 - 2	18	3 - 4	18	2	42	
				3 - 5	18	

- NOTES:
 1. * Upstream circuit breaker required to maintain kA rating.
 2. All enclosures finished in FirePump red.
 3. Cable Entrance either top or bottom.

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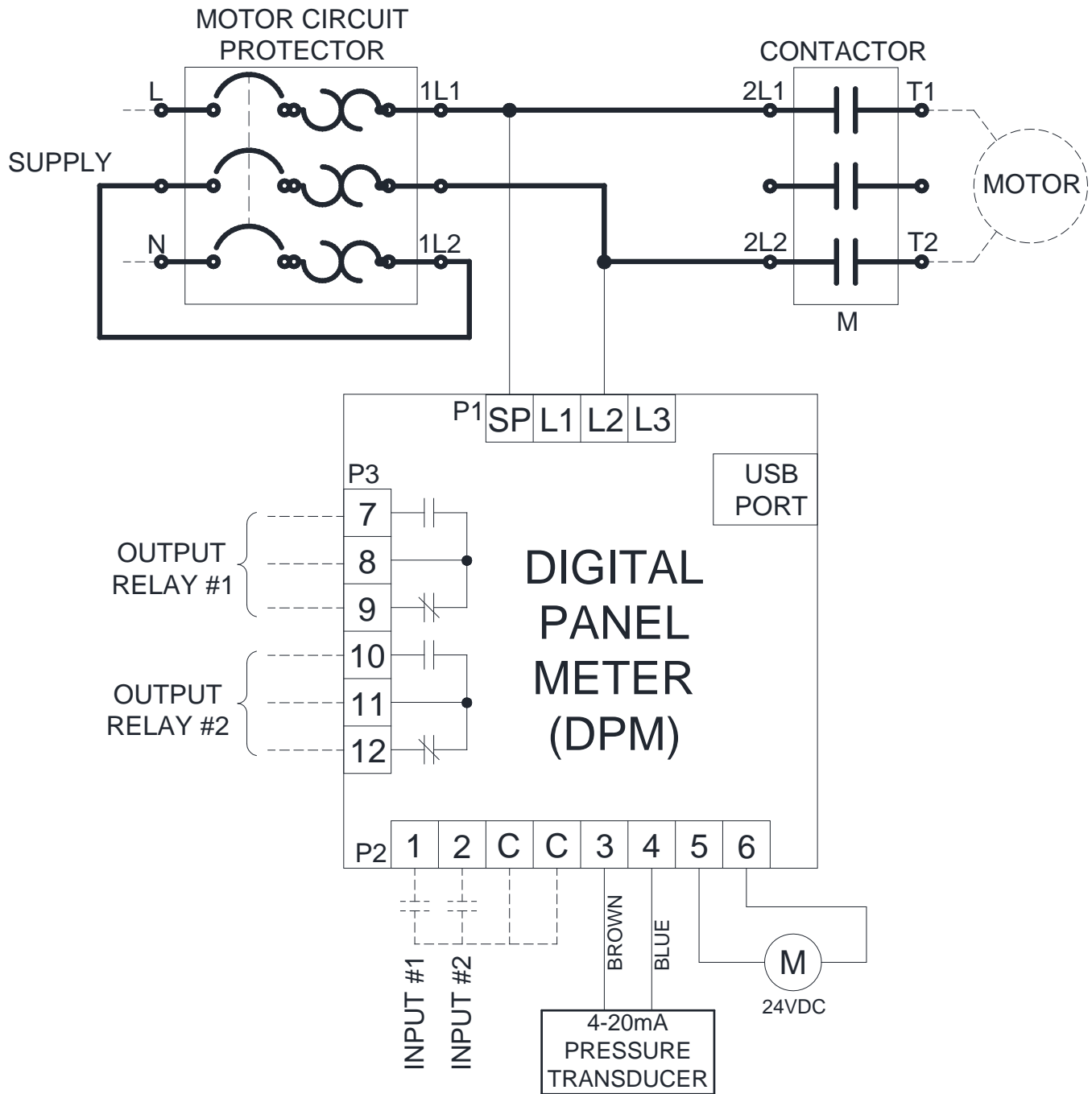


200-208V		220-240V		380-415V		440-480V		550-600V	
Motor Hp	Withstand Rating (kA)	Motor Hp	Withstand Rating (kA)	Motor Hp	Withstand Rating (kA)	Motor Hp	Withstand Rating (kA)	Motor Hp	Withstand Rating (kA)
0.33 - 0.75	50	0.33 - 0.75	50	0.33 - 1.5	50	0.33 - 2	50	0.33 - 7.5	50
1 - 2	65	1 - 3	65	2 - 5	65	3 - 5	65	10 - 30	10*
3 - 4	42	4 - 5	42	7.5 - 15	42	7.5 - 10	42		
5 - 10	18	7.5 - 10	18		18	15 - 20	18		

120V 1ph		208V 1ph		240V 1ph		Approx. Weight
Motor Hp	Withstand Rating (kA)	Motor Hp	Withstand Rating (kA)	Motor Hp	Withstand Rating (kA)	Lbs (Kg)
0.33 - 0.5	65	0.33 - 1	65	0.33	50	18 (8)
0.75 - 1	42	1.5 - 2	42	0.5 - 1.5	65	
1.5 - 2	18	3 - 4	18	2	42	
				3 - 5	18	

- NOTES:
 1. * Upstream circuit breaker required to maintain kA rating.
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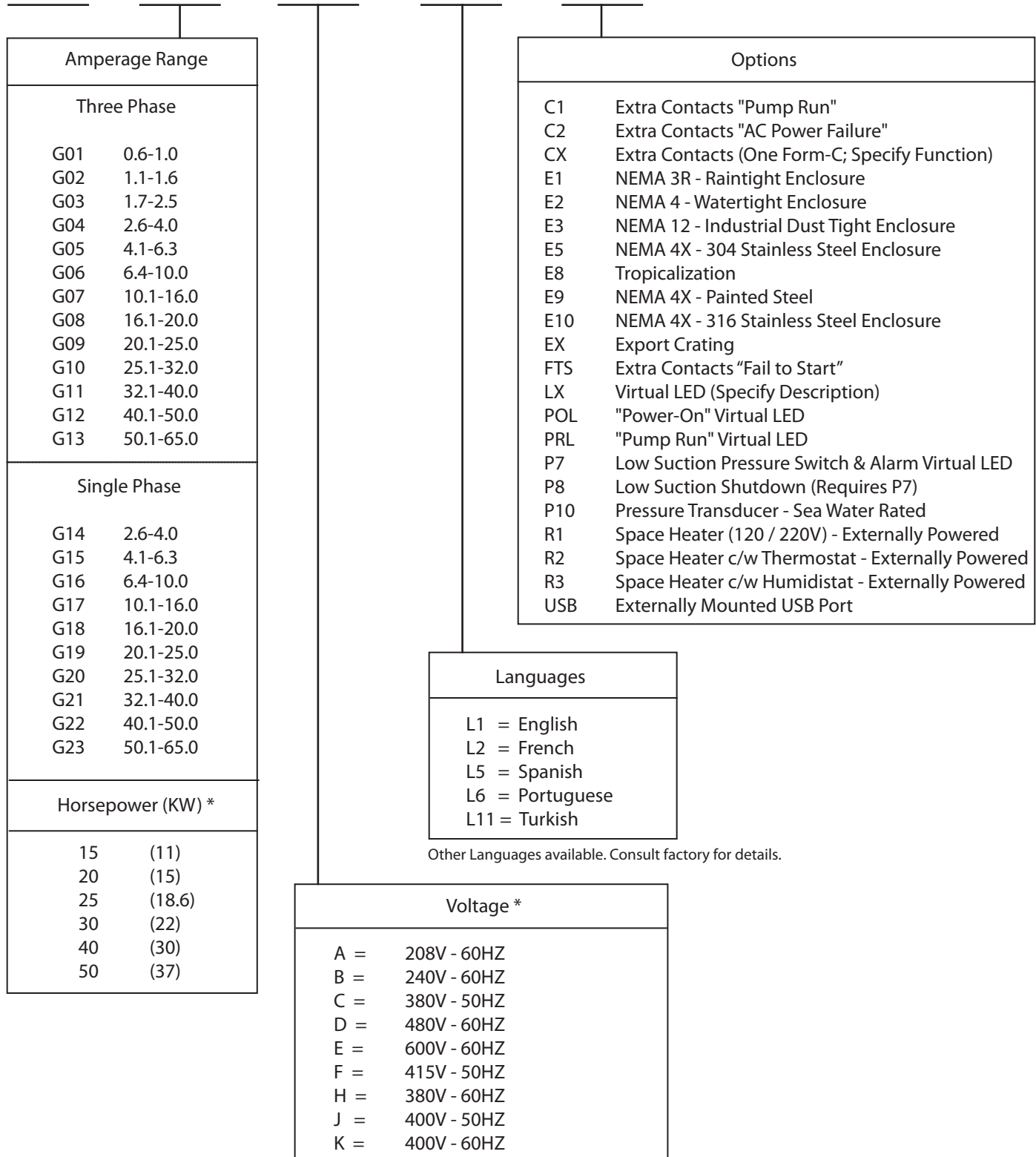
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XTJP XTJY

NOTE: To select a proper part number - refer to the current Eaton Pricing Guidelines for available combinations.



* NOTE: Voltage letter designations are only used when a Horsepower (KW) is selected.

XTJP / XTJY Jockey Pump Controllers

Typical Jockey Pump Controller Specifications

Approvals

The Jockey Pump Controller shall meet the requirements of the latest edition of NFPA 20 as well as meeting CE mark requirements. It shall meet or exceed the requirements of UL 508 [Underwriters Laboratories (UL)] standards and be approved by [Canadian Standards Association (CSA)].

Starting Type

The controller shall be Across-the-Line or Wye-Delta (Star Delta) type designed for full voltage starting.

Ratings

The Controller shall have a minimum withstand rating of 10,000 symmetrical amperes @ [208V] [240V] [380V] [400V] [415V] [480V] [600V] [120V Single Phase] [240V Single Phase].

The horsepower rating of the controller shall not exceed 50Hp for three (3) phase units or 10Hp on single phase units.

Construction

The controller shall include a combination Circuit Breaker / Overload Motor Protector.

The motor circuit protector shall be mechanically interlocked such that the enclosure door cannot be opened when the handle is in the on position except by a tool operated defeater mechanism.

The controller manufacturer shall manufacture the contactor, motor circuit protector, touchscreen display, and enclosure. Brand-labeled components will not be accepted.

Supply Voltage

The jockey pump controller shall auto-detect three phase voltage supply from 200VAC to 600VAC, 50/60Hz and single phase from 110VAC to 240VAC, 50/60Hz, without the use of a control transformer.

Coil Voltages

The jockey pump controller shall have the following available coil voltages
120VAC 50/60 Hz or 24VDC

Enclosure

The controller shall be housed in a NEMA Type 2 (IEC IP11) drip-proof, powder baked finish, freestanding enclosure.

Optional Enclosures

1. NEMA 3R (IEC IP14) rain-tight enclosure.
2. NEMA 4 (IEC IP66) watertight enclosure.
3. NEMA 4X (IEC IP66) watertight 304 stainless steel enclosure.
4. NEMA 4X (IEC IP66) watertight 316 stainless steel enclosure.
5. NEMA 4X (IEC IP66) watertight corrosion resistant enclosure.
6. NEMA 12 (IEC IP52) dust-tight enclosure.

Languages

The controller shall be available in a variety of languages including, but not limited to:
English, French, Spanish, Portuguese, Turkish.

Touchscreen Display

The controller shall be supplied with a color touchscreen display that shall indicate the following: Supply Voltage on all phases, Current Pressure, Start Pressure and Stop Pressure.

The touchscreen display shall be supplied with a solid-state 4-20mA pressure sensor. The pressure Start and Stop points shall be adjustable in increments of one (1) PSI or 0.1 BAR.

The touchscreen display shall be a door-mount type that permits exterior programming with the controller door secured.

Options

The jockey pump controller shall have provision to be supplied with the following options:

- C1 Extra Contacts " Pump Run"
- C2 Extra Contacts "AC Power Failure"
- CX Extra Contacts (One Form-C; Specify Function)
- E1 NEMA 3R – Raintight Enclosure
- E2 NEMA 4 – Watertight Enclosure
- E3 NEMA 12 – Industrial Dust Tight Enclosure
- E5 NEMA 4X – 304 Stainless Steel Enclosure
- E8 Tropicalization
- E9 NEMA 4X - Painted Steel
- E10 NEMA 4X - 316 Stainless Steel Enclosure
- EX Export Crating
- FTS Extra Contacts "Fail to Start"
- LX Virtual LED (Specify Description)
- POL "Power On" Virtual LED
- PRL "Pump Run" Virtual LED
- P7 Low Suction Pressure Switch and Alarm Virtual LED
- P8 Low Suction Shutdown (Requires P7)
- P10 Pressure Transducer – Sea Water
- R1 Space Heater (120 / 220V)
- R2 Space Heater c/w Thermostat
- R3 Space Heater c/w Humidistat

Manufacturer

The controller shall be of the XTJP Across-the-Line or XTJY Wye Delta (Star-Delta) type as manufactured by EATON.