

# GPx SERIES

# AQUARIUS™ FIRE PUMP CONTROLS

ELECTRIC FIRE PUMP  
CONTROLLERS  
Micro-processor Based



### MAIN FEATURES:

- Micro-processor based
- NEMA 2 - IP42 enclosure
- Door front mounted: (accessible without opening main door)
  - Digital indication of individual phase to phase voltage and current
  - Pressure setting adjustments and system pressure reading
- 7-day Pressure/15-Day Event recorder
- Bottom gland plate for power and/or motor leads entrance

VOLTAGE	HP	STANDARD SHORT CIRCUIT WITHSTAND RATING	OPTIONAL SHORT CIRCUIT WITHSTAND RATING
208	5 to 150	100,000 A.	150,000 A.
240	5 to 200	100,000 A.	150,000 A.
380 - 416	5 to 350*	100,000 A.	150,000 A.
480	5 to 400	100,000 A.	150,000 A.
600	5 to 500	50,000 A.	100,000 A.

Also available with transfer switch (Model GPG, generator set or Model GPU, second utility)

\* See individual model brochures. Larger HP's available upon request.

	ACROSS-THE-LINE	PART WINDING	AUTO TRANSFORMER	SOFT START SOFT STOP	PRIMARY RESISTOR	WYE-DELTA CLOSED TRANSITION	WYE-DELTA OPEN TRANSITION
MODEL NUMBER	<b>GPA</b>	<b>GPP</b>	<b>GPR</b>	<b>GPS</b>	<b>GPV</b>	<b>GPW</b>	<b>GPY</b>
VOLTAGE	FULL	REDUCED	REDUCED	REDUCED	REDUCED	REDUCED	REDUCED
TYPICAL VOLTAGE APPLIED MOTOR STARTING	100%	100%	65%	30% (adjustable)	70%	100%	100%
INRUSH CURRENT	6 X NORMAL LOAD CURRENT	60% OF NORMAL WITH 1" WINDING	42% OF NORMAL	30% (adjustable)	50% OF NORMAL	33% OF NORMAL	33% OF NORMAL
STARTING TORQUE	100%	48%	42%	30%	50%	33%	33%
MOTOR TYPE	STANDARD	SPECIAL	STANDARD	STANDARD	STANDARD	SPECIAL	SPECIAL
# OF WIRE CONNECTIONS	3 WIRE	6 WIRE	3 WIRE	3 WIRE	3 WIRE	6 WIRE	6 WIRE

Based on NEMA B type motors.

## STANDARD FEATURES:

### MANUAL OPERATORS (FLANGE MOUNTED)

- Single operator for both isolating switch and circuit breaker door interlocked in the "ON" position complete with interlock defeater screw
- Emergency manual start handle providing for manual across-the-line starting
- Start and Stop pushbuttons

### ELECTRICAL FEATURES

- Molded case isolation switch
- Molded case circuit breaker
- Motor starter HP rated
- 3 phase voltage surge suppressor

### CONTROL FEATURES

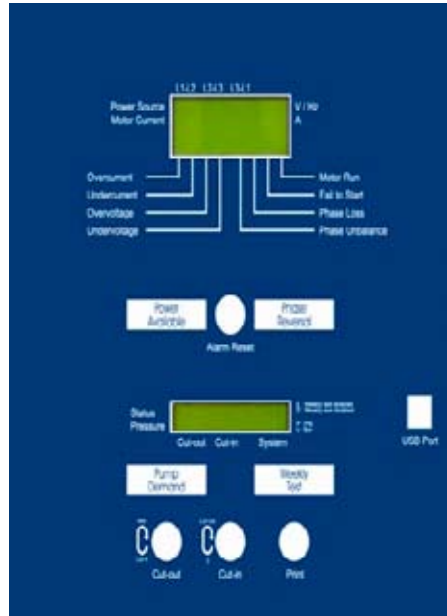
- Micro-processor logic based
- Factory set (no field programming)
- Locked rotor protection
- Phase sequence / loss
- Provision for remote or deluge valve start
- Automatic start sequence
- Pressure transducer (0-300psi)
- Manual and emergency control circuit independent of micro-processor

### DRY ALARM CONTACTS - 8A, - 250VAC

- Power or phase failure and/or circuit breaker in open position - DPD
- Phase reversal - DPDT
- Pump run - 1N/O - 1N/C
- Trouble (alarm conditions) - DPDT

## OPTIONAL FEATURES:

- **Option Type A:** Operational modifications
- **Option Type B:** Additional annunciations
- **Option Type C:** Extra alarm contacts
- **Option Type D:** Miscellaneous
- **Option Type E:** Load shedding provisions
- **Option Type F:** Automatic transfer switch options
- **Option Type H:** Export packing



**BOTTOM GLAND PLATE**  
For ease of power and motor lead entrance

## ANNUNCIATOR AND LCD DISPLAY

### Voltage and amperage module

Provides for:

- Phase sequence / Loss monitoring & alarms
- Individual phase-to-phase voltage indication
- Individual phase current indication
- True elapsed run time
- Motor run visual indication
- Over & under current visual indication
- Over & under voltage visual indication
- Fail to start visual indication
- Phase loss visual indication
- Phase unbalance visual indication
- Power available LED
- Phase reversal LED

### Pressure and Sequencer module

Provides for:

- Cut-In & Cut-Out pressure setting
- System pressure indication
- Run period timer
- Sequential start timer
- Weekly test setting
- Pressure recording
- Alarm & events recording
- Pump on demand LED
- Weekly test LED
- USB (slave) communication port
- Printer (optional)
- Modem (optional)

208V.-240V.	380V.-416V.	440V.-480V.	600V.
HP	HP	HP	HP
5 to 30	5 to 50	5 to 60	5 to 75
40-60	60-100	75-150	100-150
75-150	125-350*	200-400	200-500

GPA - GPP - GPY - GPV**			GPR - GPS - GPW			APPROX. WEIGHT
WIDTH	HEIGHT	DEPTH	WIDTH	HEIGHT	DEPTH	
in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	Lbs. (Kg)
20 (508)	36 (914)*	12 (305)	26 (660)	36 (914)*	12 (305)	275 (125)
24 (610)	54 (1371)	14 (355)	30 (762)	54 (1371)	14 (355)	375 (170)
30 (762)	68 (1727)	18 (457)	36 (914)	68 (1727)	18 (457)	600 (270)

\* See individual model brochures. Larger HP's available upon request.

\* Height does not include mounting feet.

\*\* Consult factory for dimensions.

# AQUARIUS™

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# AQUARIUS™

## FIRE PUMP CONTROLS



# GPG MODEL

### AUTOMATIC POWER TRANSFER SWITCH FOR GENERATOR EMERGENCY POWER SOURCE IN COMBINATION WITH A GPx SERIES ELECTRIC FIRE PUMP CONTROLLER MICRO-PROCESSOR BASED

The model GPG automatic power transfer switch is specifically designed and suitable for connecting to an alternate power source from a generator whose capacity does not exceed 225 percent of the fire pump motor's full load amperage. It complies to the latest NFPA20 standard and is listed and approved by UL and FM.

It is meant to be combined to a **GPx Series** full service fire pump controller and supplied as one unit. The complete assembled, wired and tested combination provides short circuit protection for the transfer switch normal power position.

The alternate (emergency) power position is short circuit protected by a remote mounted circuit breaker or fuse set supplied by others. The transfer switch is electrically operated and mechanically held in the normal or alternate (emergency) position. Manual operation of the transfer switch is provided for.

Only quality components, all U.L. listed or recognized and C.S.A. certified are used throughout to assure the best possible reliability.

The complete assembled and wired controllers are factory tested before shipping and ready for immediate installation.

#### CONTROLLER PROTECTION LEVEL:

- Standard NEMA - UL - CSA type 2
- Optional - NEMA - UL - CSA type 3R
  - NEMA - UL - CSA type 4
  - NEMA - UL - CSA type 4X
  - NEMA - UL - CSA type 12

#### ALTERNATE POWER ENCLOSURE ENTRANCE

- Bottom gland plate

#### OPERATIONAL TEMPERATURE LIMITS:

- 41°F to 122°F (5°C to 50°C)

#### ANNUNCIATOR AND LCD DISPLAY

- Accessible without opening main door
- Normal and alternate power indication
- Transfer switch status indication
- Transfer switch bypass time delay, alarm reset and silence pushbutton

#### MICRO-PROCESSOR BASED LOGIC CONTROL

- Mechanically protected and shielded



#### The transfer switch assembly includes:

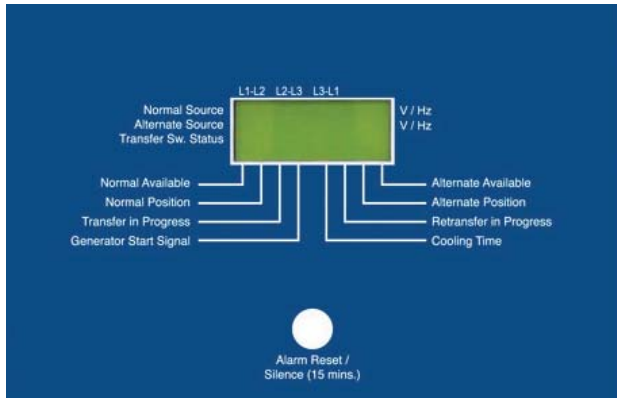
- One Test push button to simulate a normal power failure. Pressing the Test push button for more than 3 seconds will close the generator start contact and initiate the transfer to the alternate (emergency) power source. The retransfer to the normal power source is initiated automatically after 5 minutes and the generator stops 5 minutes after the retransfer.
- Time delays:
  - To override momentary normal power outages before activating engine start contact. Factory set at 3 seconds.
  - To retransfer to normal power. Instantaneous retransfer in case of alternate (emergency) power failure. (Factory set at 5 minutes.)
  - To allow engine generator cool-down after retransfer to normal source. Factory set at 5 minutes.
- Voltage, frequency and phase reversal sensing:
  - Voltage sensing on all phases of normal power, set at 85%. A voltage below this value or phase reversal initiates generator start.
  - Alternate (emergency) voltage and frequency sensing set at 90%. A voltage or frequency above this value initiates transfer to alternate (emergency) power.
  - Voltage sensing on all phases of normal power, set at 90%. A voltage above this value initiates retransfer to normal power.

# GPG MODEL

AUTOMATIC POWER TRANSFER SWITCH FOR  
GENERATOR EMERGENCY POWER SOURCE IN  
COMBINATION WITH A GPx SERIES ELECTRIC  
FIRE PUMP CONTROLLER  
MICRO-PROCESSOR BASED

## STANDARD FEATURES:

- One flange mounted molded case isolating switch for the alternate (emergency) power supply complete with manual operator door interlocked in the ON position and padlock provision in the OFF position
- One automatic power transfer switch rated to match the electrical rating of the normal power circuit of the associated fire pump controller
- Audible alarm when isolating switch in OFF position
- Transfer switch bypass time delay, alarm reset and silence pushbutton
- Transfer switch test pushbutton



## DRY ALARM CONTACTS FOR:

- Generator start DPDT, 8 A. 250 V.AC or 5 A. 24 V.DC
- Isolating switch in OFF position DPDT, 8 A. 250 V.AC
- Automatic transfer switch in normal power position, 1 N/O
- Automatic transfer switch in alternate (emergency) power position, 1 N/O

## ANNUNCIATOR AND LCD DISPLAY

Provides for:

- Phase reversal indication
- Individual phase-to-phase voltage indication for each source of power
- Transfer switch status indication
- Normal power available indication
- Alternate power available indication
- Normal position indication
- Alternate position indication
- Transfer in progress indication
- Re-transfer in progress indication
- Generator start signal indication
- Cooling time indication
- Alarm reset / Silence pushbutton



## BOTTOM GLAND PLATE

For ease of alternate power leads entrance

## OPTIONAL FEATURES

- Options Type F: Transfer switch modifications (See section GPO for details)

208V.-240V.	380V.-416V.	440V.-480V.	600V.
HP	HP	HP	HP
5 to 30	5 to 50	5 to 60	5 to 75
40-60	60-100	75-150	100-150
75-150	125-350*	200-400	200-500

\* For GPA, GPR, GPS and GPV if FLA is equal to or less than 500 A.  
\* For GPP, GPW and GPY if FLA is equal to or less than 522 A.

GPA - GPP - GPY - GPV** + GPG or GPU			GPR - GPS - GPW + GPG or GPU			APPROX. WEIGHT
WIDTH	HEIGHT	DEPTH	WIDTH	HEIGHT	DEPTH	
in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	Lbs. (Kg)
40 (1016)	36 (914)*	12 (305)	46 (1169)	36 (914)*	12 (305)	600 (270)
44 (1118)	54 (1371)	14 (355)	50 (1270)	54 (1371)	14 (355)	810 (367)
54 (1372)	68 (1727)	18 (457)	60 (1524)	68 (1727)	18 (457)	1235 (560)

\* Height does not include mounting feet.  
\*\* Consult factory for dimensions.

HOW TO ORDER: GPG - V / HP / Ph / Hz + options  
Ex.: GPG - 208 / 20 / 3 / 60 + options

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