# UNIVERSAL CONTROL CABLE - Purchased Separately

Length	2 metre	(6 ft.)	Part Number	1001300
Length	5 metre	(15 ft.)	Part Number	1001301
Lenath	10 metre	(30 ft )	Part Number	1001302

# FUNCTIONS - External control of the pump, via the universal control cable

4 (four) different pump functions are available via the 5 (five) wires of the control cable

#### PAUSE - Brown-Black

- Open contact pump between these wires, pump will be in "PAUSE" mode.
- "PAUSE" shown on pump display, pump stopped.
- Closed contact between these wires, pump enabled, pump will run based on operating mode.
- When the cable is connected to the pump and the pause function is not used, it is necessary to close Brown Black wires together, otherwise pump will always be in "PAUSE" mode.

#### **CONTACT** - White-Black-Brown

■ Pulses between these wires will pace the pump when the pump is in contact mode.

#### ANALOG - Blue-Black-Brown

For 4-20 mA input Blue + input, Black - input, Pump Impedance 120 ohms.

## AUXILIARY - Grey-Black-Brown

- Open contact between these wires, pump operates as normal.
- Closed contact between these wires, pump defaults to the preset auxiliary stroking frequency.

# STATUS LEDs

#### **GREEN LED ON**

Normal operation LED blinks off with each pump stroke.

#### YELLOW LED ON

- In calibration mode stroke volume adjusted +/- > 10% of calibrated setting.
- "CALIB" flashing at side of display.

#### YELLOW LED ON

Display flashing, low chemical tank level warning.

## **RED LED ON**

"MINIM" Flashing, low chemical tank level.

#### **RED LED ON**

"ANALG" Flashing, No mA input or mA input less than 3.7 mA. (4-20 mA operation)

#### **RED LED ON**

"FLOW" Flashing, low flow for more than preset numbers of strokes.

#### **ProMinent Fluid Controls, Inc. (USA)**

136 Industry Drive,

Pittsburgh, PA 15275-1014

Tel: (412) 787-2484

Fax: (412) 787-0704 eMail: sales@prominent.us

Internet: www.prominent.us

## ProMinent Fluid Controls Ltd. (Canada)

490 Southgate Drive,

Guelph, ON N1G 4P5

Toll-Free: 1-888-709-9933

Tel: (519) 836-5692

Fax: (519) 836-5226

eMail: sales@prominent.ca Internet: www.prominent.ca

# All rights reserved. QSGuide.indd rev0 6/28/2006 NA (pn:7750239)

# QUICK START PROGRAMMING GUIDE for Sigma and gamma/L pumps

Experts in Chem-Feed and Water Treatment



## Push Button Functions



**P** = Hold for 2 (two) seconds to enter into programming or

**P** = Press once to confirm a setting or value



i = Steps through operating information each time when pressed



ARROW UP = Increases numeric value / Up



**ARROW DOWN** = Decreases numeric value / Down



**START/STOP** = Start/Stop pump operation

# **Additional Quick Start Instructions Inside**

ProMinent recommends operators familiarize themselves with the pump's operating manual, as the Quick Start Guide is a supplement to this important documentation about your control version pump.

## MANUAL MODE

## Pump is shipped in Manual mode, set at maximum stroke frequency.

Use **()** or **()** to change pump's stroke frequency.

Use 1 to step through pump operating information each time when pressed (i.e. stroke frequency, stroke length % / totalized strokes / etc.).

Use oto start and stop pump.

# **ANALOG MODE** (Optional for pump)

#### For 4-20 mA control

Press and hold (a) until display flashes. Release.

Use ① or ① until you see "MODE". Press ②

Use **()** or **()** until you see "ANALOG". Press **()**.

The pump is now in analog mode.

If the red L.E.D. comes on and "ANALG" flashes on the display, the pump is either not getting an analog signal or the signal is below 3.7 mA. (4-20 mA operation)

## To set for 4-20 mA operation

Press and hold (1) until display flashes. Release.

Use o or until you see "SET". Press .

Use ① or ① until you see "ANALG". Press ②.

Use ① or ② until you see "4-20 mA". Press ②

Pump will respond proportionally, 4 mA = 0 SPM 20 mA = Maximum frequency

## **CONTACT MODE**

External pulse inputs via the universal control cable from (i.e. water meter, Dulcometer controller).

#### **BASIC CONTACT MODE**

Press and hold p until the display flashes. Release.

Use ① or ① until you see "MODE". Press ②.

Use of or until you see "CONTACT". Press .

The pump is now in contact mode.

## TO SET MULTIPLIER/DIVIDER VALUE (when pump has this option)

Factor can be set in the range of 00.01 to 99.99

Put pump into "CONTACT" mode, as per above.

Press and hold 
until display flashes. Release.

Use o or until you see "SET". Press .

Use ① or ① until you see "CNTCT". Press ②.

Use of or until you see "OFF". Press .

First of 4 (four) digits is flashing XX.XX

Use  $\bigcirc$  or  $\bigcirc$  to set numeric value of the flashing digit. Press  $\bigcirc$  to move to next digit. Repeat until factor is set (i.e. For multiply by 2.5 = 02.50 For divide by 2 = 00.50)

Press (a) to return to pump operation.

# FOR QUICK PRIMING

## For quick priming while on external control

- Press until "FREQ" is shown at the right hand side of display.
- Then by pressing and simultaneously, pump will run at "MAX" frequency.

## **CALIBRATION**

To calibrate the pump, have pump ready to draw from a calibration column or graduated cylinder.

Stop pump .

Press and hold (1) until display flashes. Release.

Use of or until you see "SET". Press .

Use ① or ① until you see "CALIB". Press ②.

Use ① or ① until you see "ON". Press ② "Start" should be flashing on display.

Note the level in the calibration column/graduated cylinder.

Press **(D)** to start the calibration.

Run calibration as long as the calibration column allows. Press 
 to stop calibration.

Determine the volume pumped (i.e. 38 ml=0.0380 litres)\*.

Use ① or ① to change the numeric value of the flashing digit.

Press to move to the next digit.

When volume setting is complete. Press D.

Use no or to set unit to litres\*.

Press **(D)**. Calibration is complete.

By using (1), you can step through operating information,

view pump rate in litres/hr and totalized capacity.

\* If calibration was done in gallons, use the pumped gallon volume and set unit for gallons.

# **FLOW MONITORING**

A flow monitor must be connected to the pump for this function. Monitor purchased separately.

Press and hold 
until display flashes. Release.

Use ① or ① until you see "SET". Press ②.

Use ① or ② until you see "FLOW". Press ②.

Use o or until you see "ON". Press .

You can now set the number of pump strokes with low volume before a fault occurs.

Use ① or ② to set numeric value of the flashing digit, press ② to move to next digit.

Repeat until the desired number is set. (up to 125)

# **AUXILIARY FREQUENCY**

A universal control cable must be connected to the pump. When the gray wire is connected to the black, the pump strokes at the pre-set auxiliary frequency.

To set Auxiliary Frequency

Press and hold (a) until display flashes. Release.

Use o or until you see "SET". Press

Use ① or ① until you see "AUX". Press ②.

A value can be set from 0 to maximum stroking frequency.

Use ① or ① to set numeric value of the flashing digit, press ② to move to next digit.

Repeat until the desired number is set.

Press (2) to return to pump operation.

#### Note:

- For Analog and Contact Mode Operation, an universal control cable must be connected to the pump.
- For flow monitoring, a ProMinent flow monitor must be connected.
- For low level indication, a ProMinent 2-stage level switch must be connected.
- Large knob on the pump face is for stroke volume adjustment.
  - Can be adjusted from 0% to 100%
  - · Recommended 30% to 100% for standard liquid ends.
  - · Recommended 50% to 100% with auto-degassing liquid ends for gamma/L