PRISM™ Pulsation Module

## 4.2 Programmed Settings for Rate, Ratio and Time-Delay

Rate, ratio and time-delay values can be set with a PC or Network Controller with interface programming software and the programming kit. The software allows the module to be set for either programming or switch settings. Settings will be retained until reprogrammed, and the DIP switch settings will have no effect unless the module is reprogrammed to accept switch settings.

Each module in a network configuration requires a unique address. Refer to the PRISM™ Network Wiring instructions (literature 9E-840).

5. Troubleshooting

Table 4 indicates general troubleshooting problems and their solutions. The problems indicated in Tables 5 and 6 require a definite technical knowledge to deal with them. Action on items in these tables should be carried out by an authorized Bou-Matic dealer or technician.

Table 5 lists the Diagnostic LED flash codes, cause and corrective action. Table 6 provides helpful suggestions for troubleshooting communication errors. Section 5.1 explains how the LEDs function.
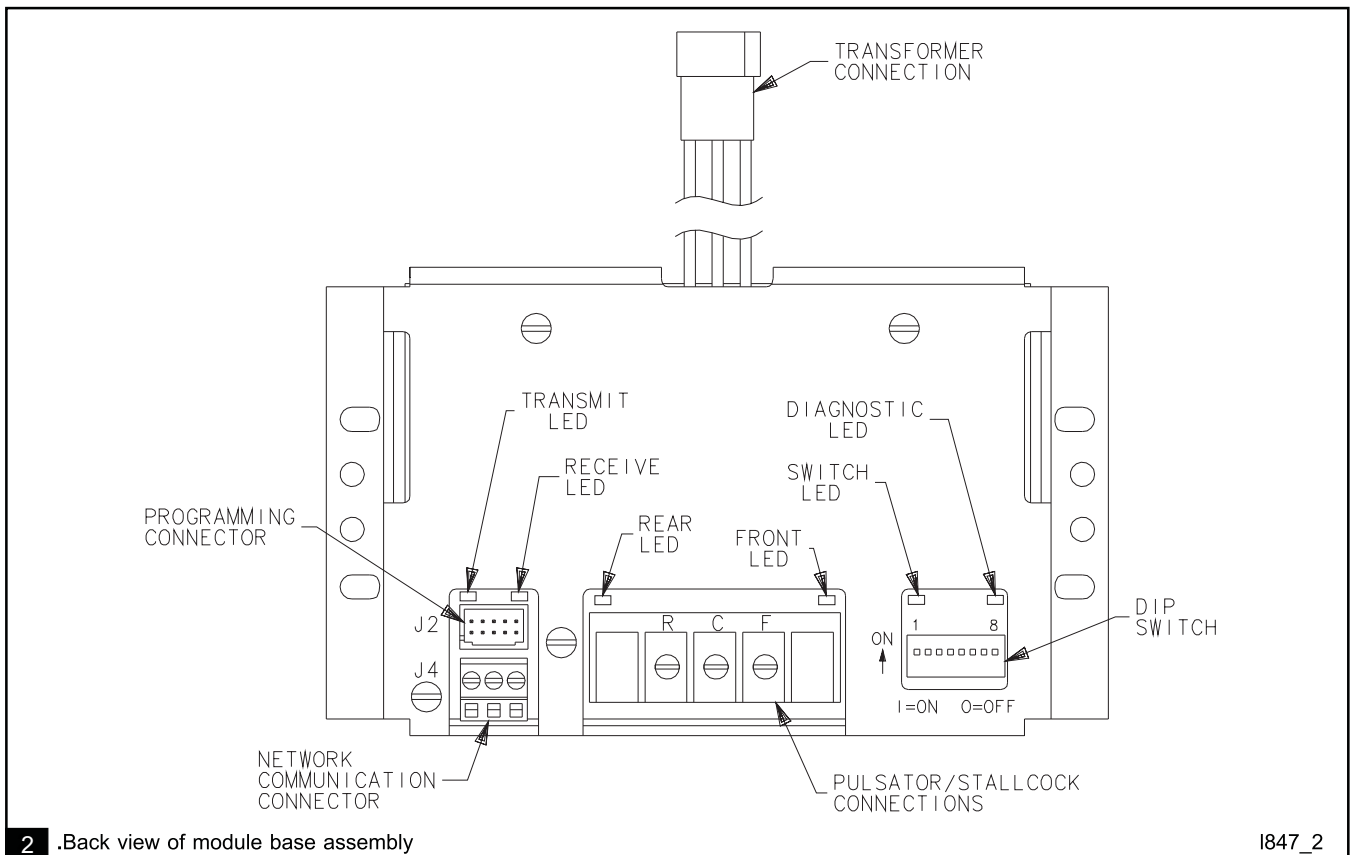
2 .Back view of module base assembly   I847_2

5.1 LED Indicators

Refer to Figure 2.

- On power up, the Front and Rear LED's will flash at the pulsation rate and ratio.
- The transmit and receive LED's will flash during communication.
- The Switch LED when lit indicates that the switch settings are being utilized. The Switch LED when not lit indicates that programmed settings are being utilized.
- The Diagnostic LED will flash if an abnormal event has occurred.
- The PRISM™ Pulsation Module has built-in short circuit protection, protecting both the front and rear outputs during a short circuit condition. The diagnostic LED will flash to indicate if a short circuit condition has occurred. Once the short is removed, the module will automatically resume normal pulsation action and the diagnostic LED will continue to flash until the unit has been powered down.
- The PRISM™ Pulsation Module is designed to drive a maximum of 12 Bou-Matic pulsators. If this limit is exceeded, the module will go into short-circuit protection mode, and the pulsators will stop functioning.

Table 4. General Troubleshooting

Symptom	Possible Cause	Corrective Action
No lights are flashing	1. Switch is off	1. Turn switch on
	2. Circuit breaker is tripped	2. Remove Overload, push circuit breaker button
	3. No power from the system	3. Provide power
Switches don't affect settings, switch LED is off	Module has been programmed with a PC	Module must be re-programmed with a PC
Diagnostic LED is flashing	See Table 5	See Table 5
Communications problems on a network	See Table 6	See Table 6

Table 5. Pulsation Diagnostic LED Troubleshooting

Diagnostic LED Flash Code	Cause	Corrective Action
1 long pulse followed by 1 short pulse	24 volt supply under voltage	Resolve low line condition.
1 long pulse followed by 2 short pulses	24 volt supply over voltage	Resolve high line condition.
1 long pulse followed by 3 short pulses	Front pulsator short circuit condition	Remove the short across the Front pulsators.
1 long pulse followed by 4 short pulses	Rear pulsator short circuit condition	Remove the short across the Rear pulsators.
2 long pulses followed by 1 short pulse	Communication Error 1	Call Bou-Matic Technical Service.
2 long pulses followed by 2 short pulses	Communication Error 2	Call Bou-Matic Technical Service.
2 long pulses followed by 3 short pulses	Communication Error 3	Call Bou-Matic Technical Service.
2 long pulses followed by 4 short pulses	Communication Error 4	Call Bou-Matic Technical Service.
3 long pulses followed by 1 short pulse	Check sum error in the EEPROM	Try re-powering the module. If this doesn't work, the parameter settings will need to be re-programmed by the Dealer.
3 long pulses followed by 2 short pulses	Check sum error in the Flash Program memory	Try re-powering the module. If this doesn't work, the main code section will need to be re-programmed by the Dealer.
3 long pulses followed by 3 short pulses	Check sum error in the Boot Loading memory	Try re-powering the module. If this doesn't work, the module will need to be returned to Bou-Matic.
3 long pulses followed by 4 short pulses	Error 5	Call Bou-Matic Technical Service.

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Table 6. Pulsation Communication Troubleshooting

Symptom	Cause	Corrective Action
No Communication.	1. Wiring not connected correctly.	a) Bare wire must be connected to J4 pin 1 labeled S. b) White wire with blue stripe must be connected to J4 pin 2 labeled A. c) Blue wire with white stripe must be connected to J4 pin 3 labeled B.
	2. Termination resistor not installed on last control.	Install termination resistor to the last control on the Bou-Matic Network. Connect resistor across J4 pin 2 and J4 pin 3.
	3. Network Access Port does not have a termination resistor installed.	Install termination resistor to the Network Access Port. Connect resistor across the white and blue wires.
Transmit LED is on continuously.	Module is defective.	Replace PRGM module.
Receive LED is on continuously.	A control on the Bou-Matic Network is defective.	Replace defective control.
Both the transmit and receive LED are on continuously.	Module is defective.	Replace PRGM module.
Voltage measured across J4 pin 2 and J4 pin 3 is zero during communication attempt.	1. A control on the Bou-Matic Network is defective. 2. A short exists.	Replace defective control. Remove short.
Voltage measured across J4 pin 2 and J4 pin 3 is continuously greater than or equal to 2.5 Volts.	A control on the Bou-Matic Network is defective.	Replace defective control.