

# AUTOMATION PRODUCTS



Minilec offers variety of controllers for plant/process automation with dedicated software and with communication features, these are easily adoptable to varying customer needs.

**MODELS**

**F5 BPC1, F3 BPC1**

**PPLC (Customised Controllers)**



**FEATURES**

- Digital inputs
- Digital outputs
- RS232 / RS485 Serial communication link
- MODBUS / RTU protocol
- PC side software

**FUNCTIONS**

- Continuous monitoring of input parameters
- Control of process through outputs & software
- Data acquisition & communication
- Data Storage & records through PC

**NOTE :** For PPLC please contact Minilec Office

**Ordering Instructions**

- Product Family Name
- Model Name
- Aux. Supply/Control supply voltage
- Input & output details
- Process / application

**F5 BPC1**

Booster Pump Controller



**F3 BPC1**

Booster Pump Controller



Sequencing of Booster Pumps according to the pressure switch, duty cycle is a necessity in a Booster Pump Control System. Minilec Booster Pump Controller fulfils all the requirements of a Booster Pump Control Panel. Suitable for 2 / 3 Pumps or 4 / 5 Pumps. F3 BPC1 is suitable for 2 / 3 pumps and F5 BPC1 is suitable for 4 / 5 pumps, operates on 90-270 V AC/DC supply and has RS 485 output port.

**Input :**

2, 3, 4, 5 Pressure Switches, Over load relay contacts, Water Level Electrodes & Auto / Manual switches

**Outputs :**

2 Relay outputs for 2 Pump System OR 3 relay outputs for 3 pump System and respectively for 4 & 5 pump systems. Common Alarm Relay output for Buzzer.

**Open Collector output :**

For LED indications for RUN / Trip on the panel door For LED indications for LL, HL, O / L on the panel door

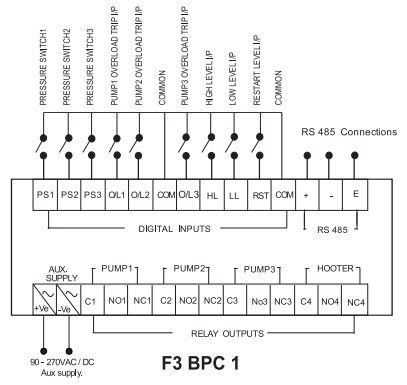
**Operating Sequence:**

The key of the Booster Pumps is the Pressure Switches, which are preset according to the different pressure levels in the Pressure Tank. The water pressure in the Pressure Tank is to be maintained so that the consumers get constant pressure irrespective of the variations in the demand. As the user demand increases the respective Pressure switches activate & Booster Pumps are switched ON sequentially.

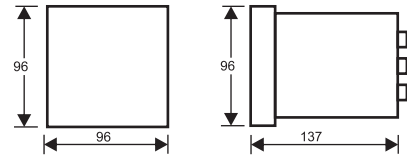
\* Pumps are switched off Sequentially as per decrease in demand. Role of Stand-by pump is rotated in each next cycle to ensure equal running of all pumps.

**Technical Specifications :**

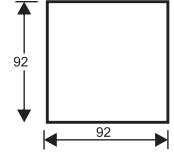
Parameter	F3 BPC1	F5 BPC1
• <b>Auxiliary Supply Voltage</b>	90-270 V AC / DC	90-270 V AC / DC
• <b>Inputs (Potential free)</b>	Pressure Switch Contacts Trip Contacts Water Level Inputs (4 Electrodes) Auto / Manual Selection Alarm Mute	5 5 HLL, LL & RST By Front Keys
• <b>Relay Outputs</b>	Pump Alarm	5 1
• <b>Serial Port output (Optional)</b>	RS 485	(Optional)
• <b>Indications</b>	Power On, Pump 1 On, Pump 2 On, Pump 3 On,	Power On, Pump 1 On, Pump 2 On, Pump 3 On, Pump 4 On, Pump 5 On,
• <b>Dimensions (mm)</b>	Overall (L x W x D) Mounting (L x W)	216 x 166 x 82 203 x 153 mm
• <b>Weight (gms)</b>	550	850



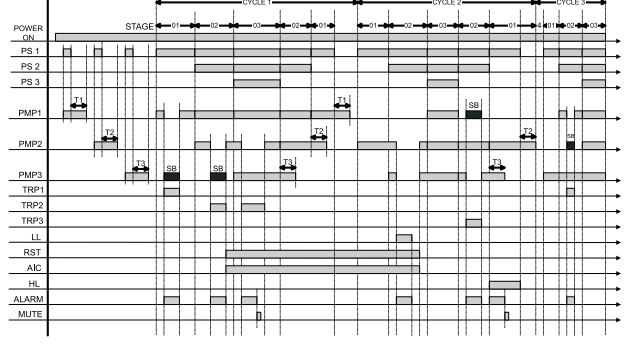
**F3 BPC1 - OVERALL DIMENSIONS (mm)**



**F3 BPC1 - CUT OUT DIMENSIONS (mm)**



**BOOSTER PUMP CONTROLLER (3 PUMP) TIMING DIAGRAM**



**ABBREVIATIONS USED**

PS1 : PRESSURE SWITCH1	TRP1 : PUMP1 TRIP	LL : LOW LEVEL	PMP1 : PUMP 1	T1 : OFF DELAY FOR PUMP1 (1-15 SEC)
PS2 : PRESSURE SWITCH2	TRP2 : PUMP2 TRIP	RST : RESTART LEVEL	PMP2 : PUMP 2	T2 : OFF DELAY FOR PUMP2 (1-15 SEC)
PS3 : PRESSURE SWITCH3	TRP3 : PUMP3 TRIP	HL : HIGH LEVEL	PMP3 : PUMP 3	T3 : OFF DELAY FOR PUMP3 (1-15 SEC)
				SB : STANDBY PUMP

