



Enclosure Dimensions	Finish	Color	Lockable	NEMA Rating	Part Number
6x6x4"	Powder Coated	Grey	No	NEMA3R	EN664G3
6x6x4"	Stainless Steel	Stainless Steel	No	NEMA3R	EN664S3B
8x8x4"	Powder Coated	Grey	No	NEMA3R	EN884G3
8x8x4"	Stainless Steel	Stainless Steel	No	NEMA3R	EN884S3B
12x12x6"	Powder Coated	Grey	Yes	NEMA3R	EN12126G3
12x12x6"	Stainless Steel	Stainless Steel	Yes	NEMA3R	EN12126S3
12x18x8"	Powder Coated	Grey	Yes	NEMA3R	EN12188G3
12x18x8"	Stainless Steel	Stainless Steel	Yes	NEMA3R	EN12188S3



PRESSURE SENSOR

Monitors system pressure.
24 volt incoming power makes it
suitable for outdoor use.

- **NORMALLY CLOSED**
- **FIXED SET POINT**
- **1/4" NPT MALE**
- **NEMA: 4, 13**
- **DIFF. RANGE: 8-16%**
- **FACTORY SETTING: 20 psi**



Protective boot for Pressure
Switch



105° HIGH TEMPERATURE SENSOR

Monitors the temperature
created in a pump during
dead head and shuts it
down - protecting the
pump and the pipework
from damage.

- **SET POINT: 105 degrees**
- **DIFF. RANGE: 5-9 degrees**
- **THREAD SIZE: 1/2" NPTF**
- **NORMALLY OPEN**



RELAYS

Munro's 40 AMP Relays are designed
with specific parameters in mind:

- **FULLY ENCLOSED CONTACTS**
- **HIGH HOLDING POWER ON OVERSIZED CONTACTS**
- **LOW CURRENT REQUIREMENTS ON THE COIL FOR LOWER REQUIRED HOLDING POWER**
- **AVAILABLE IN 24 VOLT, 110 VOLT OR 220 VOLT**
- **AVAILABLE IN A 2-POLE, 3-POLE OR 4-POLE**
- **OPTION OF A SCREW BASE OR DIN RAIL MOUNTING**

BY MUNRO MANUFACTURING
The Intelligent Way to Protect Your Pump®




PUMP START RELAY AND PROTECTION SYSTEM



TOTAL PACKAGE FOR ALL MOTOR CONTROL NEEDS



Colors Available:

-  Powder-Coated Blue
-  Powder-Coated Grey
-  Stainless Steel



Pressure is produced in the volute case and discharge of a pump when it is working. If this pressure does not exist, there is a problem within the pumping system.

The *SmartBOX*™ monitors this pressure through the use of a pressure sensor located on the discharge side of a pump. At the beginning, or anytime during a zone cycle, if water is not available the pressure will drop within the pump and the pressure sensor will signal a time delay to begin counting. If pressure has not recovered over the timer cycle, the pump shuts down to save itself before damage occurs.

The resetting of the pressure sensor is automatic. The next cycle after an electrical signal shut down will have the same opportunity to build pressure. Since the sensor measures lack of pressure, as long as the pump is able to rebuild and maintain pressure, the pump will be allowed to run normally.

SMARTBOX™ FEATURES

- Completely automatic and hands-free pump protection
- Bridges the gap between 24 volt lawn controllers and 110V/220V pump motors
- One model works for all single phase pumps from 3/4 HP TO 7-1/2 HP*
- Color coded wiring for easy installation
- Automatically resets pressure or temperature sensor at each cycle

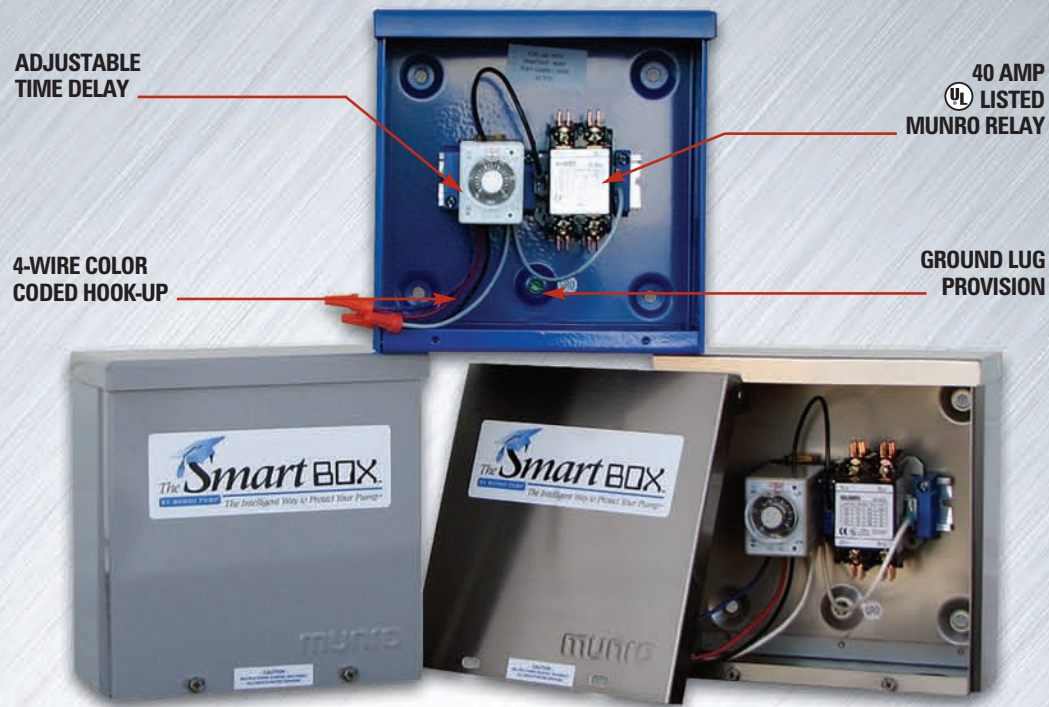
SMARTBOX™ PROTECTION

- Serves as a Pump Start Relay while offering low pressure shut-down protection. **Activates shut-down sequence at 20 psi discharge pressure**
- Optional high temperature protection protects pipe workings and pump in “dead-head” situations. **Activates shut-down process at 105°**
- Available with thermal overload protection for motors over 2 HP*
- Switches lawn controller to a domestic water alternative if pump’s primary source water is not available**

* NATIONAL ELECTRICAL CODE (NEC) STATES ALL MOTORS WILL BE THERMALLY PROTECTED FROM EXCESSIVE “AMPERAGE DRAW.” MOST MOTORS UNDER 2 HP ARE SUPPLIED WITH THERMAL PROTECTION FROM THE MOTOR MANUFACTURER. FOR MOTORS OVER 2 HP CODE-COMPLIANT SMARTBOX™ IS RECOMMENDED.

CIRCUIT BREAKERS ARE NEVER CLASSIFIED AS MOTOR PROTECTION

** NOTE ~ CHECK WITH YOUR LOCAL HEALTH DEPARTMENT FOR REGULATIONS AND REQUIREMENTS FOR BACKFLOW PREVENTION.



ALL MUNRO RELAYS & PUMP PROTECTION SYSTEMS ARE UL LISTED as ENCLOSED INDUSTRIAL CONTROL PANELS
LOOK FOR THE LISTING MARK!

ALL MODELS ARE HOUSED IN NEMA 3R WEATHERTIGHT ENCLOSURES WITH “BAKED-ON” POWDER COATING OR STAINLESS STEEL FOR LONG LIFE IN DIFFICULT ENVIRONMENTS

Basic Smartbox

Type of Enclosure	Coil Voltage	HP	Heater Code Number	Part Number
MPLC	24	3/4 THRU 7-1/2*	--	MPLC24
WITH ADDITIONAL SENSOR FOR HIGH TEMPERATURE “DEAD HEAD” PROTECTION				
MPLC	24	3/4 THRU 7-1/2*	--	MPLC24T

Basic Smartbox with Code-Compliant Thermal Protection

Type of Enclosure	Coil Voltage	HP	Heater Code Number	Part Number
WITH CODE-COMPLIANT THERMAL PROTECTION				
<small>ALL SmartBOX™ CODE-COMPLIANT MODELS USE ONE OF THE E “Standard Trip” HEATER ELEMENTS FOR AMBIENT TEMPERATURE COMPENSATION BIMETAL RELAYS LISTED</small>				
MPLC	24	3	E60	MPLC243
MPLC	110	3	E61	MPLC1103
MPLC	220	3	E62	MPLC2203
MPLC	24	5	E65	MPLC245
MPLC	220	5	E66	MPLC2205
MPLC	24	7-1/2	E67	MPLC2475
MPLC	220	7-1/2	E69	MPLC22075
MPLC	24	10	E70	MPLC2410
MPLC	220	10	E72	MPLC22010

When ordering an enclosure, BLUE is the default color. For a GREY enclosure, add a “G” at end of part number, e.g. “MPLC24G”. For a STAINLESS STEEL enclosure, add an “S” at end of part number, e.g. “MPLC24S”.