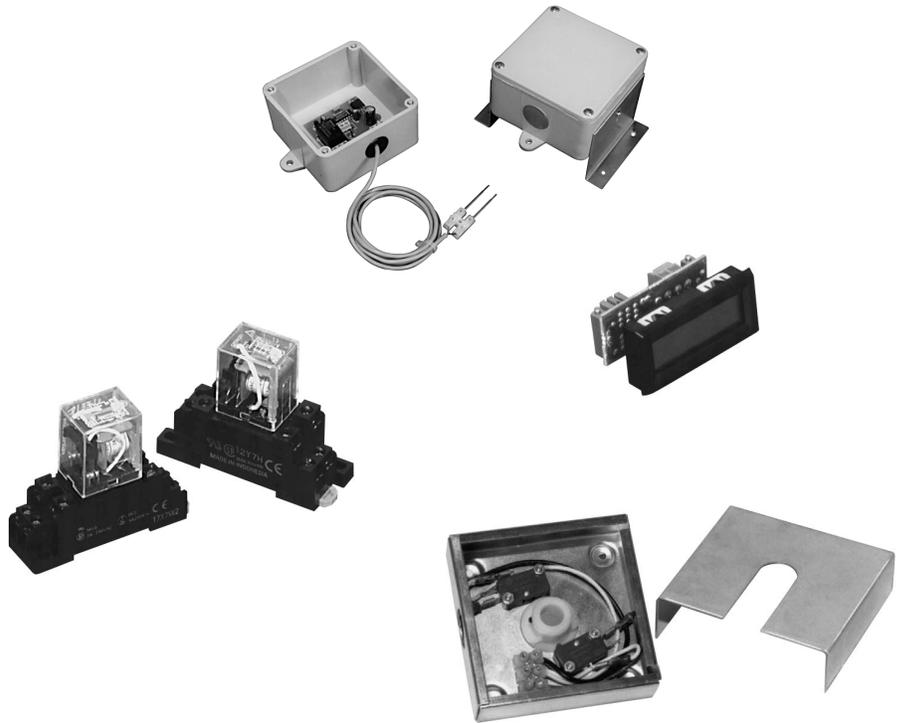


# GREYSTONE

ACCURACY BY DESIGN

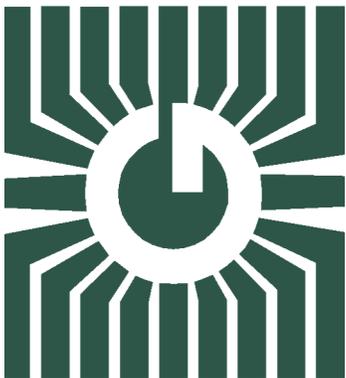
## MISCELLANEOUS CONTROL DEVICES



### PRODUCTS:

- Light sensor/transducer – PSR series
- Water Detector – WD100 series
- Loop powered indicators – LPI series
- Damper end switch – DES-100 series
- General purpose relays – LY, MY & MK series

*Peace of mind  
through reliable  
control devices*



GREYSTONE HAS AN ISO 9001 REGISTERED QUALITY SYSTEM

# LIGHT SENSOR – PSR SERIES

## DESCRIPTION:

The PSR-1 is a Light Sensitive Resistor that may be used as an input to indicate the presence of light at the sensor location. The PSR-1-T is a PSR-1 coupled with a B420-P transmitter. The PSR-1-T produces a 4 – 20mA output signal. The sensor is designed to be mounted in the end of a weatherproof conduit box.

## SPECIFICATIONS:

### PSR-1

**Output (non-linear)** >1 MΩ in dark  
<1.5 kΩ in bright light

**Temperature** -25°C to 75°C  
(-13°F to 167°F)

### PSR-1-T

**Power** 12 – 35 VDC  
**Max current draw** 22 mA  
**Output (linear)** 4–20mA (current limited to 22 mA)  
**Temperature** -25°C to 75°C  
(-13°F to 167°F)

## APPLICATION:

The PSR-1 has a resistance in darkness in excess of 1 MΩ and resistance in bright light of less than 1.5 kΩ.

The PSR-1 and PSR-1-T indicate the presence or absence of light. They should not be used for footcandle control of occupied spaces. The PSR-1-T is calibrated for 4mA in bright light > 100 foot-candles and 20mA in darkness < 0.1 foot-candles.

MODEL	PRODUCT DESCRIPTION	
PSR	RESISTIVE LIGHT SENSOR	
	CODE	OPTIONS
	1	Sensor only
	T	4 – 20mA Transmitter
	E	Weatherproof Enclosure

## PSR: PRODUCT ORDERING INFORMATION

<b>EXAMPLE:</b>
Light sensor c/w 4 – 20mA output in weatherproof enclosure
<b>PSR-1-T-E</b>

# WATER DETECTOR – WD100 SERIES

## DESCRIPTION:

The WD100 is a microchip-based device that uses gold-plated sensing probes to detect the presence of water or other conductive liquid. The WD100 is powered by an AC or DC source, 14 – 30 volts. It features normally open and normally closed (form C) relay contacts rated at 5A@120VAC/30DC for connection to a monitoring system, or direct control of another device. The mounting legs will allow a sensing height adjustment from 0" to 1/2". The WD100 is designed to signal an alarm if one or more of three conditions are met: water is detected, power is lost to the unit, or if there is an internal failure. The WD100 provides the highest level of water detection confidence.

The WD-102 operates on the same principle as the WD-100 but comes with a 5 ft. remote probe. For custom lead lengths please contact Greystone.

The WD-100-xx Series c/w the specified length of conductivity cable. See ordering information for available lengths.

## SPECIFICATIONS:

**Power supply:** 14 – 30 VAC/DC  
**Supply current** 60mA @ 24 VDC, (no water)

**Operating temperature:** -40° to 85°C(-40° to 185°F)

**Enclosure dimension (L x W x H)** 127 x 127 x 102 mm  
5-3/8" x 5-3/8" x 4" (max)

**(mounting legs @ max/min height):** 127 x 127 x 102mm  
5-3/8" x 5-3/8" x 3½"(min)

**Alarm output:** Form C relay, rated @ 5 amps @ 120VAC / 30VDC (resistive load)

## APPLICATIONS:

The following chart gives examples of what types of fluids the WD100 can and can not be used to detect.

Fluids than can be detected	Fluids that can't be detected
City water	Pure water
Sea water	Gasoline
Copper sulfate solution	Oil
Weak acid	Brake fluid
Weak base	Alcohol
Household ammonia	Ethylene glycol
Water & glycol mixture	Paraffin
Wet soil	Dry soil
Coffee	Whiskey

## OTHER FEATURES:

Fail-safe circuitry  
Reverse acting contacts  
Reverse voltage protection  
RFI/EMI noise immunity

## ORDERING INFORMATION:

WD-100 – Stand Alone  
WD-102 – Remote Probe (5')  
WD-100-5 – c/w 5' conductivity cable  
WD-100-10 – c/w 10' conductivity cable  
WD-100-25 – c/w 25' conductivity cable  
WD-100-50 – c/w 50' conductivity cable  
WD-100-100 – c/w 100' conductivity cable



## DAMPER END SWITCH – DES-100

### DESCRIPTION:

The damper position switch is a mechanically activated electrical switch which provides accurate and reliable indication of damper blade position. Unlike standard limit switches which only indicate damper drive linkage position, the position switch is mounted directly on the main damper drive axle or on an auxiliary axle off of an indirectly driven blade. This assures true damper blade position indication.

### DESIGN FEATURES:

- Adjustable axle mounted collar provides for easy set-up and adjustment minimizing labour costs.
- Electrical enclosure has a 1/2" knockout which allows for quick and easy installation.
- Dual, opposed switches in the same enclosure provide for indication of fully open or closed.
- Switches can be set by user as NC or NO (form A or B)

### SWITCH RATINGS:

- 4 A at 125 VAC

## LOOP POWERED INDICATOR LPI-1 – 4-20mA

### DESCRIPTION:

LPI-1 loop powered indicators with large 3½ digit LCD are designed to display any 4 to 20 mA signal directly in the engineering units of the measured media. The display is powered directly by the measured 4 to 20 mA signal so there is no need for a power supply.

### APPLICATIONS:

- Temperature indication
- Pressure indication
- Kilowatt demand
- Voltage indication
- Humidity indication
- Differential or static pressure
- Gallons per minute flow
- Current indication
- Other 4 – 20mA indications
- Current indication

### SPECIFICATIONS:

Supply voltage	• Powered by milliamp control loop
Input	• 4-20mA dc
Impedance	• 300 ohms nominal
Accuracy	• ±0.1% of scale
Adjustments	• SPAN (GAIN) and ZERO (OFFSET)
Decimal point	• 3 positions or none (user selectable)
Range	• -1999 to +1999
Operating temp.	• 0° to 50°C (32° to 122°F)
Humidity	• 95% Non-condensing
Connection	• 2 pin screw terminal
Cutout required	• 25.1mm (.988") x 55.5mm (2.19")
Panel clearance	• 40mm (1.6")
Display	• 3½ digit
Digits size	• 11.43mm (0.45") LCD
Dimensions	• 35.5mm (1.4") H x 58.67mm (2.31") W

### FEATURES:

- Snap in panel mounting
- Large easy to read LCD display
- Optional NEMA 4X enclosure
- Pre-Calibrated for desired range (optional)
- Optional selector switch for multiple indicators on one display unit

### NOTE:

Impedance is rated at 24 VDC and 20 mA. Exercise caution to avoid too much impedance in the current loop. Most transmitters are rated 500 to 750 ohms.

# GENERAL PURPOSE RELAYS

SERIES	DESCRIPTION		
LY MY	15 amp contacts 5 amp contacts		
	CODE	CONTACT FORM	
	1	SPDT (not available in MY series)	
	2	DPDT	
	3	3PDT	
	CODE	LED INDICATION	
	N	Neon light	
	CODE	COIL VOLTAGE	
	24 VAC	Low voltage AC	
	24 VDC	Low Voltage DC	
	120 VAC	High voltage AC	

LY	2	N	24 VDC
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Greystone Energy Systems, Inc. reserves the right to make design modifications without prior notice.

## RELAY BASES (required for above)

**EXAMPLE:**  
For a 15 amp relay c/w DPDT contacts, LED and 24 VDC supply.

**NOTE:**  
For other relay types, detailed specifications, or for more options to above relays, please contact Greystone.

- |          |                        |
|----------|------------------------|
| PTF08A-E | • Base for LY1 and LY2 |
| PTF11A   | • Base for LY3         |
| PYF08A-E | • Base for MY2         |
| PYF11A   | • Base for MY3         |

## OTHER PRODUCTS AVAILABLE FROM GREYSTONE:

- |          |                       |       |                          |
|----------|-----------------------|-------|--------------------------|
| Belimo   | • Actuators           | Modus | • Room Pressure Monitor  |
| Spartan  | • Motorized Valves    | Bamo  | • Flow Transducers       |
| Beco     | • Thermostat guards   | Dwyer | • Switch and Transducers |
| Humphrey | • Solenoid Air Valves |       |                          |



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*Greystone Energy Systems Inc. is one of North America's largest ISO 9002 registered manufacturers of HVAC sensors and transducers for Building Automation Management Systems. We have conscientiously established a worldwide reputation as an industry leader by maintaining leading-edge design technology, prompt technical support, and a commitment to on-time deliveries. We take pride in our Quality Management System which is ISO 9002 certified, assuring our customers of consistent product reliability.*

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