

## PYTHON POWER™

### AC/DC Power Supply/ Output Converter



#### ***A cost-effective power and output conversion accessory for DC sensors.***

Python Power™ is an accessory that allows a DC sensor to be installed in locations where only AC power is available or to simply maximize installation efficiency.

Python consists of a universal, in-line AC/DC power supply and TRIAC switch. The integral TRIAC output switch is controlled by the sensor's low-voltage output, automatically detecting a sinking or sourcing output. The TRIAC is then actuated.

The DC output will power most types of sensors, allowing users to take advantage of the advanced features available in DC sensors that are not available in AC sensors. Unlike other products, Python has a sleek design and can be pulled through and stored in a 1-inch straight conduit.

Python is a powerful performer and an ideal converter for retro-fit installations.

Accepting universal AC input voltages from 85VAC to 265VAC,

the encapsulated housing and integral cables are resistant to most acids, bases, and food and beverage.

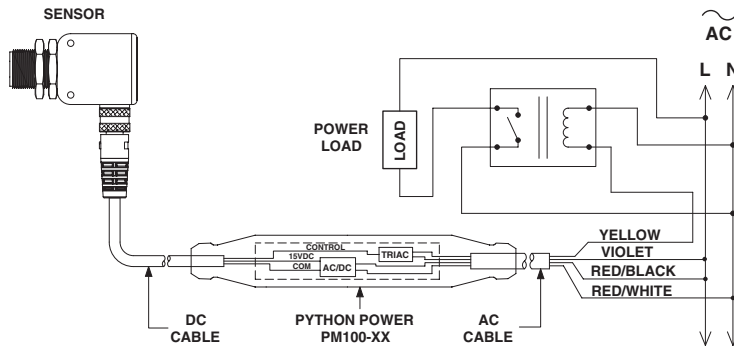
Python is UL listed to UL61010C-1 and CE certified to EN61010C-1. Python's IP67 enclosure rating ensures it will withstand washdown environments.

Python supports many sensing applications where DC power is unavailable. Because of this versatility, it is a solid candidate for almost every application in an AC environment. Python is an ideal converter for retro-fit installations and a cost-effective, time-saving solution for new installations. Python accommodates all Hyde Park DC-powered sensors, as well as most other brands. Python can be used with most any sensing technology, including ultrasonic, photoelectric, and inductive proximity.

- ***Self-contained, AC/DC power converter***
- ***Integral isolated TRIAC output***
- ***Sleek design***
- ***Stored in or pulled through a 1" straight conduit***
- ***IP67 enclosure rating***
- ***CE certified***
- ***NEMA 4X (indoor use only)***

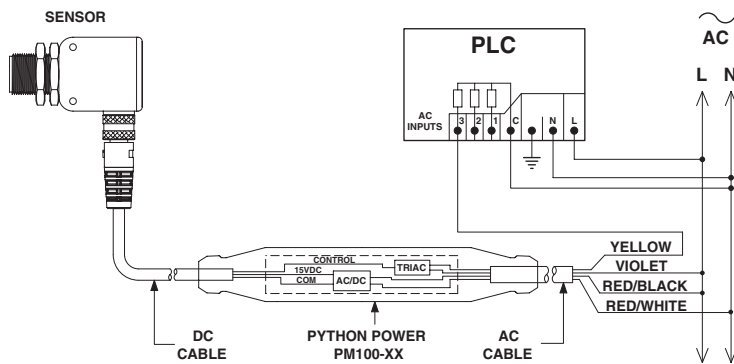
## Operation

Depending on the type of sensor you are using, Python's model number will vary (see Model Reference Guide on page 6-3). The sensor you are using must operate on a 15VDC to 18VDC supply, consume 100mA or less of operating current, and have a sink or source output.



**DRIVING POWER RELAY**

**WARNING:** Applied AC load must limit Python's TRIAC switch to rated current.



**TYPICAL PLC CONNECTION**

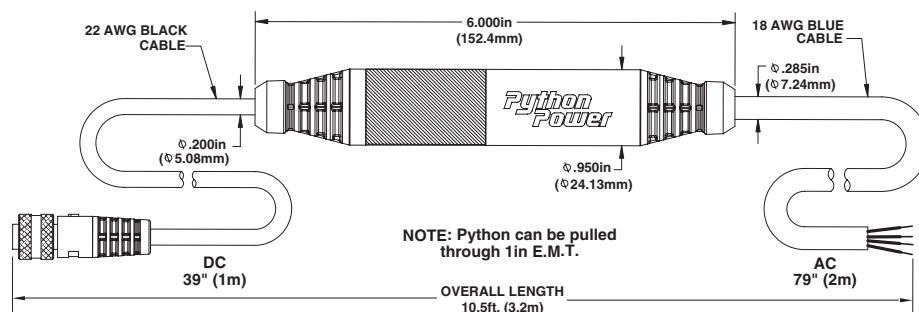
**WARNING:** Applied AC load must limit Python's TRIAC switch to rated current.

### ⚠ CAUTION

#### UNINTENDED OPERATION

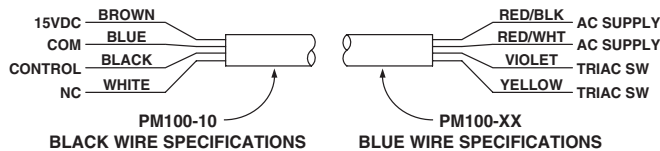
Apply an AC Load that limits Python's TRIAC switch to rated current  
Failure to follow this instruction can result in injury or equipment damage

## Dimensions



## Model Reference Guide - Python Power

Model	Connector	Female Contacts	Pinout, cable connector
PM100-00	M8	3	
PM100-01	M8	4	
PM100-02	M12	4	
PM100-03	M12 Green LED - Power Amber LED - Output (sink)	4	
PM100-04	Mini (7/8-11 thread)	4	
PM100-10	No connector	n/a	
PM-02-B79	M2 2m (79") DC cable		



## General Specifications

### AC Power Requirements

Supply Voltage: 85VAC to 265VAC, 50/60Hz  
 Current Consumption: 35 mA max.  
 Power Consumption: 4 VA max.  
 Installation category: II (IEC 60364-4-443)  
 Input fusing: non-replaceable, non-repairable

### DC Output Ratings (to sensor)

Output voltage:  
 Minimum at rated current: 15VDC  
 Maximum at no load: 20VDC  
 Regulation: 40 V/A  
 Current, max. rated: 100mA  
 Current fault, max.: 200 mA  
 Pri/sec. isolation: 2200VAC, 1 min.  
 Turn-on delay, 100mA load, 90% final voltage: 10ms typical  
 Turn-off delay, 0mA load, 10% full voltage: 1s typical

### TRIAC Switch Ratings (switch AC current only)

Features: optically isolated, zero-crossing  
 Switch voltage, maximum: 230VAC  
 Switch Current, maximum: 50mA@230VAC, 100mA@120VAC  
 Isolated from AC line  
 Peak repetitive surge current: 1 A (100ms, 120pps)  
 On-state voltage: 3v max, @ 100 mA  
 Off-state leakage: 500nA max.  
 Holding current: 250mA typical  
 Critical rate of rise of off-state voltage: 600v/us min.  
 Isolation surge voltage: 7500VAC min., 60Hz, 1 sec.  
 Turn-on time, full load, max voltage: 15ms max. (zero-crossing)  
 Turn-off time, full load, max voltage: 15ms max. (zero-crossing)  
 Over-current protection: internal fuse (non-replaceable, non-repairable)

### Environmental

Operating Temperature Range: -25° to 60°C (-13° to 140°F)  
 Storage Temperature Range: -40° to 85°C (-40° to 185°F)  
 Operating Humidity: 100%, non-condensing  
 Protection Ratings: Type 1 (UL50), IP67

### Agency Approvals

CE Mark: CE conformity is declared to: EN55011:1998 Group 1, Class A  
 EN61010C-1  
 EMC: EN61326:1997 Measur., Lab., and Control  
 FCC Class A (USA)  
 UL61010C-1 "Industrial Control Equipment" File#E238344  
 FDA: Cables and over-mold are FDA compatible non-contact  
 Declaration of Conformity available upon request

### Construction

Dimensions: (length x diameter)  
 152 mm (6.0 in) x 24 mm (0.95 in)  
 AC cable: 4-wire, 18AWG, 300V, PVC:  
 2 m (79.0 in) x 7 mm (0.28 in) dia.  
 DC cable: 4-wire, 22AWG, 300V, PVC  
 1 m (39.0 in) x 5.2 mm (0.21 in) dia.  
 Material: PVC  
 Input fusing: non-replaceable, non-repairable

