

PYTHON POWER™

AC/DC Power Supply/ Output Converter



patent pending

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.

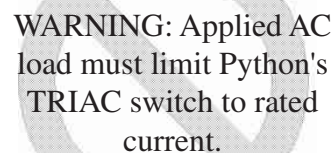
Accepting universal AC input voltages from 85VAC to 265VAC, the encapsulated housing and integral cables are resistant to most acids, bases, and food and beverage.

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*

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.



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

PM100-10
BLACK WIRE SPECIFICATIONS

15VDC **BROWN**
 COM **BLUE**
 CONTROL **BLACK**
 NC **WHITE**

PM100-XX
BLUE WIRE SPECIFICATIONS

RED/BLK AC SUPPLY
RED/WHI AC SUPPLY
VIOLET TRIAC SW
YELLOW TRIAC SW

Technical drawing of the Python cable assembly. The drawing shows a central cable with a diameter of 0.950 in (24.13 mm) and a length of 6.000 in (152.4 mm). The cable is connected to a DC connector on the left and an AC connector on the right. The DC connector has a diameter of 0.200 in (5.08 mm) and a length of 39 in (1 m). The AC connector has a diameter of 0.285 in (7.24 mm) and a length of 79 in (2 m). The overall length of the assembly is 10.5 ft (3.2 m). The drawing also includes a note: "NOTE: Python can be pulled through 1 in E.M.T."

22 AWG BLACK CABLE

6.000in (152.4mm)

18 AWG BLUE CABLE

0.200in (5.08mm)

0.950in (24.13mm)

0.285in (7.24mm)

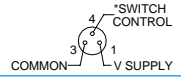
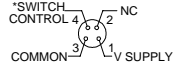
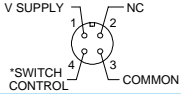
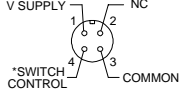
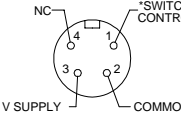
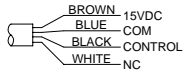
DC 39" (1m)

AC 79" (2m)

OVERALL LENGTH 10.5ft (3.2m)

NOTE: Python can be pulled through 1in E.M.T.

Model Reference Guide - Python Power

Model	Connector	Female Contacts	Pinout, sensor 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	

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 (100μs, 120pps)
On-state voltage: 3v max, @ 100 mA
Off-state leakage: 500nA max.
Holding current: 250μA 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

