

PSC-BL-I-FM-DC0(-BLE) | Bi-level Dimming PIR Sensor

Overview

- Quad Element PIR sensor
- 0-10V configurable output: set to 0% (OFF)*, 10%, 25% or 50% dimming
- Photocell for ambient light detection
- Time delay 1 adjustable 5 sec to 30 min
- Time delay 2 adjustable 10 sec to ∞
- LED Motion indicator
- Active High/Low outputs for Relay drive
- Mounting height up to 40ft.
- 360° coverage pattern
- Bluetooth add-on enables remote sensor programming (up to 40ft) with greater customization of dimming levels, time delays, and ambient light sensitivity



Suitable for indoor and outdoor use



Applications

The PSC-BL-I-FM-DC0 uses digital PIR Motion Detector Architecture and Quad Element passive infrared (PIR) technology for improved detection coverage for ceiling mount, high bay, and low bay applications.

The PSC-BL-I-FM-DC0 is a Class 2 Device designed to satisfy new CA Title 24 requirements for bi-level dimming of lighting fixtures. Using a 0-10V signal, the sensor is capable of dimming lighting loads down to 0%*, 10%, 25%, or 50%.

The sensor is suitable for a variety of indoor and outdoor applications. It supports fixture and ceiling mounts up to 40ft high. Both sensor and power pack are rated for use in temperatures ranging from -30° to 70°C and relative humidity from 90 to 95% at 30°C.

0-10V: 100mA to drive up to 50 LED sink drivers on 0-10V output.
High Vin-2.5V 100mA source
Low 100mA sink current

*For dim to off, Pacific PSC-AC-PP-200 Power Pack or LED dimming driver capable of dimming to off is required.

Sensor Operation

End users can program length of time delays, light level sensitivity, sensor range and other settings using a series of dipswitches and trimpots. Simply remove the lens to gain access.

Bi-level Dimming:** 0-10V bi-level dimmer connects to 0-10V control on the LED driver. When motion is detected the sensor will bring lighting up to 100% lumen output. When no motion is detected for the length of TD1, the sensor will send a signal to dim lighting to a specific level set by the end-user. If no motion is detected for the length of TD2, the sensor will send a signal to shut off the light.

Relay Control: Two additional High and Low control outputs can be used to trigger relays or other control circuitry.

Bluetooth Enabled Version: Add “-BLE” suffix to order the sensor with wireless control. The Bluetooth Low Energy (BLE) enabled sensor pairs with an Android or iOS application to allow initial setup and subsequent sensor adjustments, beyond what the analog controls on the sensor can offer. The application enables users to adjust sensor parameters such as time delay, dim level, sensitivity, ambient light level, and more. Additionally, features such as parameter profiles, password protection, manual dim control, and real-time feedback from the sensor can speed up configuration and provide custom user control.

Accessories

Power Pack: The PSC-BL-I-FM-DC0 operates on 12-24VDC input and requires a separate power pack such as the PacWave™ PSC-AC-PP-200/300/400.

This power pack incorporates a high current relay and a high voltage transformer which can accept universal input (100-305VAC).

Alternatively, the sensor can also operate with a driver that has an auxiliary output (12V).

Fresnel Lens:

LBL: 8-12ft Fresnel Low bay lens
HBL: 13-40ft Fresnel High bay lens

**The sensor will dim the light if motion is not detected for the first time delay (TD1) and shut off the light if motion is not detected for the second time delay (TD2). TD2 will only count down after TD1 has expired and the light has dimmed. If motion is detected during TD2, the light will return to full output, and TD1 will restart.

If using a power pack, the sensor will tell the power pack to shut off the driver after TD2 expires to turn off the light. If using a dimming driver without a power pack, the sensor will try to dim down to 0% upon expiration of TD2.

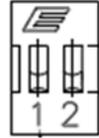
Since one trimpot configures both TD1 and TD2, a fixed TD2 is set to each value of TD1. See page 2 for the corresponding values.

How to Order

Model No.	Description	Input Voltage	Output
PSC-BL-I-FM-DC0 (-BLE)	Bi-Level Passive Infrared (PIR) Occupancy Sensor (add “-BLE” suffix for Bluetooth Enabled version)	12-24VDC	0-10VDC Control High Control Low
PSC-AC-PP-200	Dimming Power Pack for Fixture Mount	100-277VAC	12.5VDC
PSC-AC-PP-300	Dimming Power Pack for Fixture Mount no Relay	100-277VAC	12.5VDC
PSC-AC-PP-400	Power Pack for Fixture Mount no Relay	100-277VAC	12.5VDC
Add Suffix for options:			
/C	with Connector, see page 3, Lead Option B		
-M	with enclosure for Bottom-mount or Side-mount		

Summary	
Sensor Type	PIR occupancy sensor
Input Voltage Current Consumption	12-24VDC 25mA sensor (50mA w/ BLE)
0-10V Output	100mA, up to 50LED sink drivers
High	Vin-2.5V 100mA source
Low	100mA sink current
Max Sensor Range	40 ft / 980 ft ²
Best Performance	12 ft / 113 ft ²
Time Delays (TD1/TD2)	5 sec/10 sec, 5 min/30 min, 15 min/45 min, 30 min/60 min, 10 min/∞ ^{***}
Photocell Sensitivity	30 Lux to daylight
Operating Temperature	-30° C to 70° C
Storage Temperature	-40° C to 80° C
Relative Humidity	90-95% non-condensing at 30° C
Mounting	Fixture or ceiling mount (max 40ft high)
Color	White
Warranty	5 years

Settings Adjustment



Dipswitch 1	Dipswitch 2	DIM Level
OFF	OFF	OFF
OFF	ON	10%
ON	OFF	25%
ON	ON	50%

Trim pots

Trimpot #1 on left adjusts time delay. Trimpot #2 in middle adjusts ambient light sensitivity. Trimpot #3 on right adjusts motion detection range and sensitivity. Turn clockwise to increase, turn counterclockwise to decrease.

Trimpot #1:
Time Delay

Trimpot #2:
Ambient Light Sensitivity

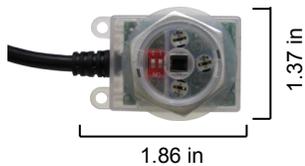
Trimpot #3:
Motion Detection Range



Dipswitches:
Dimming Level

Physical Dimensions

Standard Housing



1.12 in

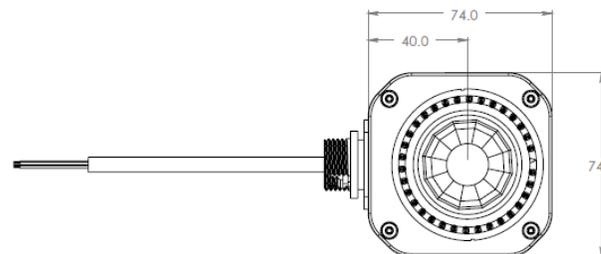
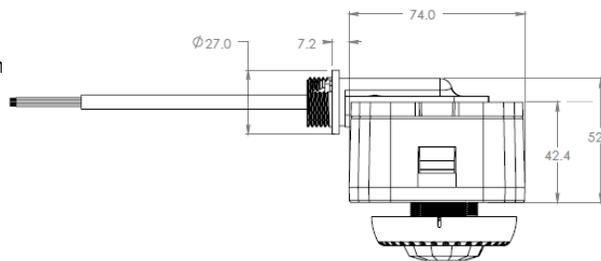
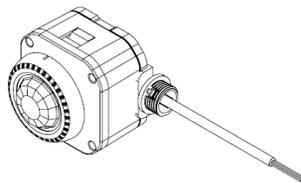


Weight: 2.20 oz
(with cord)

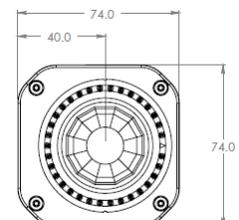
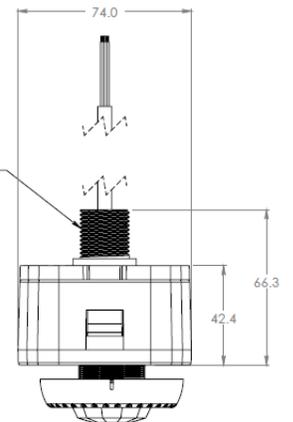
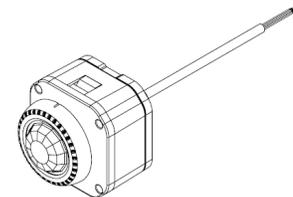
Lens Cover



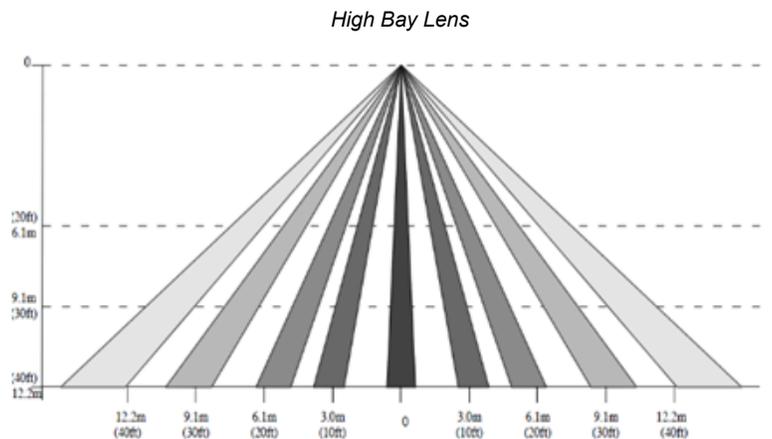
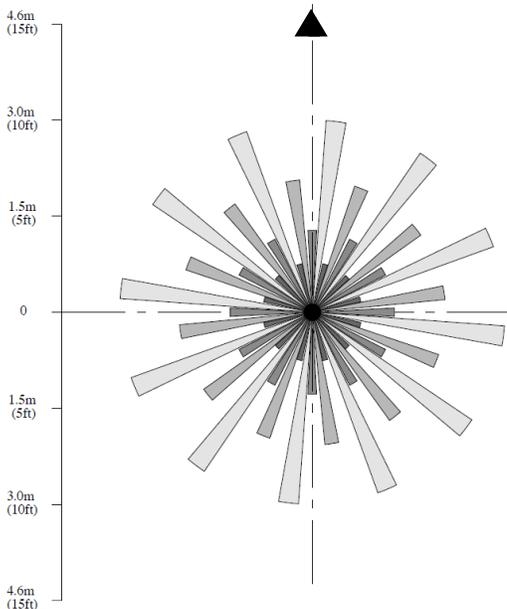
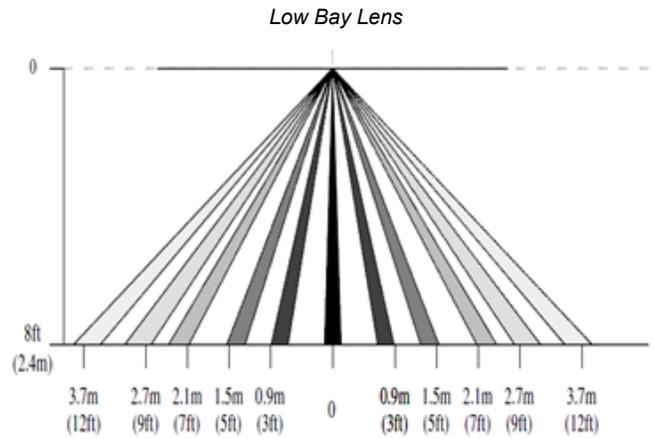
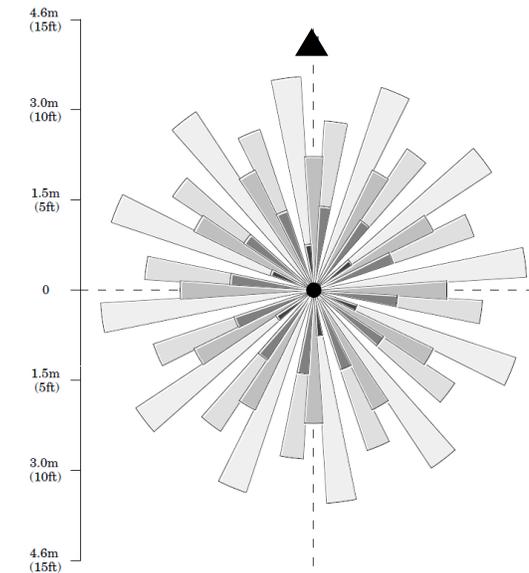
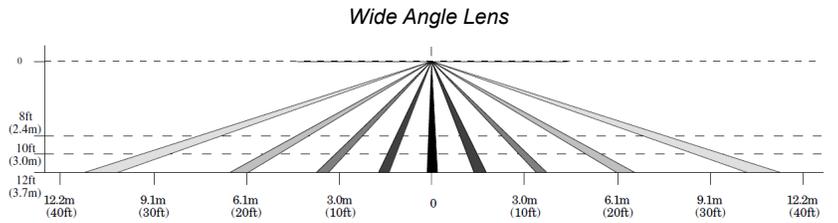
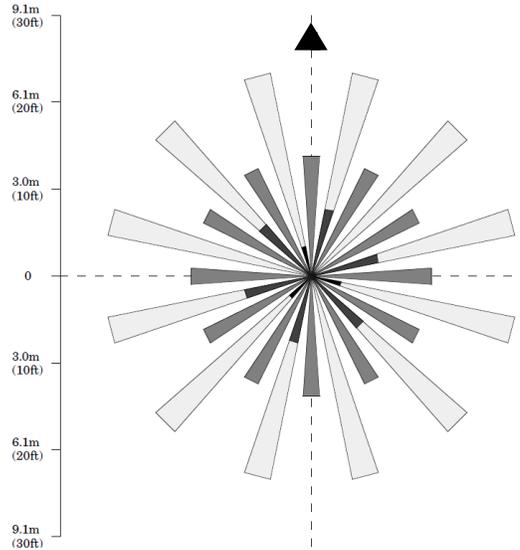
Side Mount Housing



Bottom Mount Housing

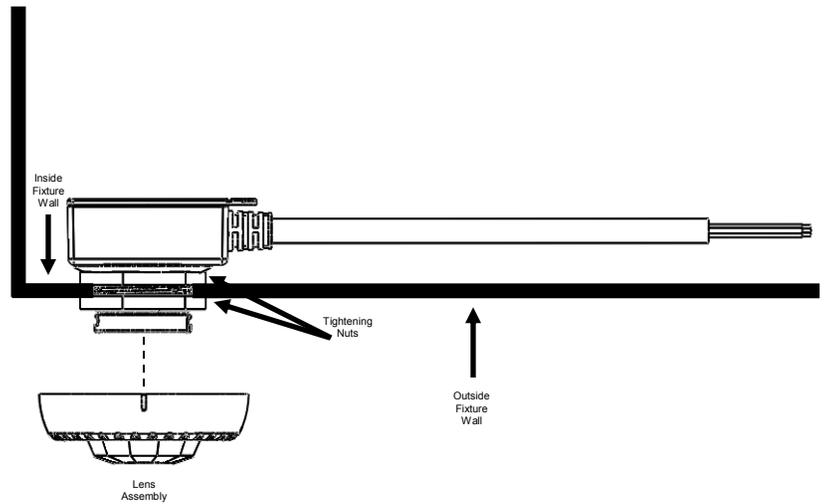
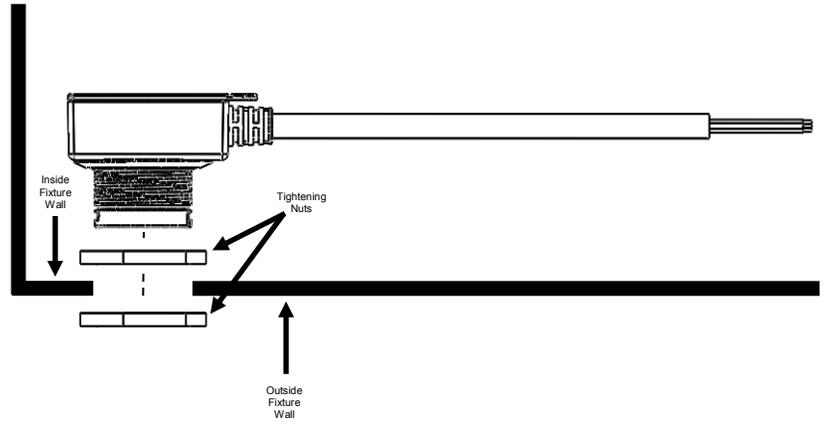
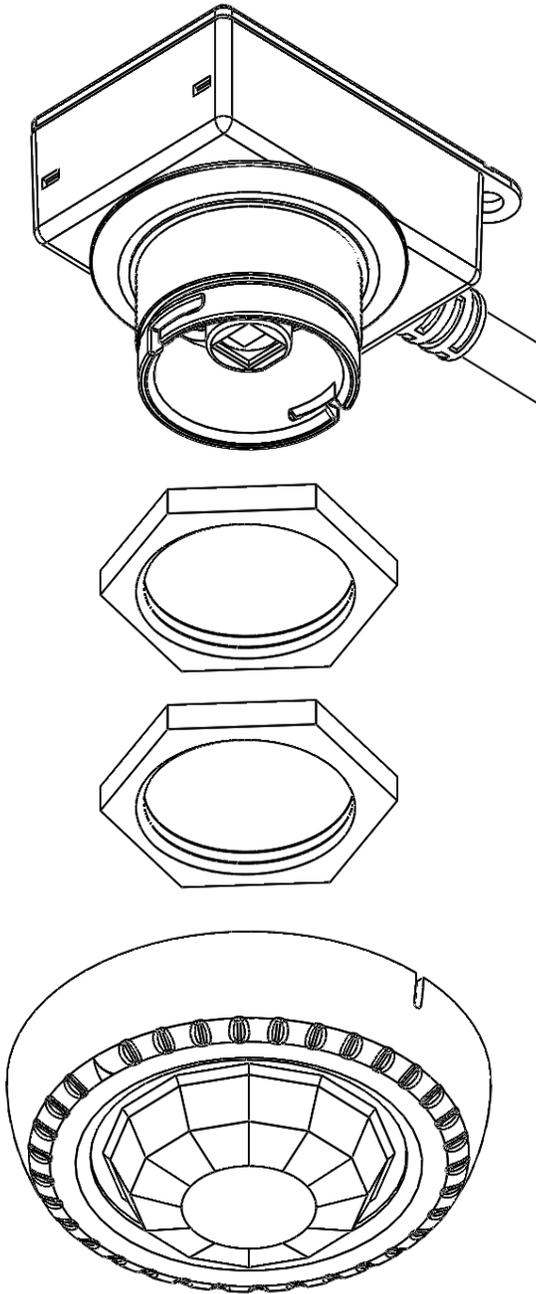


Detection Area



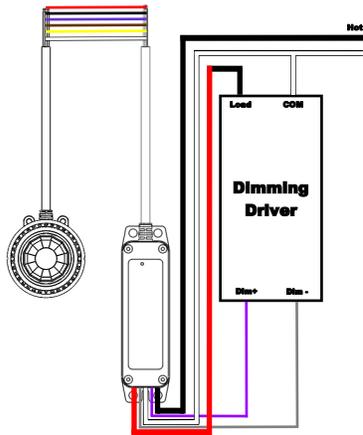
PSC-BL-I-FM-DC0 Sensor Module

Installing the PSC-BL-I-FM-DC0 in the light fixture

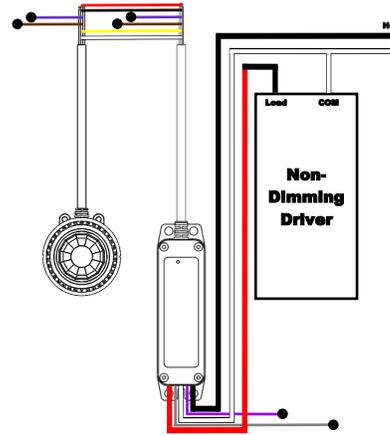


Wiring Diagrams

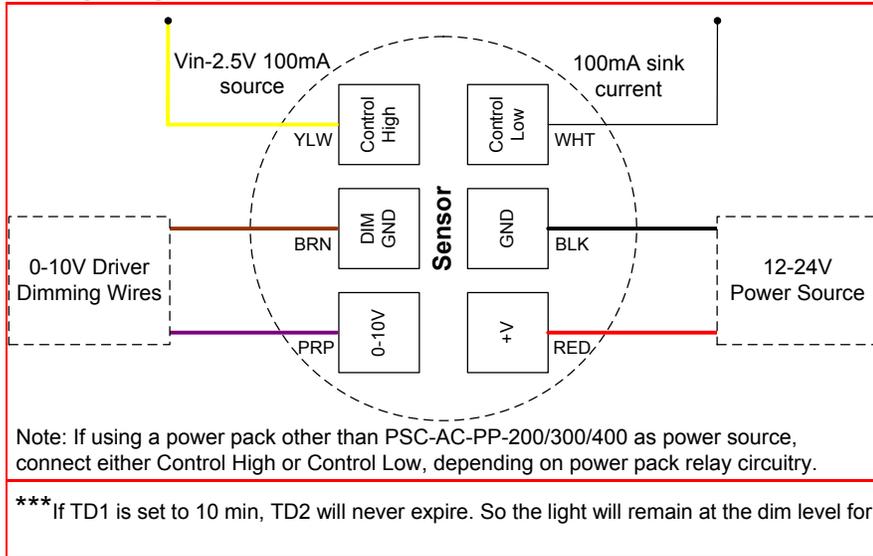
(1) Dimming Driver w/ Power Pack



(2) Non-Dimming Driver w/ Power Pack

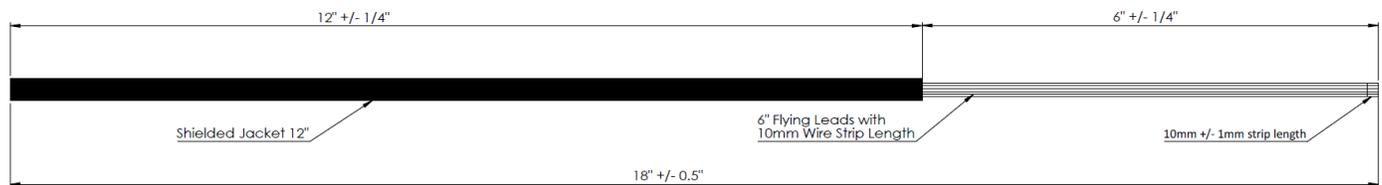


Wiring Diagram

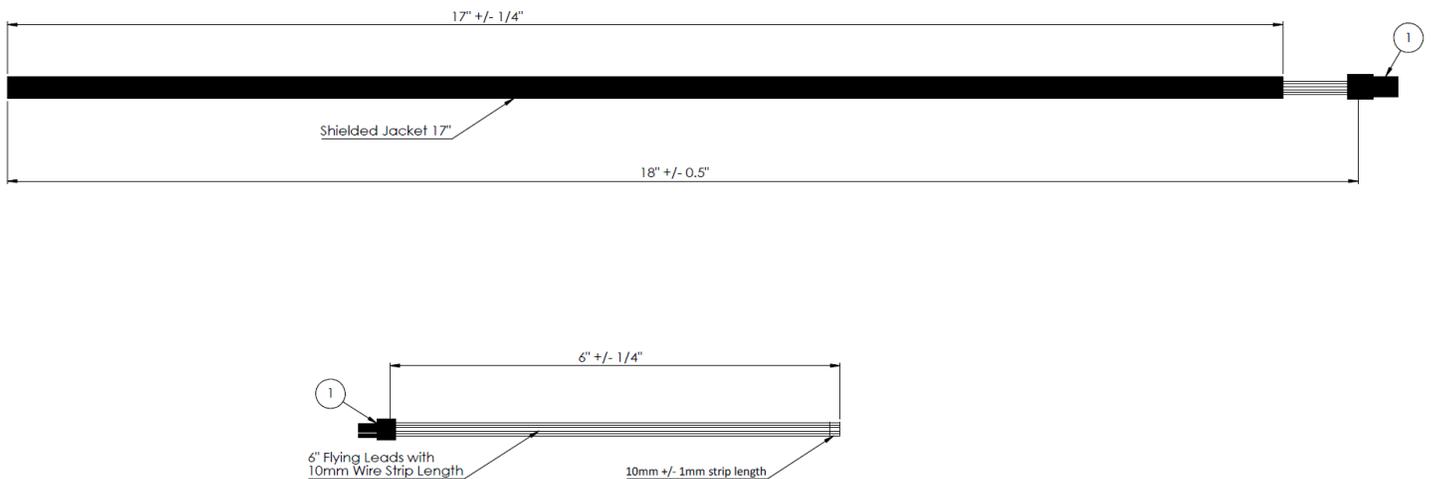


Lead Options:

Option A (Standard):



Option B (/C):



① Matching male and female connector: TE 794617, 794616 or equivalent