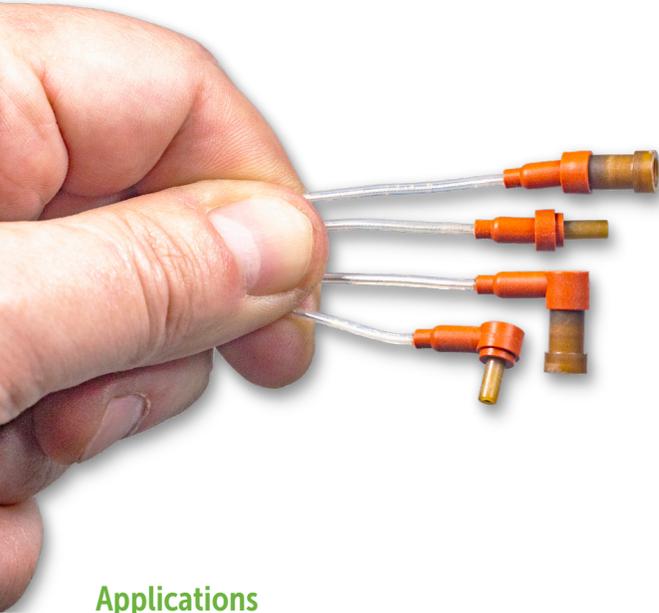


New and Improved

# Ruggedized PeeWee High Voltage Cable Assemblies



## Overview

The Ruggedized PeeWee is the latest addition to Teledyne Reynold's proven PeeWee product family.

Building on decades of experience in small form factor, high voltage connectors, this new product line is based on the proven PeeWee connector interface and is fully compatible with all existing PeeWee push on product.

### PeeWee Heritage:

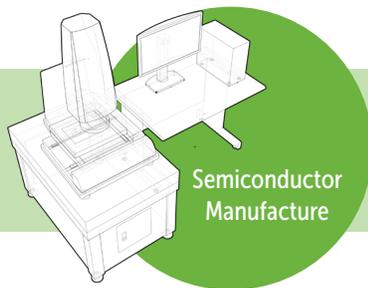
- Produced for more than 30 years
- Over half a million shipped

## Applications

- Commercial & defense TWT's
- High voltage power supplies
- Semiconductor manufacturing & inspection systems
- Analytical instrumentation
- Medical equipment

## Specifications

- 18 kVDC rated for ground level applications
  - 0-10,000 ft altitude
  - 10°C to 40°C operating range
  - 100% screened at 24 kVDC, 10,000 ft
- 12 kVDC rated for high altitude use
  - 0-70,000 ft altitude
  - -55°C to +125°C operating range
  - 100% screened at 18 kVDC, 70,000 ft
- Ergonomically robust
- Military Grade mechanical shock and vibration resistant
- Easy to mate (<4 lb mating force)
- Salt fog tested for proven corrosion resistance



## The Origin of a Legend

The Ruggedized PeeWee family is an enhanced version of Teledyne’s classic PeeWee product line originally designed decades ago for high altitude, high voltage and defense electronic applications.

PeeWee’s small form factor makes it ideal for weight and size sensitive applications. It utilizes Teledyne’s proprietary Advanced Interface Seal design to maintain steady HV performance at high altitudes and under a robust range of harsh conditions (temperature, mechanical, etc.).

## Dependable

100% of manufactured assemblies are subjected to the following tests:

- Dielectric Withstanding Voltage (DWV) at 18 kVDC, 70,000 ft simulated altitude
- Dielectric Withstanding Voltage (DWV) at 24 kVDC, 10,000 ft simulated altitude
- Circuit Resistance

## Modularization

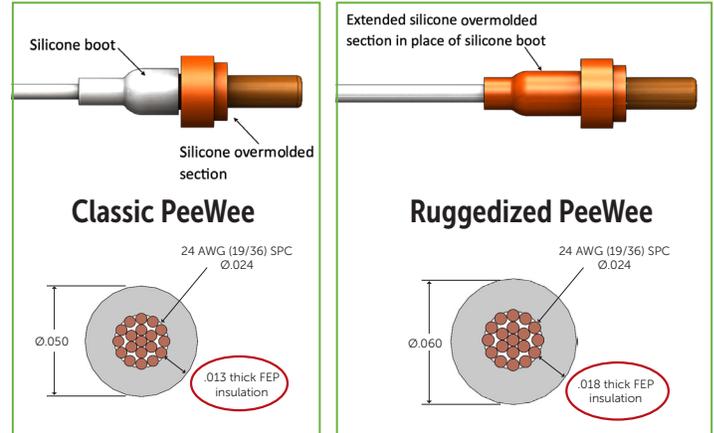
By using PeeWee connectors, it is possible to package or re-package a high voltage power supply into multiple modules which can be easily and reliably mated and unmated with one another. The packaging technique permits the pre-testing of individual modules as they are being manufactured and the ability to replace modules or perform routine maintenance in the field when necessary.



*Ruggedized PeeWees are fully compatible with all existing PeeWee push on products*

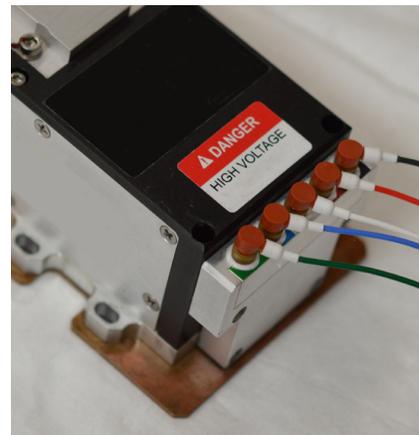
## Ruggedized vs. Classic PeeWee

A more robust strain relief, more durable wire options and the proven PeeWee interface combine to make TRI’s PWR series the clear choice when specifying 12 KVDC, unshielded high voltage connector options. The PWR series significantly reduces potential for stress or force induced failure during mating, or, damage done during installation.



Identification		Electrical			
Part Number	Surface Prep	Voltage Rating (kVDC)	Current Rating (A)	Resistance (Ω/1000 ft)	
178-8524	Etched	18.0	.8	23.6	
700717	Silicone coated				
178-8118	Nomex over etched				
178-5789	Nomex over silicone coated				
		Mechanical		Construction	
Part Number	OD (in)	MIN Bend Radius (in)	Conductor	Insulation	
178-8524	∅.060	.60	24 AWG (19/36) SPC	FEP	
700717	∅.070	.70			
178-8118	∅.050 (less nomex)	.60			
178-5789	∅.060 (less nomex)	.70			

**Note:** Typically silicone coated wires are chosen when RTV or silicone based potting or over-molding will be applied; etched wires are typically chosen for applications where epoxy based encapsulants will be used.



*New ruggedized PeeWees, like the legacy PeeWees shown on this TWT, are trusted for use in the most demanding applications.*

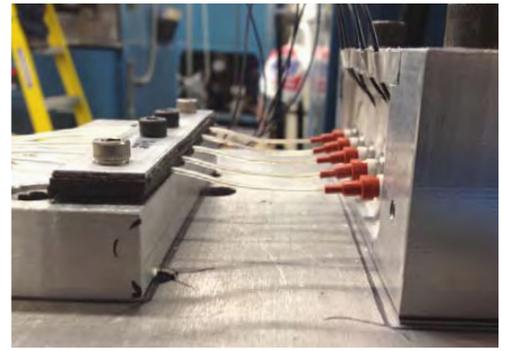
## How Can You Be Sure?

We're confident in the products we sell because we test them way beyond the limits we specify. The new Ruggedized PeeWee range has been evaluated thoroughly, to give you peace of mind that it will not fail you in even the most extreme of environment. We validate the design using multiple samples to establish performance levels with margin in the following categories:

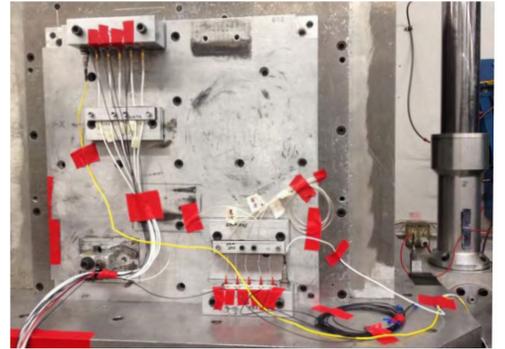
- Insulation Resistance
- Partial Discharge
- Connector Durability
- Thermal Shock
- Vibration
- Shock
- Cable Retention
- Insertion/Extraction Force
- Humidity
- Accelerated Life
- Contact Retention
- Corrosion
- High Voltage Failure

A full test report is available – contact us to see why we can stand behind our products with confidence – Technology, Tested, Trusted.

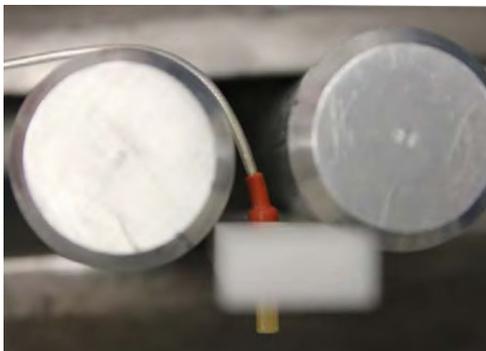
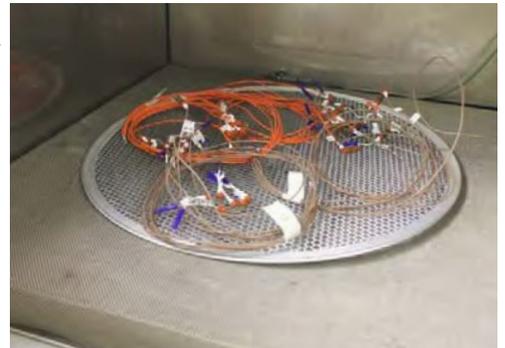
*Vibration Testing*



*Shock Testing*



*Humidity Testing*



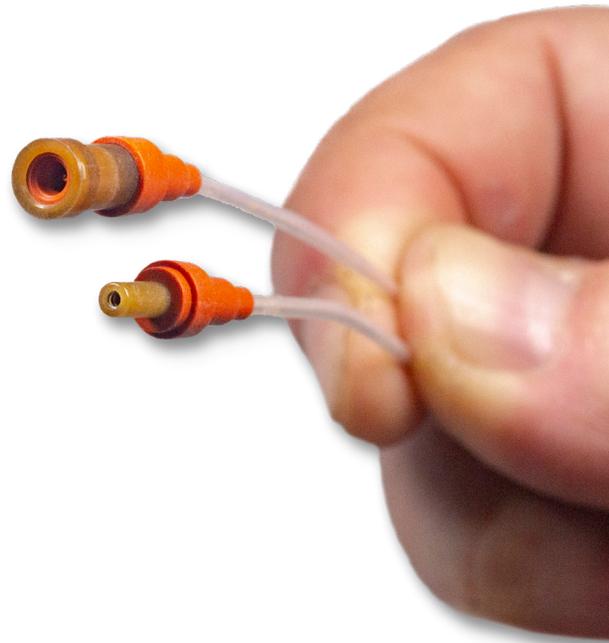
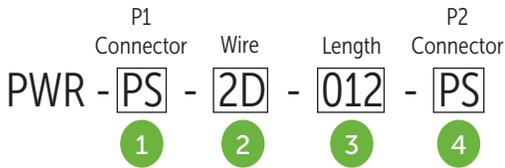
*Cable Retention Testing*



*Accelerated Life Testing*



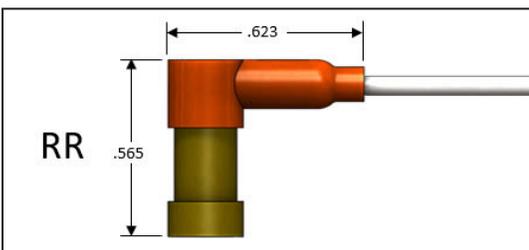
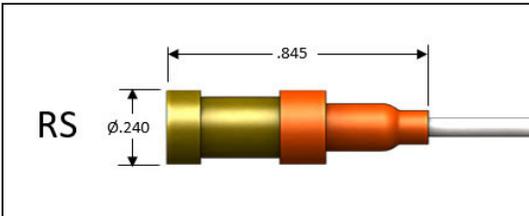
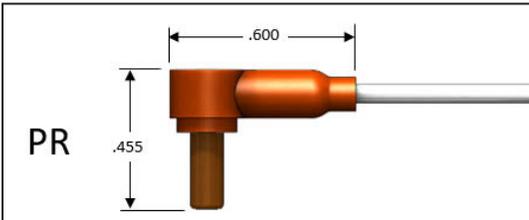
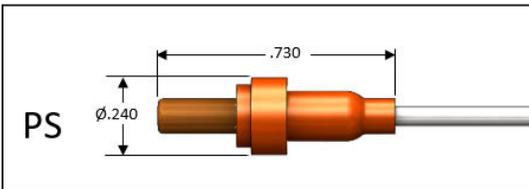
Ordering



1 P1 CONNECTOR

Available Connector Options are Defined Below

CONNECTOR DESIGNATOR	CONNECTOR DESCRIPTION
PS	PLUG, STRAIGHT
PR	PLUG, RIGHT ANGLE
RS	RECEPTACLE, STRAIGHT
RR	RECEPTACLE, RIGHT ANGLE



2 WIRE TYPE

Wire Type Options are Listed in Table Below

Wire Designator	Wire Description	Wire Color
NC	Ø.060 FEP insulated 24 AWG, Etched surface	Natural
2D	Ø.070 FEP insulated 24 AWG, Silicone coated	Red
0D		Black
9D		White
NE	Ø.060 FEP insulated 24 AWG, Etched surface with nomex jacket	Natural
2F	Ø.070 FEP insulated 24 AWG, Silicone coated with nomex jacket	Red
0F		Black
9F		White

3 ASSEMBLY LENGTH

Assembly Length is specified in inches with a 3 digit number.

EXAMPLE: PWR-PS-NC018-PS is a double ended plug assembly with Ø.060 etched FEP wire and length of 18 inches

Length tolerance for all standard PWR assemblies is ±1.00 inches

4 P2 CONNECTOR

P2 Connector can be same as P1 connector or "00" for flying lead

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