

## APD Transportation Connectors

*With two decades of IP69K sealed and vibration proof connectors, the APD series is overcoming transportation challenges.*

### The Challenge

ITT was faced with the challenge of creating a product for implementation on multiple transportation applications. The focused segments included electrical vehicles, busses, trucks, tractors, construction and agriculture equipment. A product that could still meet the following requirements:

- Robust
- Lightweight
- Broad variety of layouts
- High sealing class
- Keying and coding

### The Engineered Product Solution

Originally design for the transportation, off-road and special vehicle markets the APD products meet all typical application demands in this field. The APD is also the connector of choice for other areas including military or industrial applications that require harsh environment solutions while needing a product that is both, small in size and light in weight. The APD series covers a wide range of 1- and 2-way high power and 4-way high voltage solutions up to 51-way interface connectors, special sensors or PCB type versions and a flexible platform for your customized solutions.

### Innovative Interconnect Benefits

- Mechanical keying and color coding
- Sealed to IP67 / IP69K (with individual wire sealing)
- Bayonet locking
- Secondary contact locking feature for APD 19 / 51 way
- For applications with up to 48 V/500 V voltage, up to 240 A power

### Attributes and Values

1. The secondary locking feature allows the customer an easy contact installation and guarantees a good contact alignment.
2. The connectors can be used for harsh environment applications due to a high sealing class (up to IP 69K with individual wire sealing) and a material which is resistant against fluids like diesel, oil and brake fluids.
3. The proven bayonet locking system meets high vibration requirements.

1. Locking feature accommodates multiple functions, such as the Tail/Cargo Lift and Cooling & Heating Systems

3. Meets high vibration requirements for the tire pressure control unit



2. Resistance against fluids in the Engine Control Unit

### Applications

1-way APD High Power  
Engine Control Unit  
Inverter Box DC/AC

4-way APD  
AC, Cooling & Heating System  
4-way APD  
Control Units for Video Walls  
High Tension Distribution Box

19-way APD  
Diesel Engine for Tractors  
51-way APD  
Cabin Interface Tractor

# APPLICATION NOTE

[www.ittcannon.com](http://www.ittcannon.com)
**APD for Wheeled Armored Vehicles**
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## The Challenge

Military / Defense applications have always used rugged, metal connectors specified for this market. With the demand for reduced spending of governmental organizations, this market opened partially for non-military type components. Not all military vehicles parts need the same level of reliability. Wheeled armored vehicles, mainly used for troop transporting, are a specific type of military vehicle this approach applies to. While the inner frame incorporates weaponry, radio or drive control which still requires a "military connector" other applications on the outside such as lighting and mirrors or functions such as cooling and heating allow for less expensive and lighter plastic connectors.



## Features

- Circular Plastic Connectors 1 to 51 way
- Fluid resistance against oil, diesel, break fluids etc.
- IP Rating up to IP67 / IP69K
- Specified to ISO 15170
- Vibration proof
- Stamped and machined contact offering
- Mechanical & colour coding
- Up to 48V
- Secondary locking

## Applications

- Heating & cooling
- Mirror systems
- Tire Pressure
- Lighting
- Speakers
- Microphones

## The ITT Solution ...

The APD product line was originally designed to meet the automotive norm DIN72585 (now ISO15170), and is now an ideal fit when the military specification requirements are removed. These connectors are lightweight, cost effective, easy to assemble, and offer additional security of a secondary locking system for high pin counts. This line is readily available and covers a wide range of layouts and required technical features such as high vibration resistance, resistance to fluids, and high sealing grades up to IP67 / IP69K.



**For application assistance, please contact:**

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