

ITW GSE

# 400 HZ GPU AIRCRAFT CABLE ASSEMBLY

## Watertight & High Quality Modular Cable Assembly



*The cable assembly with strain relief, used in an ITW GSE Power Coil*

The modular 400 Hz aircraft cable assembly is a critical connection between the aircraft and the 400 Hz power supply. To ensure seamless operation of the complete 400 Hz system and on-time aircraft departures, the assembly must be robust and dependable. The ITW GSE cable assembly is designed for exactly that purpose. The assembly consists of a low loss power cable and a connector. The parts are vulcanized together which results in a highly reliable and completely watertight cable assembly that can withstand the rigorous demands on the ramp. The modular design, super construction and durability reduce life cycle costs and increase productivity.

The cable is designed for operation under extreme environmental conditions and high mechanical stress.

The connector is injection molded around the wires and the terminals thus preventing water intrusion and corrosion.

For easy operation, the connector is equipped with LED modules and switch modules that can rapidly be exchanged. Due to the clever design, you simply cannot be wrong when reinserting new modules.



### EXCHANGE OF WORN PARTS IN LESS THAN 5 MINUTES

The connector end is equipped with a replaceable contact section and a replaceable abrasion resistant cap that protect and extend the life time of the complete assembly. As operators will know, those parts are subject to wear and tear. To reduce maintenance costs and increase up-time, the components can be exchanged in less than 5 minutes – also on the ramp.

That's flexibility at its best.

The connector has been on the market for many years and is highly appreciated by airlines, airports, military and defense customers for its reliability.



*Complete 400 Hz Aircraft Cable Assembly with cable strain relief*

It's all about connections



# ITW GSE 400 Hz GPU Aircraft Cable Assembly



## CONNECTOR

The connector is completed with push buttons for Start and Stop of 400 Hz, Cable Up/Down plus three LEDs indicating "Plug inserted", "400 Hz ON" and "Interlock signal present".

For safety, the connector incorporates three PTC120 sensors, one for each phase. In case of a worn out pin or the like that can cause overheating, the sensors report the failure in due course. As the sensors are inside the connector head, a replacement of the contact section does not compromise the function of the sensors which is an obvious advantage.

## UNIQUE SAFETY DEVICE

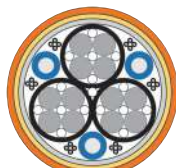
To prevent the aircraft from moving away from the Boarding Bridge while the 400 Hz system is connected, the ITW GSE modular cable assembly incorporates a unique safety device. Once the connector's F-pin meets that of the aircraft, a strong contact between the two metal parts is established. This split F-pin solution is much more dependable than the traditional one using a mechanical switch to establish the 90% contact.

## CABLE

The flexible PUR (polyurethane) balanced cable can be used under extreme environmental conditions and high mechanical stress. It comes in orange color for high visibility on the ramp. The double insulation layer in different colors makes it easy to identify when the outer layer is worn out or damaged and requires replacement.



Complete Aircraft  
Cable Assembly



Cross Section of the balanced cable  
 $3 \times 70 + 3 \times 12 + 6 \times (4 \times 1) \text{ mm}^2$



Contact Section    Abrasion resistant cap

## REPLACEABLE ABRASION RESISTANT CAP

The patented replaceable abrasion resistant cap is made of highly durable composite, selected for its strength and long life. It is especially designed with a tapered edge for easy and secure fit on any aircraft. To ease maintenance and operation down-time, it can be exchanged in 2-3 minutes.

## CONTACT SECTION

The patented contact section that prolongs the life of the modular cable assembly is molded of the highest quality Poly Chloroprene for durability in all ramp conditions. The sockets are made with proprietary alloy with high tensile strength thus ensuring a proper tension without the use of any springs that would compromise reliability. A lip on the cable head extends over the contact section and makes water evacuate from the joint. This part is used by the United States Military since the 1990s.

## OVERVIEW OF COMPONENTS

400 Hz CABLE ASSEMBLY PART NUMBERS	
<b>COMPLETE CABLE ASSEMBLY</b>	
574.237	24 m w/Split-F and Abrasion cap
574.236	28 m w/Split-F and Abrasion cap
<b>LED AND SWITCH MODULES</b>	
SC0571	ON/OFF
SC0563	UP/DOWN
SC0564	LED Assy
<b>CONTACT SECTION AND WEAR CAP</b>	
SC0569	w/Split-F and Abrasion cap
SC0566	Abrasion cap
<b>STRAIN RELIEF KIT</b>	
574.222	Complete Kit