



TUF^{A+C}

The USB Type C connector is now being adopted by all the major manufacturers of mobile devices (phones, tablets, etc) and has already been incorporated into some laptops. This is not only because of its small form factor and the fact that it is reversible, making it simpler and easier to use, but also because it enables significantly faster charging than was possible with the USB Type A connector, whilst at the same time (for relevant devices) replacing all former AV/data connections, such as VGA, HDMI, USB-A, RJ45.

TUF^{A+C} from OE Electrics provides both the new USB-C port, for enhanced fast charging of compatible devices, plus a USB-A for charging legacy devices - suiting users with any USB powered device both old and new. TUF^{A+C} also has the unique benefit of being replaceable through patented TUF-R technology; perfect for areas of high traffic such as airports, schools and hospitality, where, if damaged through misuse or worn out through high usage, TUF^{A+C} can quickly be replaced, in-situ, without the need for an electrician or even turning off the power; or, to keep pace with technology, it can be exchanged for an upgraded TUF solution.

Specifications

USB Charging Outlets	1 x Type A Female 1 x Type C Female
Charging Current	Type C 5V up to 3.0A Type A 5V up to 2.5A Maximum combined output 5A
Rated Total Output Power	25W
AC Voltage Range	110-240VAC at 50/60Hz
AC Input Current (Full Load)	Maximum 0.6A
Efficiency	Up to 90%
Environment	0 - 30C / 85% Relative Humidity
Standby Power	0.05W

Features

Protection from External Surges	Yes (3.5kA for 8/20us Pulse)
Internal Over Temp Protection	Self Resetting
Internal Over Voltage Protection	Self Resetting
Output Over Current Protection	Self Limiting
Short Circuit Protection	Self Resetting
USB Sockets	Intelligent Device Recognition (IDR) Gold Plated for Improved Contact Type-A specifically manufactured for minimum 5000 insertions. Type-C for minimum 10,000 insertions.
Power indicator	Blue LED
Cable Compensation	Voltage Adjustable to compensate for cable loss
Standards	Certified to IEC 60950-1, UL 60950-1, and EN61204-3/CISPR22

Compatibility (examples only, not exhaustive)

Apple iPhone/iPad	Yes - Type A Apple 2.4A Type C 5V 3A
Apple MacBook Laptop	Yes - Type C - 3A
Google Pixel Phone + Laptop	Yes - Type C - 3A
Android (USB BC1.2)	Yes - Type A
Samsung Tablet Charging Specification	Yes - Type A
Blackberry	Yes - Type A

Device Charge Times

	10 to 90% Charge Time [Min]
iPhone 8+	71 (Type C) 75 (Type A)
Samsung Galaxy Note 8	69 (Type C) 87 (Type A)
iPad Pro 9.7	125 (Type C) 235 (Type A)

NEW TUF A+C

USB TYPE-A

USB TYPE-C

Upgrading/Replacing a TUF module



TUF replacing tool.



Insert the 'snake eye' bit into the tool as shown.



Use the tool to unscrew the 'snake eye' screws.



Lift off the TUF fascia



Insert the second part of the TUF replacing tool into the TUF as shown, until a click is heard.



Pull the TUF cartridge out from the unit.



Unwrap and insert the new TUF cartridge, paying close attention to the orientation of the cartridge to the blue housing.



Push the cartridge into the blue housing until a click is heard.



Place the TUF fascia back into position.



Using the TUF replacing tool and 'snake eye' bit, screw the snake eye screws back into place