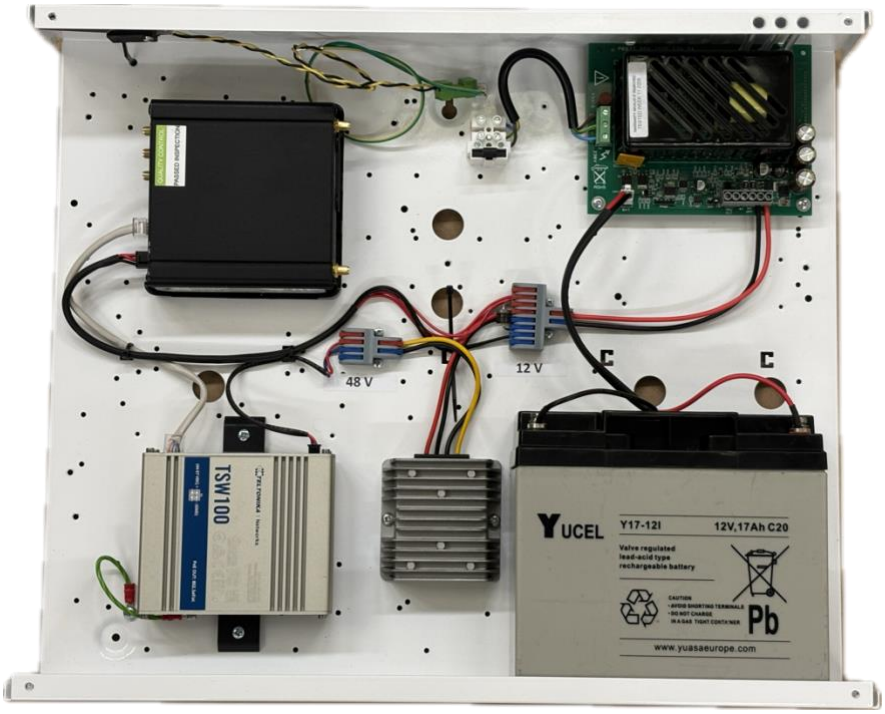
D1558-E-PoE+-01

A Single Box, Fully Backed-Up, Resilient Solution, Providing a 12VDC 8A & 48VDC PoE+ Communications Hub, with Connections for a 4G router



Dycon D1558-E 12VDC 8A Power Module, a 12VDC to 48VDC PoE+ converter, a 5-port PoE+ switch and connections for fitting a CSL 4G router and a 17Ah VRLA battery

- A single housing comprising a Dycon D1558 12VDC 8A power supply, a 12VDC to 48VDC PoE+ converter & a 5-port PoE+ switch & battery back up
- Pre-drilled fixing points and connectors for a CSL 4G router, fixing points for other routers on request
- Space for a 12VDC 17Ah back-up battery
- All components, pre-assembled, & fitted, ready for connection to 230VAC power, 1 x 17Ah battery, 4 x 30W PoE+ ports and 1 x CSL, or other, 4G router

Today's businesses increasing rely on integrated Intrusion, CCTV and Access Control systems to keep their business and premises safe and functioning. One problem with this is the fact that many of these components, and the way they communicate, operate at different voltages making providing back-up battery provision both cumbersome and expensive, coupled with this is the increasing need to provide CCTV camera feeds in remote sites where there is no internet connection. Dycon has worked with major integrators and communication providers to reduce these issues and has created a simple, easy-to-fit total solution. The D1558-E-POE+ has a Dycon 'intelligent' 12VDC 8A power supply unit and it has enough space for a 17Ah battery that enables it to keep working even if the mains power is lost. An integral voltage converter converts this 12VDC feed into a 48VDC PoE+ feed and drives a CSL 4G router and, an integral 4 x 30W- port PoE+ switch that can power up to 4 x CCTV cameras, or other peripherals. The constantly-charged 17Ah battery ensures sufficient power to drive the whole system even if the mains power is lost.

DYCON
power solutions

Applications

How does it work?

The unit is supplied in a single, tough, steel Dycon E-box and is suitable for fitting for fitting in most commercial or Industrial environments.

The principal system power is supplied by the outstandingly-reliable and well-proven Dycon 'Intelligent' D1558 12VDC 8A module, this constantly monitors and recharges, a 12VDC 17Ah VRLA battery to ensure a seamless power changeover should the 230VAC mains power be lost.

The D1558 is connected to a voltage converter, a unique device which takes the 12VDC 8A power provided by the power module or, if the 230VAC mains feed is lost, the 12V 17Ah battery, and converts it to a PoE^+ compatible 48VDC. This, in turn, powers an integral un-managed 4 x 30W port PoE^+ switch that is perfect for driving up to 4 x CCTV cameras or other peripherals. It also provides power for the CSL, or another make, 4G router. In the event of normal power being lost, the system seamlessly uses the power from the 12VDC 17Ah VRLA standby battery and, via the voltage converter, provides normal 48VDC PoE+ for the peripherals and the router, until normal power can be restored.

Remote Sites

Remote sites often lack a local internet connection so the ability to transmit CCTV images to a monitoring centre of guard post can be severely compromised. The solution here is often to use a 4G router too, but again, even this can fail if the power to the router is lost locally.

The D1558-E-POE+-01 solves this problem with its ability to provide both 12VDC and 48VDC PoE^+ even if the 230VSAC mains power is lost. This can continue until the battery drops to its 10VDC cut-off point, at which level the unit shuts down to avoid damage. Once power is restored, the D1558 battery charging feature restarts and will bring the battery back to its normal level as soon as possible.

Rapid Protection for Temporary Sites

As the D1558-E-POE^+-01 single box solution is supplied ready-wired, it can quickly be transported to any site, it just requires the cameras to be connected and focussed, 230VAC mains applied, the battery connected, and the router SIM commissioned.

Just as easily, the whole set-up can be quickly removed when the job is finished.

Installer Friendly

The E-box comes with the main power module, the voltage converter, and 5-port PoE^+ switch already fitted and wired, no need to run cables inside the box. All necessary connectors and cables are supplied with each unit so there are no additional costs payable to fit this solution.

The CSL router and bracket is normally supplied direct by CSL. We have pre-drilled the fixing holes into the E-Box so that it just needs to be screwed into position. If you are using another router, please contact Dycon so that we can prepare the fixing holes for that model. The unit will also need a suitable 17Ah VRLA battery.

To install this complete solution, all you need to do is …….

- Obtain a CSL, or other make 4G router, and a VRLA 17Ah Battery. *Dycon does not include these specialist products with this unit.*
- Screw the E-Box to the wall and run a 230VAC mains cable to the D1558 PCB and connect it
- Screw the CSL, or other 4G router into the pre-drilled position in the E-box
- Connect the router's antenna and, using the designated cut-out, screw it to the E-box
- Connect the supplied cable from the PoE^+ switch to the 4G router, using the supplied cable
- Connect the 4 x PoE cables from the cameras/peripherals to the PoE switch
- Connect the router to the network using the supplied cable
- Fit the 12VDC 17Ah battery into position and connect
- Commission the 4G router and power up the complete system
- Screw the E-box lid back into place

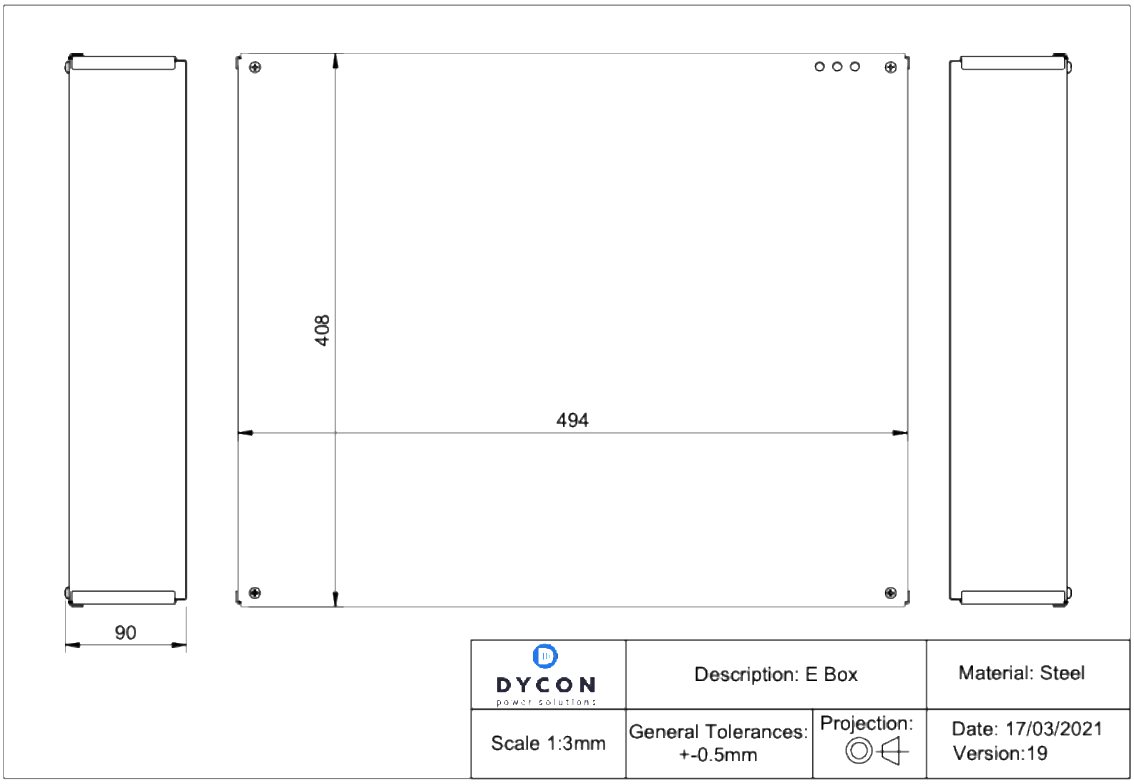
Specifications

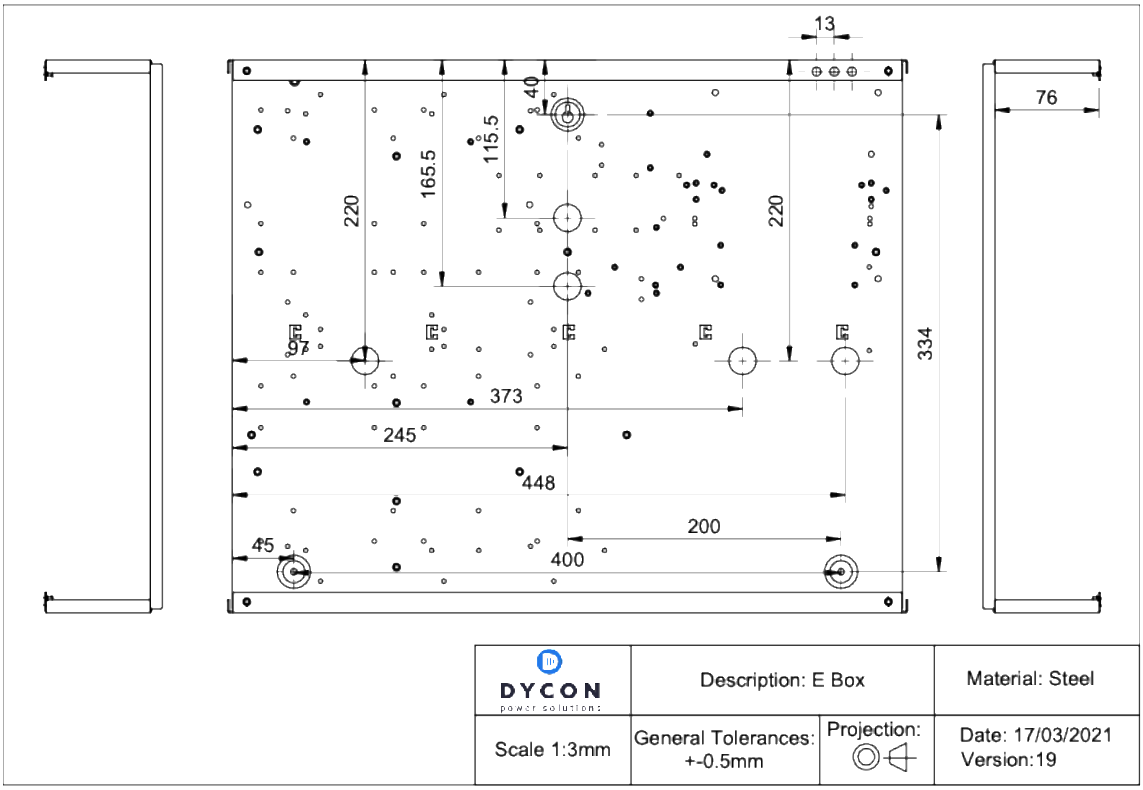
D1558 8A Power Supply Module	Type A, Ungraded, Environmental Class 2
Voltage Input	195Vac -265Vac @ 50-60Hz
AC Input Current	800mA
AC Input Fuse	3A
Output Voltage with AC Power	Maximum 13.9Vdc, minimum 13.5Vdc
Output Ripple	< 0.25V peak-to-peak at full rated output
Maximum Output Current at Full Load	8 Ampere
Battery Charging Current and Voltage	500mA at 13.7Vdc float charge voltage
Minimum Standby Output Voltage	9.6Vdc
Maximum Power Input at Full Load	113W
Fault Relay Rating	60V @ 100mA, 14ohms closed
Efficiency	>85% @ 8A load
Maximum Over-Voltage Cut-Out	14.4Vdc ±3%
Low Battery Fault	11Vdc ±3%
Low-Voltage Power Output Fault	12.3Vdc ±3%
Battery Deep Discharge Voltage Limit	10Vdc ±3%
Automatic Reset Time*	10ms to 18s (Depending on type and duration of fault)
PCB Size (mm)	108 x 142 x 46 (46mm when fitted on stand-offs)
Operating Temperature Range	-10˚C to +40˚C
Humidity	95% non-condensing

Ethernet PoE$^+$ switch	802.3i/3u/3ab/3x/3az
LAN	5 x ETH ports, 10/100/1000Mbs, supports auto MDI/MDIX crossover
PoE ports	Port 1-4; PoE standards 802.3af & 802.3at
PoE max power per port	30W
Bandwidth (non- locking)	10 Gbps
Packer buffer	128 Kb
MAC address table size	2k Entries
Jumper frame support	9216 bytes
Power connector	4-pin industrial DC power socket
Input voltage range	7-57 VDC
PoE out input voltage range	44 -57 VDC
Power consumption	Idle: 2W / max (no PoE): 9W / PoE max 129W
Dimensions (w) x (h) x (d)	115 x 32 x 95 mm
Operating temperature	-40°C to +75°C: Humidity 5% to 95% non-condensing

Voltage Converter	12VDC to 48VDC PoE$^+$ Voltage Converter
Output Voltage	48VDC PoE$^+$
Maximum Output Current at Full Load	3A, with a peak output of 5A
Efficiency @ Full Load	>95%
Operating Temperature Range	-10˚C to +70˚C
Humidity	95% non-condensing
Case material	Aluminium
Size (h x w x d)	73mm x 73mm x 31mm
Weight	236gm
Fixing holes for M3 slotted screws	65mm between centres

Dycon E-Box drawings and dimensions





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