

## Technical Data Sheet

### DSO116

## ST Range 24V dc EN54 Power Supply Units



### Product Description

The ST range of switch mode power supplies has been specifically designed for EN54 compliant fire systems and EN12101 AOV systems.

Available in either 1A, 2A or 5A versions they are certified to EN54-4 and EN12101- 10 by AFNOR and VdS (EN54-4 only).

The units include intelligent battery charging using Elmdene's efficient EcoCharge technology, possess mains & battery monitoring with 2x independent volt-free outputs and also feature battery deep discharge protection in the event of a prolonged mains failure.

The inclusion of LED indicators provides quick status diagnostics of the power supply, while a variety of enclosures offer the installer a choice of standby battery backup options.

- ⦿ 2 Independent 27.6Vdc monitored outputs
- ⦿ On-demand load-sharing capability supports either rapid charging of high-capacity batteries or brief high-current peak-loads using current diverted from charger
- ⦿ EN54-4 clause 6.4 compliant "Dual Path" power transmission option when the PSU is used with CIE but contained in a separate enclosure

## Technical Data Sheet

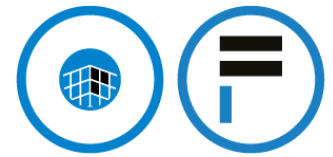
- ⦿ Charging capability (EN54-4 and EN12101-10 compliant) to support up to 65Ah batteries (see 'Output' table for maximum system load capability calculations)
- ⦿ Battery Free operation mode available (not EN54-4 compliant)
- ⦿ Self-resetting battery fuse protection
- ⦿ No output interruption during automatic switchover between mains and battery power
- ⦿ Deep discharge protection disconnects battery from load when output voltage falls below 21.6V
- ⦿ Mains status indicator LED confirms mains input is present
- ⦿ Battery status indicator LED confirms healthy battery
- ⦿ Fault indicator LED (Yellow) active on detection of output fault, charger fault and mains failure
- ⦿ Fault-diagnostic indicator LED assists with identifying cause of fault (visible through Lid)
- ⦿ Output 1 and Output 2 status indicator LEDs (dual-path and independent mode option)
- ⦿ Volt-free changeover (SPDT) relays transmit fault output signals (*Comprising: loss of mains / battery fault / charger fault / loss of output*)
- ⦿ Optional RS485 serial interface for fault reporting, diagnostics and status indication and panel integration

### M&E Specifications

Mains input	195-240V ac
Operating temperature	-10°C to 40°C at 95% RH

#### Enclosures

Enclosure	Dimensions H x W x D (mm)	Will Fit Battery Size
T	300 x 240 x 60	2 x 12V 1.2Ah
C	275 x 330 x 80	2 x 12V 7Ah
K	325 x 350 x 105	2 x 12V 12Ah
E	420 x 400 x 80	2 x 12V 17Ah



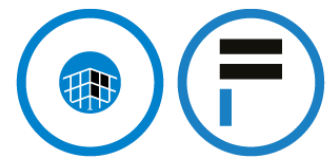
## Technical Data Sheet

H	420 x 420 x 180	2 x 12V 24Ah / 38Ah
BATT-BOX-65	534 x 465 x 268	2 x 12V 65Ah

Enclosures denoted in each Part Number after model number: eg, STV2401-C is within in a C enclosure

2401ST Models:		2401ST-T	2401ST-C	
Battery Capacity (2 x 12V)		1.2 Ah	2.1 Ah	7Ah
EN54-4 Continuous Output Current No Charging (Imax B) With Charging EN54-4 (Imax A)			1.35A 1.00A	
EN12101-10 (Imax B) For 180s at end of standby period			1.35A	
EN12101-10 Max Standby load (Imax Standby)	4hr standby	0.19A	0.35A	1.10 A
	24hr standby	Not Specified	0.80 A	(a) 0.25 A
	72hr standby	Not Specified	Not Specified	0.10 A

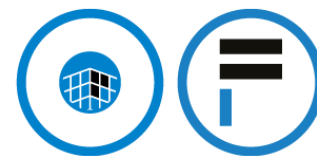
EXAMPLE (a): for EN12101 AOV systems, an 2401ST, with 2x 7Ah batteries, can maintain 250mA load for 24hrs and will be able to deliver 1.35A (ImaxB) for 180s at the end of that period.



## Technical Data Sheet

2402ST Models:		2402ST-C	2402ST-K	2402ST-E	2402ST-H	
Battery Capacity (2 x 12V)		7 Ah	12 Ah	17/18 Ah	24 Ah	38 Ah
EN54-4		2.5A	2.5A		2.5A	
Continuous Output Current		2.0A	(b) 1.75A		1.0A	
No Charging (Imax B) With Charging						
EN54-4 (Imax A)						
EN12101-10 (Imax B)			2.5A			
For 180s at end of standby period						
EN12101-10 Max	4hr standby	1.10 A	1.90 A	2.50 A	2.50 A	2.50 A
Standby load (Imax Standby)	24hr standby	0.25 A	0.43 A	0.60 A	0.83A	1.30 A
	72hr standby	0.10 A	0.17 A	0.25 A	0.33 A	0.52 A

EXAMPLE (b): for EN54 Fire systems, an 2402ST, with 2x 17Ah batteries, can support a maximum of 1.75A (ImaxA) load whilst charging the batteries.



## Technical Data Sheet

2405ST Models:		2405ST-C	2405ST-K	2405ST-E	2405ST-H		2405ST-C + BATT-BOX-65
Battery Capacity (2 x 12V)		7 Ah	12 Ah	17 Ah	24 Ah	38 Ah	65Ah
Continuous Output Current			5.7A		5.7A		5.7A (c) 3.0
No Charging (Imax B) With Charging EN54-4 (Imax A)			5.0A		4.0A		A
Compliant Charge Capability Constant current charge			0.70A		1.50A		2.60A
EN12101-10 Max	4hr standby	1.10 A	1.90 A	2.66 A	3.70 A	5.00 A	5.00 A
Standby load	24hr standby	0.25 A	0.43 A	0.60 A	0.83A	1.30 A	2.25 A
(Imax Standby)	72hr standby	0.10 A	0.17 A	0.25 A	0.33 A	0.52 A	0.90 A

EXAMPLE (c): for EN54 Fire systems, an 2405ST, with 2x 65Ah batteries, can support a maximum of 3A (ImaxA) load whilst charging the batteries.

### Controls

<N/A>

### Dimensional Drawings

<N/A>

### Performance Data

#### Acoustic Data

<N/A>

### Installation Guide Reference Number

<N/A>

## Technical Data Sheet

### Optional Extras

<N/A>

### Compliance

Certified by VdS (VdS 2541) to:

EN54-4/A2	"Fire detection and Alarm Systems"
EN12101-10	"Smoke and Heat control systems"

### Part Number

<N/A>