



Fire

STV Range 24V dc EN54 & EN12101 Power Supply Units



Switch Mode
Technology

The new STV range of switch mode power supplies has been specifically designed for EN54 compliant fire systems and is **NFS Approved**.

Available in either 1A, 2A or 5A versions they are certified to EN54-4, EN12101-10 and NF S 61-940 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.

Features

- 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
- Charging capability (EN54-4 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
- Supplied with Power Sonic VRLA batteries or without



STV2402-C-FR



Technical Information

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

Approvals

Certified by **VdS** (VdS 2541) and **AFNOR** to:

- **NF S 61-940**
- **EN54-4/A2** "Fire detection and Alarm Systems"
- **EN12101-10** "Smoke and Heat control systems"

CE Mark

RoHS Compliant

Enclosures

Enclosure	Dimensions H x W x D (mm)	Will Fit Battery Size	Battery Manufacturers
T	300 x 240 x 60	2 x 12V 1.2Ah	Powersonic Yuasa Interlogix Europa
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	
H	420 x 420 x 180	2 x 12V 24Ah / 38Ah	
BATT-BOX	BOX65	2 x 12V 65Ah	

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



Technical Information

Output

STV2401 Models:		STV2401-T	STV2401-C	
Battery Capacity (2x 12V)		1.2Ah	2.1Ah	7Ah
EN54-4 Continuous Output Current No Charging (Imax B) With Charging EN54-4 (Imax A)		1.35 A (b) 1.00 A		
EN12101-10 (ImaxB) For 180s at end of standby period		1.35 A		
EN12101-10 Max Standby Current (Imax Standby)	4hr standby	0.19A	0.35A	1.10A
	24hr standby	Not Specified	0.80A	0.25A
	72hr standby	Not Specified	Not Specified	0.10A
NF S 61-940 Standby Current (50% 4 year derating)	4hr standby	0.12A	0.22A	0.67A
	24hr standby	Not Specified	0.05A	0.15A
	72hr standby	Not Specified	Not Specified	Not Specified

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

STV2402 Models:		STV2402-C	STV2402-K	STV2402-E	STV2402-H	
Battery Capacity (2x12V)		7Ah	12Ah	17/18Ah	24Ah	38Ah
EN54-4 Continuous Output Current No Charging (Imax B) With Charging EN54-4 (Imax A)		2.5A 2.0A	2.5A (b) 1.75A		2.5A 1.0A	
EN12101-10 (ImaxB) For 180s at end of standby period		2.5A				
EN12101-10 Max Standby Current (Imax Standby)	4hr standby	1.10A	1.90A	2.50A	2.50A	2.50A
	24hr standby	0.25A	0.43A	0.60A	0.83A	1.30A
	72hr standby	0.10A	0.171A	0.25A	0.33A	0.52A
NF S 61-940 Standby Current (50% 4 year derating)	4hr standby	0.67A	1.20A	1.69A	2.36A	2.50A
	24hr standby	0.15A	0.27A	0.38A	0.53A	0.82A
	72hr standby	0.06A	0.11A	0.15A	0.21A	0.33A

EXAMPLE (b): for EN54 Fire systems, an STV2402, with 2x 17Ah batteries, can support a maximum of 1.75A (ImaxA) load whilst charging the batteries

STV2405 Models:		STV2405-C	STV2405-K	STV2405-E	STV2405-H		BATT-BOX-65
Battery Capacity (2x12V)		7Ah	12Ah	17Ah	24Ah	38Ah	65Ah
EN54-4 Continuous Output Current No Charging (Imax B) With Charging EN54-4 (Imax A)		5.7A 5.0A			5.7A 4.0A		5.7A 3.0A
EN12101-10 (ImaxB) For 180s at end of standby period		5.7A					
EN12101-10 Max Standby Current (Imax Standby)	4hr standby	1.10A	1.90A	2.66A	3.70A	5.00A	5.00A
	24hr standby	0.25A	0.43A	0.60A	0.83A	1.30A	2.25A
	72hr standby	0.10A	0.17A	0.25A	0.33A	0.52A	0.90A
NF S 61-940 Standby Current (50% 4 year derating)	4hr standby	0.67A	1.20A	1.69A	2.36A	2.50A	5.00A
	24hr standby	0.15A	0.27A	0.38A	0.53A	0.82A	1.39A
	72hr standby	0.06A	0.11A	0.15A	0.21A	0.33A	0.56A

EXAMPLE (c): for EN54 Fire systems, an STV2405, with 2x 12Ah batteries, can support a maximum of 5A (ImaxA) load whilst charging the batteries