SOLLATEK DATA SHEET NO:

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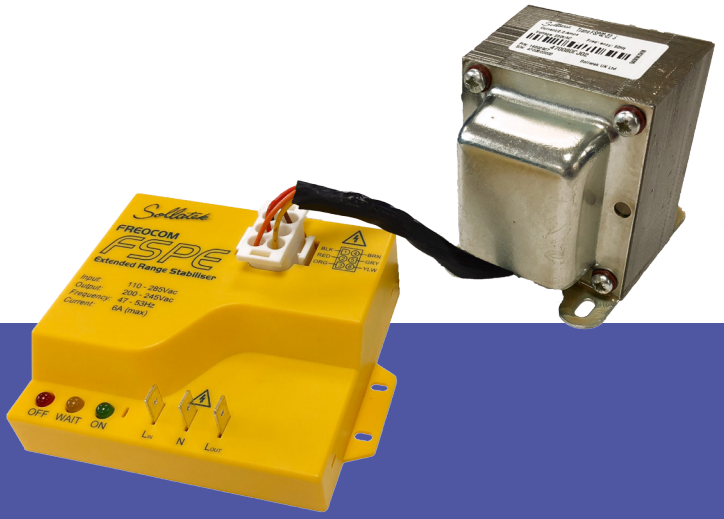


SOLLATEK FSPx RANGE

COMPLETE VOLTAGE STABILISATION AND PROTECTION
FOR ALL REFRIGERATION AND OEM APPLICATIONS

Description

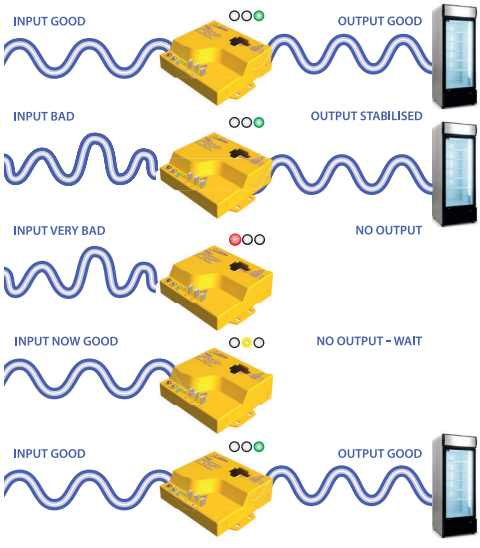
Regulated and Stable voltage supply is vital to maximise equipment efficiency and reduce damage and downtime. The FSPx Range is an intelligent stabiliser and protector ideal for environments where mains supply is unreliable and fluctuating.

The FSPx Range ensures supply is corrected within good working voltage limits and in the event the voltage is too extreme, it will disconnect the power and provide an intelligent start up delay.

There are 5 models within the range, FSPE, FSPF, FSP, FSPM & FSPL depending on required correction range which are available in 115 V or 230 V nominal voltage. Sollatek can fully customise transformers to meet your current rating requirement.

The FSPx Range are made from two discrete components: the electronic control module and the power transformer. The transformer plugs into the module very simply with a quick connect plug avoiding errors and speeding up production and service.

Operational Principle



Features

- Five models providing different input voltage ranges: FSPE, FSPF, FSP, FSPM & FSPL
- 115 V or 230 V Nominal Voltage versions available
- Complete voltage protection (high, low, spike or surge protection)
- Frequency compensated and noise-free measurements
- Unique zero voltage switching to achieve clean pure stabilised power
- Built-in Automatic Voltage Switcher (AVS) disconnects the compressor when mains voltage is outside operating range
- Reconnects the compressor once the voltage has remained within acceptable limits for 3 minutes
- TIME SAVE™ intelligent delay to reduce off-time when the appliance has been without power for more than 3 minutes
- Intelligent delay disabled for the first 30 minutes of continuous operation for ease of testing
- Controller encapsulated for water resistance and protection against environmental conditions in rugged applications
- Transformer shrouded for mechanical and splash proof protection

Model Capability Comparison

	FSPE	FSPF	FSP	FSPM	FSPL
LVD	✓	✓	✓	✓	✓
Extra Large Boost	✓	×	×	×	×
Large Boost	✓	✓	✓	×	×
Normal Boost	✓	✓	✓	✓	✓
1:1	✓	✓	✓	✓	✓
Buck	✓	✓	✓	✓	×
HVD	✓	✓	✓	✓	✓

LVD: Low Voltage Disconnect ; **HVD:** High Voltage Disconnect

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Technical Specification

Regulation Range	See Input / Output Voltage table
Input Voltage Limits	See Input / Output Voltage table
Spike Protection	143 J, 6500 Amps (8/20µs). Response time <10 ns
Output Current	Various Available, from 0.5 Amp to 12 Amp, depending on the model
LEDs	
Under/ Over voltage	Red
Wait	Amber
Run	Green
Connection Delay	
Intelligent Delay*	OFF time is reduced from 3 mins for minimal down time
Standard Delay	In addition to intelligent delay, random between 10 and 30 seconds.
	* Units are shipped with Intelligent Delay disabled until 30 minutes of continuous operation has elapsed for ease of testing
Blind Times	
Undervoltage	2 seconds
Overvoltage	0.5 seconds
Technology	
Zero Voltage Switching	Transformer tap switching takes place at zero point in voltage waveform
Response Time	Within 0.1 seconds
Performance	
Thermal Endurance	Continuously rated at full load at full boost (full Boost represents worst case)
Overvoltage Endurance	Runs continuously without damage at maximum permissible input voltage
Connectors	
Live & Neutral connectors	0.25" (6.35 mm) Fast-On
Transformer to controller	6 way connector plug
Mechanical	
Mounting	Controller: 4 x self-tapping screws ; Transformer: 4 x self-tapping screws
Controller Dimensions	112 x 89 x 30 mm (L x W x H)
Environmental	
Moisture Resistance	Circuitry splash proof by encapsulation of circuit board
Operating Temperature	-10°C to +55°C
Certification	CE, HC compatible and UL94 V-0 @ 1.5 mm

Electronic Controller Module

Mechanically all controllers share the same design. Each controller is labelled accordingly:

Features

MICROPROCESSOR CONTROL · START UP DELAY · VOLTAGE STABILISATION · AVS™ FUNCTION · INTELLIGENT TIMESAVE · SPLASH PROOF

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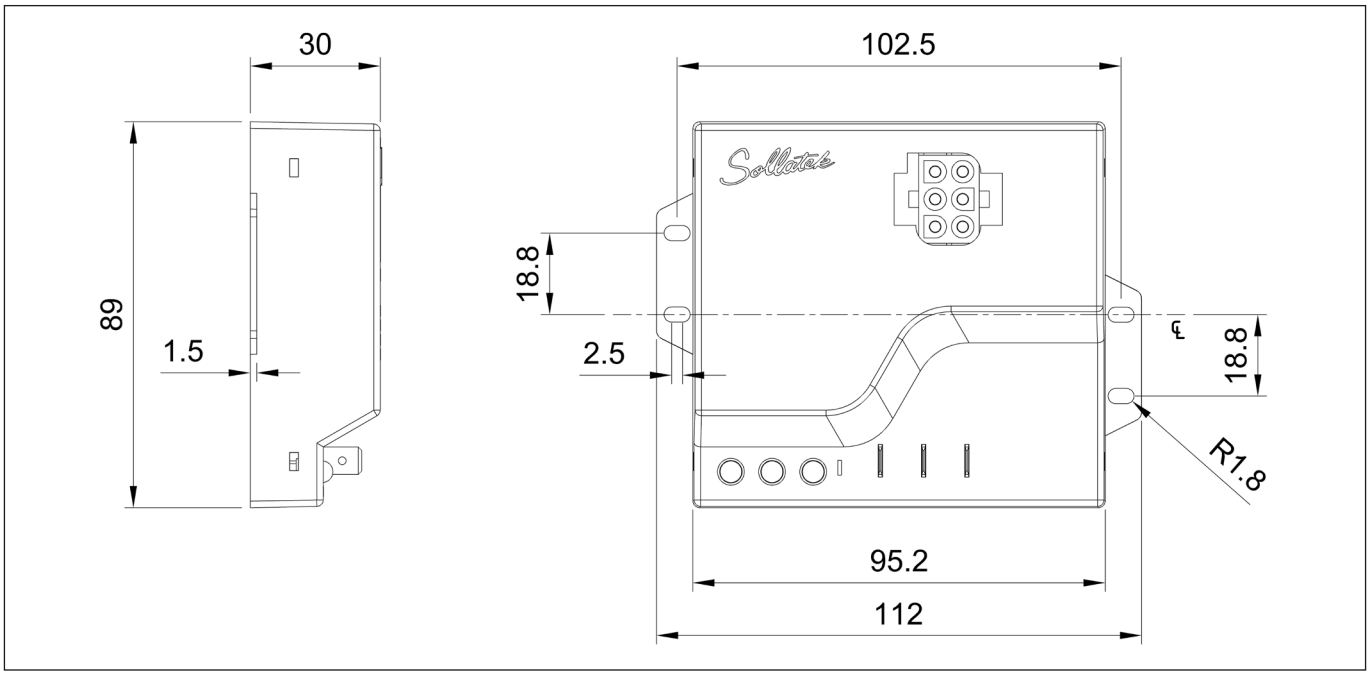
Input and Output Voltage Response

Input Voltage	Output Voltage						
	FSPE	FSPF	FSP		FSPM		FSPL
	230 V	230 V	115 V	230 V	115 V	230 V	230 V
70	OFF	OFF	OFF	OFF	OFF	OFF	OFF
73			91				
80			100				
85			107		97		
90			113		103		
95			108		108		
100			114		114		
110	200		110		112		
120	218		120		120		
130	236		116		115		
140	217		125		124		
145	225	196	130		128		
148	230	198	OFF		131		
150	233	204			OFF		
155	211	211		196			
160	218	224		202			
170	232	226		215			
171	233	237		216			195
180	209	240		227			205
182	212	219		230		207	207
190	221	230		214		217	217
200	233	242		225		229	228
210	210	220		236		239	210
220	220	230		220		222	220
230	230	240		230		232	230
240	205	218		214		240	240
250	214	227		222		221	250
260	222	236		231		230	OFF
270	231	245		240		239	
280	239	253		249		248	
290	OFF	257		258		257	
295		OFF		OFF		OFF	
300							

Electronic Controller Mechanical Drawing



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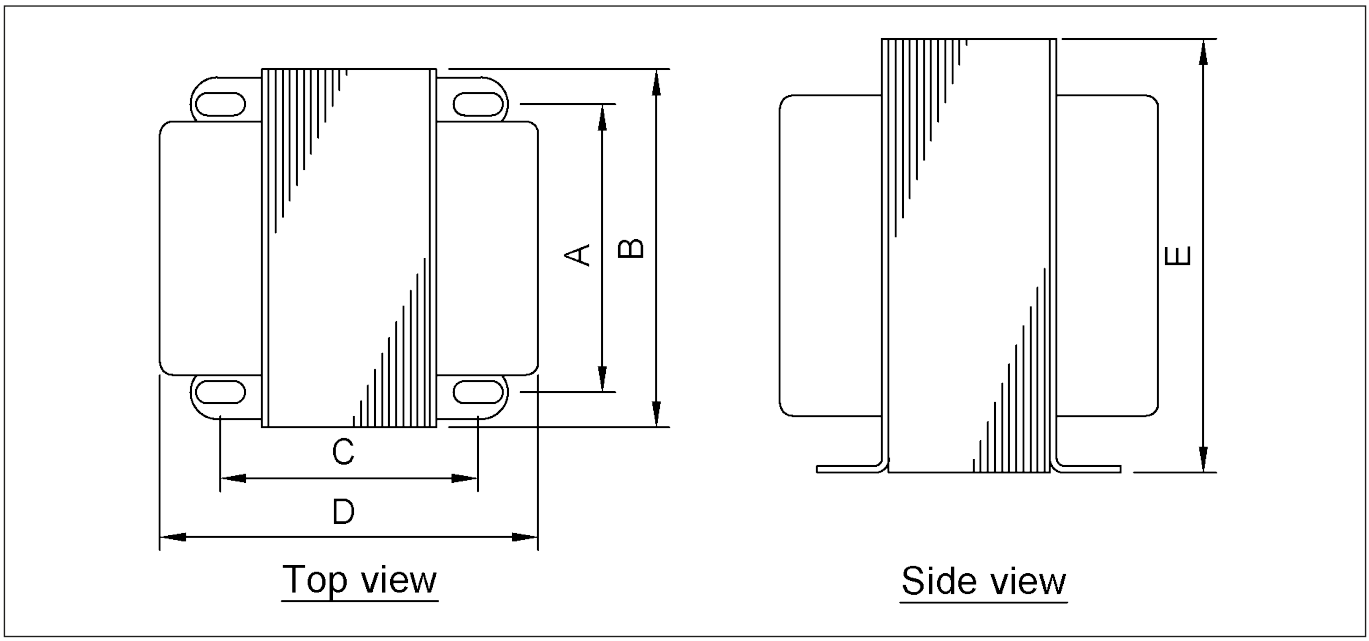
Transformer Dimensions

Part number		Long-term current (A)	Short-term Current (A)	Nominal Voltage (VAC)	Transformer Size (mm)				
					A	B	C	D	E
FSPE	FSPE2A	2.25	3.00	230	63	80	67	104	98
	FSPE03	3.00	4.00	230	63	80	80	117	98
	FSPE4B	4.50	6.00	230	79	95	101	136	115
FSPF	FSPF1B-2	1.50	2.00	230	63	80	49	86	98
	FSPF2A-2	2.25	3.00	230	63	80	49	86	98
	FSPF03-2	3.00	4.00	230	63	80	57	94	98
	FSPF4B-2	4.50	6.00	230	63	80	77	114	98
	FSPF06-2	6.00	8.00	230	79	95	67	104	115
	FSPF7B-2	7.50	10.00	230	79	95	77	114	115
FSP	FSP02-2	2.00	2.67	230	48	63	57	95	78
	FSP04-2	4.00	5.33	230	63	80	62	99	98
	FSP06-2	6.00	8.00	230	63	80	77	114	98
	FSP08-2	8.00	10.67	230	79	100	88	116	120
FSPM	FSPM06-1	6.00	8.00	115	48	63	52	89	78
	FSPM08-1	8.00	10.67	115	63	80	52	89	98
	FSPM12-1	12.00	14.00	115	63	80	52	94	98
FSPL	FSPL04-2	4.00	5.33	230	63	80	52	89	98
	FSPL06-2	6.00	8.00	230	63	80	57	94	98
	FSPL08-2	8.00	10.67	230	63	80	77	114	98

NB: Other sizes can be manufactured subject to requirement.

Transformer Mechanical Drawing



Part Number Key

The Sollatek FSPx range is easy to order. All model numbers indicate the current and voltage.

FSPx YY - Z*

Model Variation	Current (Amps)	Nominal Voltage
FSPE	eg: 01 = 1 A	eg: 1 = 115 V
FSPF	1A = 1.25 A	2 = 230 V
FSP	1B = 1.5 A	
FSPM	1C = 1.75 A	
FSPL		

* If voltage is omitted, then 230 V is assumed.

For more information on the Sollatek product range visit www.sollatek.com

Sollatek™ Intelligent Controls

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