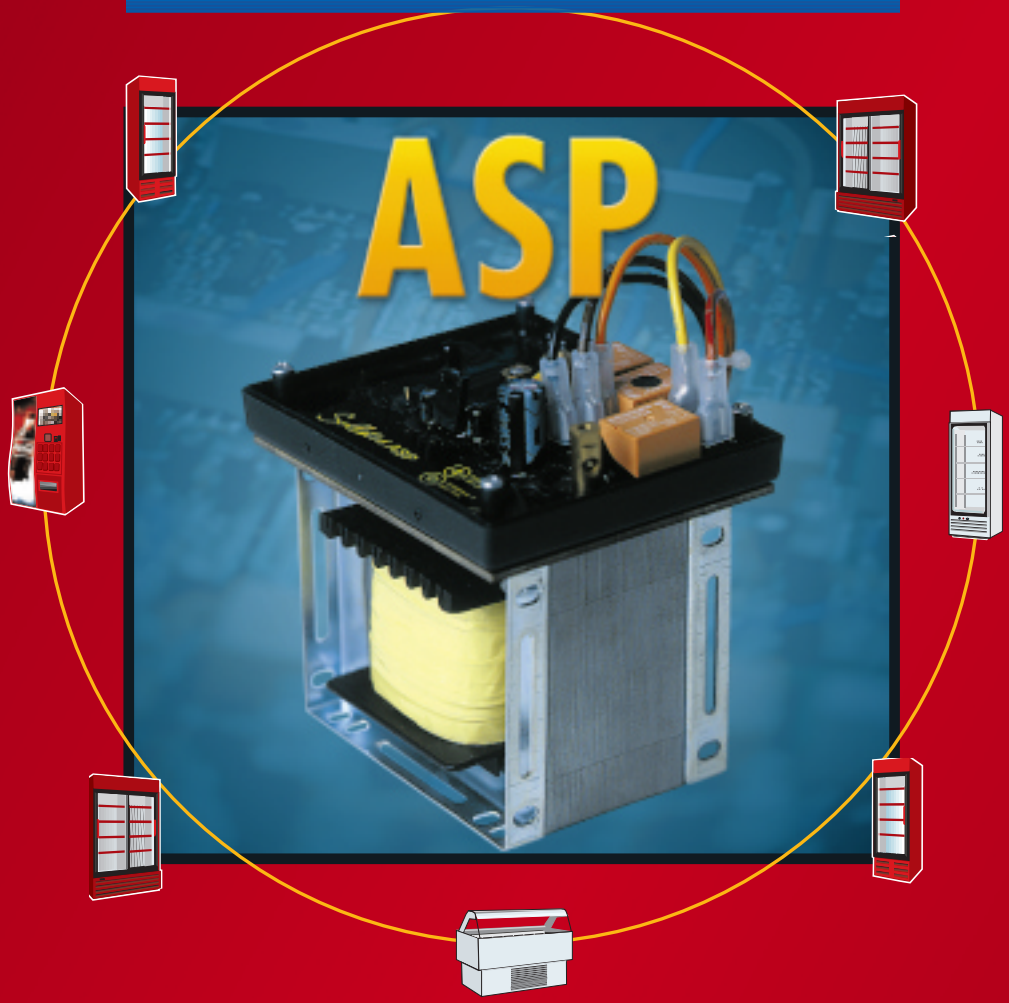
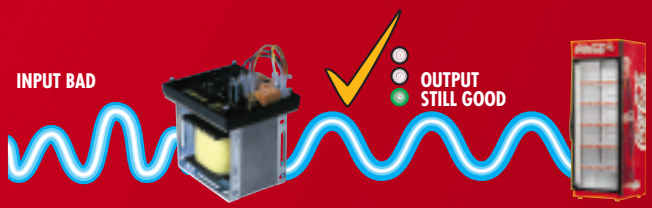
SOLLATEK ASP



THE SOLLATEK AUTOMATIC STABILISED PROTECTOR (ASP)

The Sollatek ASP
protects and provides clean stable power for

- **beverage machines**
- **drinks dispensers**
- **coolers**
- **chillers**
- **freezers**
- **refrigerated confectionery dispensers**
- **air conditioning equipment**
- **and all other refrigeration equipment**



Sollatek
The Power to Protect

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INTRODUCTION

Sollatek ASP

THE SOLLATEK AUTOMATIC STABILISED PROTECTOR

“ The Sollatek Automatic Stabilised Protector (Sollatek ASP) has been designed to provide a clean, regulated AC power supply to OEM equipment in environments with unreliable, fluctuating mains supply. ”

Voltage fluctuations can have a serious and detrimental effect on motors and compressors, reducing or eliminating their effective cooling output, and, very commonly, causing damage to the compressor. Now, there is a solution to this problem.

The Sollatek Automatic Stabilised Protector (Sollatek ASP) has been designed to provide a clean, regulated AC power supply to OEM equipment in environments with unreliable, fluctuating mains supply.

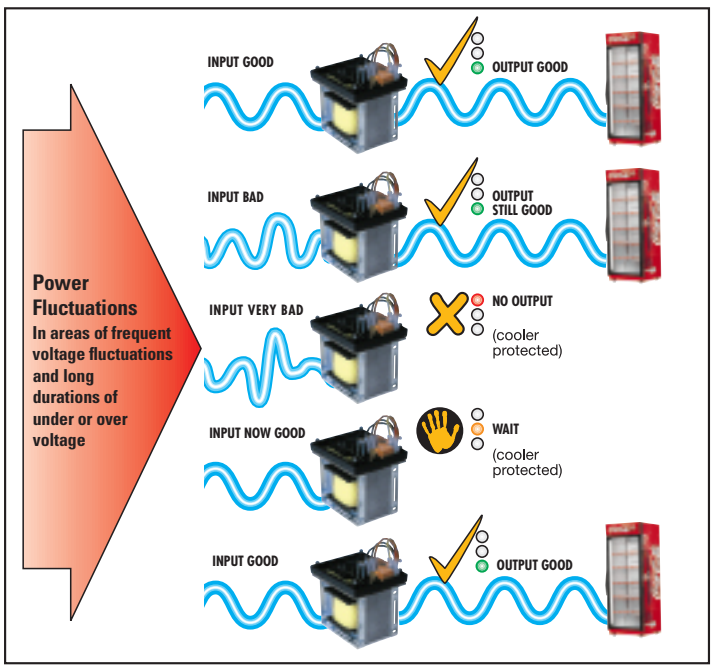
The Sollatek ASP has been developed in close collaboration with Coca-Cola Africa and Atlanta, Georgia.

Hundreds of thousands of Sollatek protectors are now in use in Fridges, Freezers, Bottle Coolers and Air-Conditioners worldwide and have proved to be extremely effective economically in reducing maintenance costs and down time.

In some countries the mains voltage is low or fluctuating most of the time. In these situations the compressor is certain to suffer damage in time and furthermore its cooling function is severely handicapped. In these situations the only solution is to fit a Sollatek ASP.

Outside these countries the Sollatek ASP can be depended on to greatly improve compressor reliability, in otherwise unreliable mains environments.

THE ASP PRINCIPLE



TYPE COMPARISON TABLE

The Sollatek ASP range is available in 3 different types;

ASP

ASPM

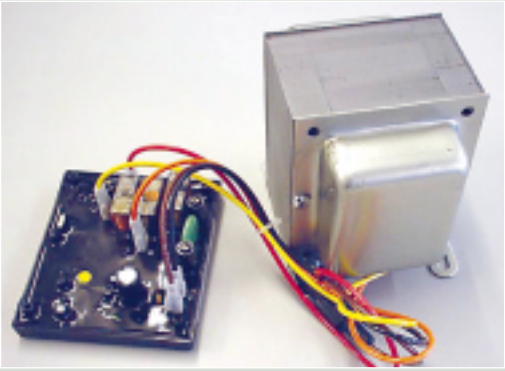
ASPL

The ASPM and the ASPL are lower spec variations of the ASP. The table below outlines the difference between the 3 different types.
For full voltage characteristics, refer to Table 5.

	ASP	ASPM	ASPL
LVD	✓	✓	✓
Large Boost	✓	✗	✗
Small Boost	✓	✓	✓
1:1	✓	✓	✓
Buck	✓	✓	✗
HVD	✓	✓	✓

***LVD**: low voltage disconnect **HVD**: high voltage disconnect* *Table 1.*

All of the above types are available in a shrouded version (add suffix S to model number, e.g. ASP04-22-S). Shrouding improves the protection rating of the transformer to IP24.



KEY TO MODEL TYPE

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

For example:

ASP03-22

- Amps
- Nominal Output voltage
- Nominal Input voltage

e.g.: 22 = 230/230V
11 = 115/115V
33 = 127/127V
21 = 230/115V

PRODUCT FEATURES

The Sollatek ASP has the following advanced features:

- **The Sollatek ASP boosts low voltage.**
- **The Sollatek ASP reduces high voltage.**
- **The Sollatek ASP disconnects the compressor, using its built-in Voltage Delay Switcher, when mains stabilisation within acceptable limits is outside its ability.**
- **Automatically reconnects the compressor, but only after the mains has remained within acceptable limits for a period of three minutes. This is to allow neutralisation of compressor gases, critical in such applications.**
- **Has a very wide voltage response range of 140V to 295V. (see page 5 for table of input and output voltage responses).**
- **Incorporates TIME SAVE™ intelligent delay to reduce off-time when the appliance has been switched off for over three minutes.**

TIMESAVE™

- Is OEM packed for water-splash resistance.
- Is simple to connect with only three wires:
  Live-In — From the mains inlet
  Live-Out — To the load
  Neutral — From the mains inlet
- Comprises two discreet components; the electronic control module (encapsulated for mechanical and environmental conditions) and the power transformer.
- Uses a unique zero voltage switching technique to achieve clean pure stabilised power.
- Incorporates full spike protection.
- Frequency compensated measurements.
- Frequency and voltage measurement smoothing in software to filter noise.
- Fault detection - senses if the measurements being made are unreasonable and disconnects output. Red and yellow LEDs flash alternately to indicate a fault.
- Wait bypass for ease of testing. Two test points are provided for the test/service engineer so that the ASP will go straight from 'yellow' state to 'green'.
- Under voltage blind period of 0.5 seconds to allow for load starting surge.

DIMENSIONS TABLE

Dims *(see Drawing 1 & 2)*
Size reference

	A	B	C	D	E
L	120	110	110	45	39
M	120	120	110	54	42
N	120	120	110	54	48
O	120	120	110	54	54
P	120	140	110	64	52
Q	120	140	110	64	60
R	120	140	110	64	74
S	118	160	115	64	66
T	118	160	130	64	79
U	137	170	125	89	65
V	137	170	131	89	71
W	137	170	144	89	84
X	137	170	156	89	97
Y	170	210	220	120	82
Z	170	210	230	120	92

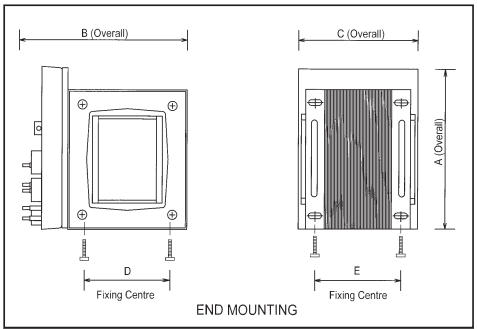
Table 2.

PRODUCT SELECTION TABLE

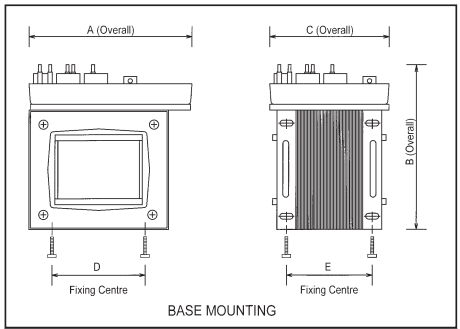
See Table 2

ASP Type	Size ref.	Amps	Voltage	ASPM Type	Size ref.	Amps	Voltage	ASPL Type	Size ref.	Amps	Voltage
230V				**230V**				**230V**			
ASP1C-22	N	1.75	230	ASPM1C-22	M	1.75	230	ASPL1C-22	L	1.75	230
ASP02-22	O	2	230	ASPM02-22	M	2	230	ASPL02-22	M	2	230
ASP03-22	P	3	230	ASPM03-22	O	3	230	ASPL03-22	N	3	230
ASP04-22	Q	4	230	ASPM04-22	P	4	230	ASPL04-22	P	4	230
ASP05-22	Q	5	230	ASPM05-22	P	5	230	ASPL05-22	P	5	230
ASP06-22	R	6	230	ASPM06-22	Q	6	230	ASPL06-22	P	6	230
ASP07-22	S	7	230	ASPM07-22	Q	7	230	ASPL07-22	Q	7	230
ASP08-22	T	8	230	ASPM08-22	R	8	230	ASPL08-22	Q	8	230
ASP09-22	U	9	230	ASPM09-22	R	9	230	ASPL09-22	R	9	230
ASP10-22	V	10	230	ASPM10-22	S	10	230	ASPL10-22	R	10	230
ASP12-22	W	12	230	ASPM12-22	T	12	230	ASPL12-22	T	12	230
ASP14-22	X	14	230	ASPM14-22	U	14	230	ASPL14-22	U	14	230
ASP16-22	X	16	230	ASPM16-22	V	16	230	ASPL16-22	V	16	230
ASP20-22	Y	20	230	ASPM20-22	X	20	230	ASPL20-22	X	20	230
ASP24-22	Z	24	230	ASPM24-22	X	24	230	ASPL24-22	X	24	230
110V				**110V**				**110V**			
ASP1C-11	L	1	115	ASPM1C-11	L	1	115	ASPL1C-11	L	1	115
ASP02-11	M	2	115	ASPM02-11	L	2	115	ASPL02-11	L	2	115
ASP03-11	M	3	115	ASPM03-11	L	3	115	ASPL03-11	L	3	115
ASP04-11	N	4	115	ASPM04-11	M	4	115	ASPL04-11	M	4	115
ASP05-11	O	5	115	ASPM05-11	M	5	115	ASPL05-11	M	5	115
ASP06-11	P	6	115	ASPM06-11	N	6	115	ASPL06-11	N	6	115
ASP07-11	P	7	115	ASPM07-11	O	7	115	ASPL07-11	N	7	115
ASP08-11	P	8	115	ASPM08-11	O	8	115	ASPL08-11	O	8	115
ASP09-11	Q	9	115	ASPM09-11	P	9	115	ASPL09-11	P	9	115
ASP10-11	Q	10	115	ASPM10-11	P	10	115	ASPL10-11	P	10	115
ASP12-11	R	12	115	ASPM12-11	P	12	115	ASPL12-11	P	12	115
ASP14-11	R	14	115	ASPM14-11	Q	14	115	ASPL14-11	P	14	115
ASP16-11	T	16	115	ASPM16-11	Q	16	115	ASPL16-11	Q	16	115
ASP20-11	U	20	115	ASPM20-11	R	20	115	ASPL20-11	R	20	115
ASP24-11	W	24	115	ASPM24-11	S	24	115	ASPL24-11	S	24	115
127V				**127V**				**127V**			
ASP1C-33	L	1	127	ASPM1C-33	L	1	127	ASPL1C-33	L	1	127
ASP02-33	M	2	127	ASPM02-33	L	2	127	ASPL02-33	L	2	127
ASP03-33	N	3	127	ASPM03-33	L	3	127	ASPL03-33	L	3	127
ASP04-33	O	4	127	ASPM04-33	M	4	127	ASPL04-33	M	4	127
ASP05-33	P	5	127	ASPM05-33	N	5	127	ASPL05-33	M	5	127
ASP06-33	P	6	127	ASPM06-33	N	6	127	ASPL06-33	N	6	127
ASP07-33	P	7	127	ASPM07-33	O	7	127	ASPL07-33	O	7	127
ASP08-33	P	8	127	ASPM08-33	O	8	127	ASPL08-33	P	8	127
ASP09-33	Q	9	127	ASPM09-33	P	9	127	ASPL09-33	P	9	127
ASP10-33	Q	10	127	ASPM10-33	P	10	127	ASPL10-33	P	10	127
ASP12-33	R	12	127	ASPM12-33	P	12	127	ASPL12-33	P	12	127
ASP14-33	S	14	127	ASPM14-33	Q	14	127	ASPL14-33	Q	14	127
ASP16-33	U	16	127	ASPM16-33	Q	16	127	ASPL16-33	R	16	127
ASP20-33	V	20	127	ASPM20-33	R	20	127	ASPL20-33	R	20	127
ASP24-33	W	24	127	ASPM24-33	T	24	127	ASPL24-33	S	24	127

Table 3.



Drawing 1



Drawing 2

Other sizes can be made subject to requirements if the following information is provided:

- Nominal Input Voltage
- Nominal Output Voltage
- Output current

SPECIFICATIONS

Parameter		Specifications
REGULATION RANGE		
		See Input/Output Voltage table 5
INPUT VOLTAGE LIMITS		
		See Input/Output Voltage table 5
SPIKE PROTECTION		
		160J, 6500 Amps (8/20µs). Response time <10 ns
OUTPUT CURRENT		
		See Product Selection Table 3
LEDs		
	Undervoltage	RED
	Overvoltage	RED
	Wait	AMBER
	Run	GREEN
CONNECTION DELAY		
	Intelligent Delay	Off time is reduced from 3 mins for minimal compressor down time.
	Delay Bypass	Connection delay can be bypassed using jumper on PCB
TECHNOLOGY		
	Zero Voltage Switching	Transformer tap switching takes place at zero point in voltage waveform
	Response time	Within 0.1 second
PERFORMANCE		
	Thermal endurance	Continuously rated at full load at full boost (full boost represents worst case)
	Over-voltage endurance	Runs continuously without damage at maximum permissible input voltage
ENVIRONMENTAL		
	Moisture resistance	Circuitry splashproof by encapsulation of circuit board

Table 4.

INPUT AND OUTPUT VOLTAGE RESPONSE

ASP

230V		115V		127V	
144	off	72	off	79	off
145	182	73	91	80	101
155	196	78	98	86	108
165	208	83	104	91	115
175	221	88	111	97	122
185	233	93	117	102	129
195	221	98	111	108	136
205	232	103	116	113	127
210	237	105	119	116	130
215	215	108	108	119	133
225	225	113	113	124	124
235	235	118	118	130	130
240	240	120	120	133	133
245	218	123	109	135	135
255	228	128	114	141	125
265	237	133	119	146	130
275	248	138	124	152	135
285	255	143	128	157	140
290	259	145	130	164	146
291	off	146	off	165	off

ASPM

230V		115V		127V	
158	off	78	off	86	off
160	182	79	89	88	100
165	188	83	95	92	105
175	200	88	100	97	111
185	211	93	106	103	117
195	222	98	112	108	123
205	234	103	117	114	130
210	239	105	120	116	132
215	245	108	123	119	136
225	225	113	113	125	125
235	235	118	118	130	130
240	240	120	120	133	133
245	245	123	123	136	136
255	226	128	113	141	125
265	235	133	118	147	130
275	243	138	122	152	135
285	252	143	127	158	140
290	257	145	128	160	142
291	off	147	off	165	off

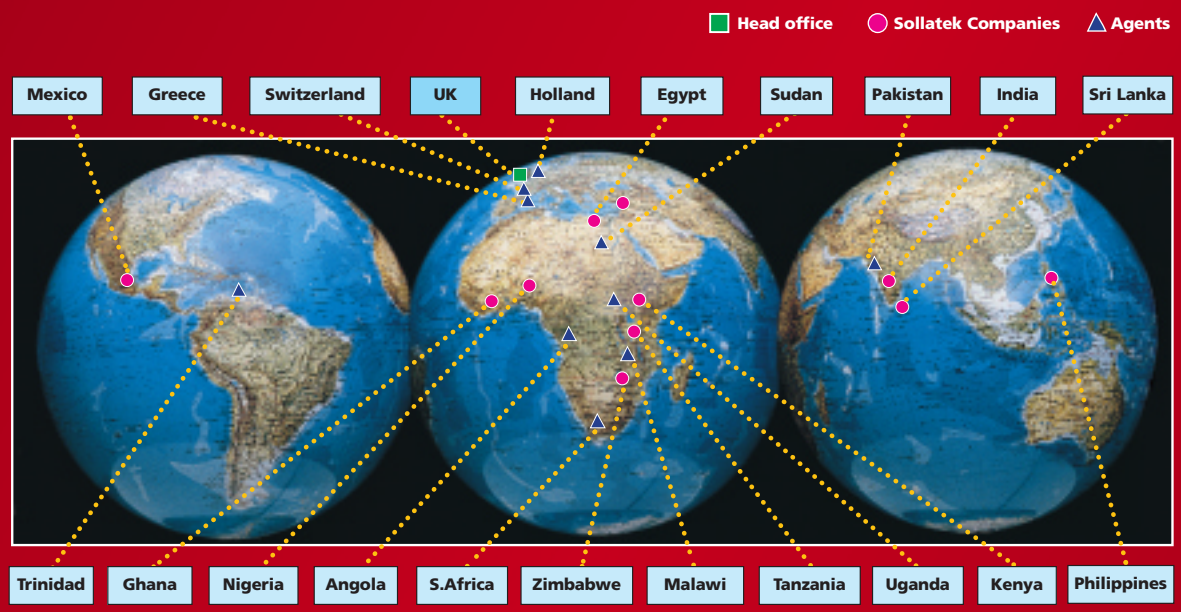
ASPL

230V		115V		127V	
158	off	78	off	86	off
160	182	79	89	88	100
165	188	83	95	92	105
175	200	88	100	97	111
185	211	93	106	103	117
195	222	98	112	108	123
205	234	103	117	114	130
210	239	105	120	116	132
215	245	108	123	119	136
225	225	113	113	125	125
235	235	118	118	130	130
240	240	120	120	133	133
245	245	123	123	136	136
255	255	127	127	142	142
259	259	129	129	146	146
260	off	130	off	147	off

Table 5.

SUPPORT

SOLLATEK WORLDWIDE COMPANIES AND AGENTS



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2 YEARS WORLDWIDE WARRANTY ON ALL SOLLATEK PRODUCTS

Sollatek provides you with full back up support and a two year worldwide warranty on all products, with local support in over twenty countries worldwide.

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