### **AC Variable Transformers**

Single & Three Phase



## **AC Variable Transformers**

### Accurate, Reliable and Long Lasting Voltage Control - for a diverse variety of applications.

Sinalda's Setavolt<sup>™</sup> Variable Transformers offer a full range of single and three phase models. Standard models include input voltages from 120VAC to 480VAC and 3 to over 800 Amps. Special units for voltages up to 1000VAC are available to order. They are categorized by their input voltage, output voltage and number of phases. If you do not find the transformer that meets your application requirements, please contact us with your detailed specifications.

While today there are many modern alternatives to the Variable Transformer for controlling voltage, the load tolerant nature of the Variable Transformer ensures that it is still the best and most reliable method of control for a large variety of applications where stepless control of a distortion-free AC output and dependent parameters are essential.

Typical uses include quality control testing, electronic equipment burn-in, low voltage performance evaluation, DC rectifier / regulator analysis or other industrial and engineering applications.

Our endurable ranges of variable transformers all deliver an efficient and trouble free method of varying AC voltages with an output from zero to line voltage.

# Ranges Available -

### SA SERIES - SINGLE PHASE

Manually operated variable transformers from 3 to over 100 amps.

HB Models	- 220V to 240V	> Page 3
LB Models	- 110V to 120V	> Page 4



Manually operated variable transformers from 3 to over 60 amps.

HB Models	- 380V to 415V	> Page 5 & 8
	- 440V to 480V	> Page 6 & 9
LB Models	- 190V to 208V	> Page 7 & 10



#### **mSA SERIES** - SINGLE & THREE PHASE

Single & Three Phase motorized variable transformers from 3 to over 150 amps.

- 220V to 240V	> Page 11
- 110V to 120V	> Page 12
- 380V to 415V	> Page 13
- 440V to 480V	> Page 14
- 190V to 208V	> Page 15
	<ul> <li>220V to 240V</li> <li>110V to 120V</li> <li>380V to 415V</li> <li>440V to 480V</li> <li>190V to 208V</li> </ul>



#### **ISA SERIES -** THREE PHASE

Three Phase oil immersed motorized induction variable transformers from 150 to 800 amps

H Models - 380V to 415V > Page 16



AC Variable Transformer Single & Three Phase

### 3 to over 800 Amps



### FEATURES

- High Efficiency & Excellent Regulation
- Distortion Less Voltage Control
- Low Operating Torque
- Trouble Free Endurable Mechanical Construction for Long Life
- Negligible Maintenance
- Straight forward Installation & Use
- Compliance with International Standards
- CE Conformity & RoHS Compliance
- 1 Year / 12 Months Warranty

**NB:** For applications where the Frequency is also required to be changed, please ask for details on our range of **FCL** Static Variable Output Voltage & Frequency Converters.





### **Proven and Endurable Design**

sinalda

The basic variable auto-transformer consists of a copper winding on a toroidal core of laminated, grain-oriented, silicon steel. A carbon brush, connected to an output terminal, is rotated over the length of a precision-ground, commutator track to tap off voltage at any turn from zero volts to the maximum output voltage of the winding.

Unlike a standard fixed ratio transformer, Setavolt<sup>TM</sup> variable transformers are designed to provide an infinitely variable step less output voltage that can be adjusted from 0 to 117% of the transformer's input voltage.

#### **Design Features**

#### High Efficiency & Excellent Regulation

In contrast to current hungry rheostats and other resistive type voltage controllers, Setavolt<sup>™</sup> variable auto-transformers have an extremely small power loss, delivering efficiency of 98% or better.

Within the transformer ratings, our variable transformers deliver, from no-load to full load current, negligible variation in output voltage.

#### Distortion Less Voltage Control

Due to the superiority of the core design and quality of the steel grade utilised, Setavolt<sup>™</sup> Variable Transformers provide a facsimile of the input waveform with negligible distortion - an essential feature required by many electronic applications.

#### 🥖 🛛 Low Operating Torque

Due to the ultra smooth commutator surface, correct and constant contact pressure of the brush on the commutator, combined with the firm positioning of the coil and internal components ensures all Setavolt<sup>™</sup> Variable Transformers deliver a low operating torque.

#### Trouble Free Mechanical Construction for Long Life

All Setavolt™ variable transformers are designed for heavy-duty and trouble free operation.

Built to exacting mechanical tolerances, using the finest materials available, the quality of design and build ensures minimal maintenance requirements and enhanced design life.



#### 💅 Negligible Maintenance

When operated in accordance with the operating instructions, the only component that may require periodic inspection and occasional replacement are the brushes. As the brushes are made of a special highly endurable carbon and the design ensures proper contact with the commutator at all times, the need for replacement is infrequent.

#### 🖌 Straight forward Installation & Use

Whether for bench use or panel mounting, installation, mounting and use is designed to be easy. Terminals are easily accessible screw or lug. Output, on manually operated variable transformers, is controlled by either clockwise or anti-clockwise knob rotation.

#### 🥖 International Standards Compliance & CE Conformity

All Setavolt<sup>™</sup> variable transformers are designed and manufactured to comply with all relevant International Standards and appropriate European Union CE Directives.

#### **Typical Applications**

- Quality Control Testing
- Electronic Equipment Burn-In
- Low Voltage Performance Evaluation
- Test Benches
- Lighting Dimmers
- High Voltage Test Sets

- Furnace Transformers
- DC Rectifiers





### THREE PHASE - MANUAL AC VARIABLE TRANSFORMERS - 380 to 415V

### **SA-HB SERIES**

Manually operated 380V to 415V three phase variable transformers from 3 to 60 amps - delivering an efficient and trouble free method of varying AC voltages with an output from zero to 117% of line voltage.

Supplied as standard in IP20 (NEMA 1 style) enclosures with terminal covers, the casings can easily be removed for 'Open' style applications.



Amps Press         Setsvolt Model         Nominal Voits AC         VX A flag         Output Voits         Voits AC         VX + H J (mn)         Veight (kg)           3         Amps         SA-3203-HB         380/V         2.3         0 to 445V         Ist X 330 x 210         18           3         Amps         400V         2.4         0 to 485V         Ist X 330 x 210         18           5         Amps         SA-3205-HB         380V         3.9         0 to 445V         184 x 330 x 210         20           10         SA-3216-HB         380V         7.7         0 to 445V         215 x 390 x 260         30           11         Amps         400V         8.1         0 to 485V         215 x 390 x 260         30           12.0         SA-3216-HB         380V         11.6         0 to 445V         300 x 500 x 345         54           20         SA-3226-HB         380V         15.4         0 to 468V         300 x 500 x 345         54           215         SA-3226-HB         380V         15.4         0 to 485V         300 x 500 x 345         54           22.0         SA-3220-HB         380V         12.2         0 to 485V         300 x 500 x 345         72           3.0         <	SA-HE Chart	SA-HB SERIES - Model Selection Chart						
3         SA-3203-HB         380V         2.3         0 to 445V           400V         2.4         0 to 465V         164 x 390 x 210         18           5         SA-3205-HB         380V         3.9         0 to 445V         164 x 390 x 210         20           5         SA-3205-HB         380V         3.9         0 to 445V         164 x 390 x 210         20           10         SA-3216-HB         380V         7.7         0 to 445V         215 x 390 x 260         30           11         SA-3216-HB         380V         11.6         0 to 445V         215 x 390 x 260         30           15         SA-3216-HB         380V         11.6         0 to 445V         20         38           20         SA-3220-HB         380V         15.4         0 to 445V         300 x 500 x 345         54           21         SA-3220-HB         380V         16.4         0 to 445V         300 x 500 x 345         54           22.5         SA-3220-HB         380V         12.6         0 to 445V         300 x 500 x 345         65           33.6         SA-3220-HB         380V         22.0         0 to 445V         300 x 500 x 345         72           3415V         25.0	Amps per Phase	Setavolt Model	Nominal Volts AC	kVA @max output volts	Output Volts AC	Dimensions W x H x D (mm)	Weight (kgs)	SA-3203 to 3215-HE
Amps       400V       2.4       0 to 468V       164 x 390 x 210       18         5       Amps       SA-3205-HB       380V       3.9       0 to 445V       164 x 390 x 210       20         10       SA-3205-HB       380V       3.9       0 to 445V       164 x 390 x 210       20         10       Amps       SA-3210-HB       380V       7.7       0 to 468V       215 x 390 x 260       30         10       SA-3215-HB       380V       11.6       0 to 468V       215 x 390 x 260       30         15       SA-3215-HB       380V       11.6       0 to 445V       300 x 500 x 345       54         20       SA-3220-HB       380V       15.4       0 to 485V       300 x 500 x 345       54         21       SA-322-HB       380V       15.4       0 to 445V       300 x 500 x 345       65         3.0       SA-322-HB       380V       12.1       0 to 445V       300 x 500 x 345       75         3.0       SA-323-HB       380V       23.1       0 to 445V       300 x 500 x 345       75         3.0       SA-323-HB       380V       22.6       0 to 485V       300 x 500 x 345       75         3.0       SA-3240-HB       380V	3	SA-3203-HB	380V	2.3	0 to 445V			
415V       2.5       0 to 485V         5       SA-326-HB       380V       3.9       0 to 445V       164 x 390 x 210       20         10       SA-3210-HB       380V       7.7       0 to 485V       164 x 390 x 210       20         10       SA-3210-HB       380V       7.7       0 to 485V       215 x 390 x 260       30         11       SA-3210-HB       380V       11.6       0 to 485V       215 x 390 x 260       30         15       SA-3215-HB       380V       11.6       0 to 485V       240 x 480 x 285       38         200       Mays       400V       16.2       0 to 485V       300 x 500 x 345       54         21       SA-3220-HB       380V       15.4       0 to 445V       300 x 500 x 345       54         30       SA-3220-HB       380V       19.3       0 to 445V       300 x 500 x 345       72         30       SA-3220-HB       380V       23.1       0 to 445V       300 x 500 x 345       72         31       SA-3220-HB       380V       23.1       0 to 445V       300 x 500 x 345       75         33       SA-3240-HB       380V       30.8       0 to 445V       300 x 500 x 345       75	Amps		400V	2.4	0 to 468V	164 x 390 x 210	18	
5         SA-3295-HB         380V         3.9         0 to 445V         164 x 390 x 210         20           10         Xings         SA-3210-HB         380V         7.7         0 to 485V         164 x 390 x 210         20           10         Xings         SA-3210-HB         380V         7.7         0 to 445V         300         Xings         Xings         400V         8.1         0 to 485V         215 x 390 x 260         30           15         Xings         Xings <th></th> <th></th> <td>415V</td> <td>2.5</td> <td>0 to 485V</td> <td></td> <td></td> <td></td>			415V	2.5	0 to 485V			
Amps       400V       4.1       0 to 468V       164 x 390 x 210       20         10       Amps       415V       4.2       0 to 485V       30         10       SA-3210-HB       380V       7.7       0 to 445V       30         11       Amps       400V       8.1       0 to 468V       215 x 390 x 260       30         15       SA-3215-HB       380V       11.6       0 to 468V       240 x 480 x 285       38         20       Xmps       400V       12.2       0 to 468V       240 x 480 x 285       38         20       Xmps       400V       16.2       0 to 485V       300 x 500 x 345       54         21       Xmps       400V       16.2       0 to 485V       300 x 500 x 345       54         21       Xmps       400V       20.3       0 to 485V       300 x 500 x 345       65         30       SA-3230-HB       380V       23.1       0 to 485V       300 x 500 x 345       75         31       400V       24.3       0 to 485V       300 x 500 x 345       75         31       400V       22.4       0 to 485V       300 x 500 x 345       75         32       SA-3230-HB       380V       32.4<	5	SA-3205-HB	380V	3.9	0 to 445V			
415V       4.2       0 to 485V         10       SA-3210-HB       380V       7.7       0 to 445V         Amps       400V       8.1       0 to 468V       215 x 390 x 260       30         15       SA-3215-HB       380V       11.6       0 to 468V       240 x 480 x 285       38         20       Amps       400V       12.2       0 to 468V       240 x 480 x 285       38         20       SA-3220-HB       380V       15.4       0 to 445V       300 x 500 x 345       54         21       SA-3225-HB       380V       19.3       0 to 468V       300 x 500 x 345       65         30       SA-3230-HB       380V       23.1       0 to 468V       300 x 500 x 345       72         31       400V       24.3       0 to 468V       300 x 500 x 345       75         31       Amps       400V       24.3       0 to 468V       300 x 500 x 345       75         34       15V       22.2       0 to 485V       300 x 500 x 345       75       75         35       SA-3230-HB       380V       27.0       0 to 485V       300 x 500 x 345       75         400       28.4       0 to 468V       300 x 500 x 345       75	Amps		400V	4.1	0 to 468V	164 x 390 x 210	20	
10       SA-3210-HB       380V       7.7       0 to 445V       SA-3210-HB       380V       8.1       0 to 468V       215 x 390 x 260       30         15       SA-3215-HB       380V       11.6       0 to 445V       30       38       39			415V	4.2	0 to 485V			
Amps       400V       8.1       0 to 468V       215 x 390 x 260       30         15       Xamps       415V       8.4       0 to 485V       30         15       Xamps       400V       12.2       0 to 468V       240 x 480 x 285       38         20       Xamps       415V       12.6       0 to 468V       240 x 480 x 285       38         21       Xamps       400V       16.2       0 to 468V       300 x 500 x 345       54         25       Xa-3225-HB       380V       19.3       0 to 445V       300 x 500 x 345       65         30       Xamps       400V       20.3       0 to 468V       300 x 500 x 345       65         30       Xa-323-HB       380V       23.1       0 to 445V       300 x 500 x 345       72         31       Xamps       400V       24.3       0 to 468V       300 x 500 x 345       75         32       Xa-323-HB       380V       27.0       0 to 445V       300 x 500 x 345       75         40       Xamps       Xamps       400V       28.4       0 to 468V       300 x 500 x 345       75         40       Xamps       30.8       0 to 445V       300 x 920 x 400       142 <tr< th=""><th>10</th><th>SA-3210-HB</th><td>380V</td><td>7.7</td><td>0 to 445V</td><td></td><td></td><td>SA-3220 to 3235-HB</td></tr<>	10	SA-3210-HB	380V	7.7	0 to 445V			SA-3220 to 3235-HB
415V       8.4       0 to 485V         15       SA-3215-HB       380V       11.6       0 to 445V         Amps       400V       12.2       0 to 468V       240 x 480 x 285       38         20       SA-3220-HB       380V       15.4       0 to 445V       300 x 500 x 345       54         21       Amps       400V       16.2       0 to 485V       300 x 500 x 345       54         25       SA-3225-HB       380V       19.3       0 to 445V       300 x 500 x 345       65         30       SA-3230-HB       380V       23.1       0 to 445V       300 x 500 x 345       72         31       400V       24.3       0 to 468V       300 x 500 x 345       72         31       5A-3230-HB       380V       23.1       0 to 468V       300 x 500 x 345       72         35       SA-3230-HB       380V       27.0       0 to 485V       300 x 500 x 345       75         415V       29.4       0 to 468V       300 x 500 x 345       75       145V       33.5       0 to 485V       300 x 500 x 345       75         400V       38.6       0 to 445V       300 x 920 x 400       142       145V       33.5       0 to 485V       300 x 920 x 400 </th <th>Amps</th> <th></th> <td>400V</td> <td>8.1</td> <td>0 to 468V</td> <td>215 x 390 x 260</td> <td>30</td> <td></td>	Amps		400V	8.1	0 to 468V	215 x 390 x 260	30	
15       SA-3215-HB       380V       11.6       0 to 445V       240 x 480 x 285       38         20       SA-3220-HB       380V       15.4       0 to 445V       300 x 500 x 345       54         21       SA-3220-HB       380V       15.4       0 to 445V       300 x 500 x 345       54         22       SA-3225-HB       380V       19.3       0 to 445V       300 x 500 x 345       65         23.0       SA-3220-HB       380V       23.1       0 to 445V       300 x 500 x 345       72         30       SA-3230-HB       380V       23.1       0 to 445V       300 x 500 x 345       72         31.0       SA-3230-HB       380V       27.0       0 to 445V       300 x 500 x 345       75         31.5       SA-3230-HB       380V       27.0       0 to 445V       300 x 500 x 345       75         31.5       SA-3230-HB       380V       22.4       0 to 485V       300 x 500 x 345       75         415V       29.4       0 to 485V       300 x 500 x 425       100         Amps       400V       38.6       0 to 445V       300 x 920 x 400       142         50       SA-32202-HB       380V       38.6       0 to 445V       300 x 920 x 400<			415V	8.4	0 to 485V			9
Amps       400V       12.2       0 to 468V       240 x 480 x 285       38         20       SA-3220-HB       380V       15.4       0 to 445V       400V       16.2       0 to 468V       300 x 500 x 345       54         21       Amps       400V       16.2       0 to 468V       300 x 500 x 345       54         25       SA-3225-HB       380V       19.3       0 to 468V       300 x 500 x 345       65         30       SA-3230-HB       380V       21.0       0 to 468V       300 x 500 x 345       72         30       SA-3230-HB       380V       23.1       0 to 468V       300 x 500 x 345       72         35       SA-3235-HB       380V       27.0       0 to 468V       300 x 500 x 345       75         400       28.4       0 to 468V       300 x 500 x 345       75         415V       29.4       0 to 468V       300 x 500 x 345       75         400       380V       32.4       0 to 468V       300 x 500 x 345       100         415V       33.5       0 to 468V       300 x 920 x 400       142         400V       36.6       0 to 468V       300 x 920 x 400       142         60       SA-3220-HB       380V	15	SA-3215-HB	380V	11.6	0 to 445V			
415V       12.6       0 to 485V         20       SA-3220-HB       380V       15.4       0 to 445V         Amps       400V       16.2       0 to 468V       300 x 500 x 345       54         25       SA-3225-HB       380V       19.3       0 to 468V       300 x 500 x 345       65         30       SA-3225-HB       380V       21.0       0 to 468V       300 x 500 x 345       65         30       SA-3230-HB       380V       23.1       0 to 468V       300 x 500 x 345       72         30       SA-3230-HB       380V       23.1       0 to 468V       300 x 500 x 345       72         31       415V       25.2       0 to 468V       300 x 500 x 345       75       74         35       SA-3235-HB       380V       27.0       0 to 468V       300 x 500 x 345       75         415V       29.4       0 to 468V       300 x 500 x 345       75       75         400V       32.4       0 to 468V       300 x 500 x 425       100         415V       33.5       0 to 468V       300x 920 x 400       142         400V       40.6       0 to 468V       300 x 920 x 400       142         60       SA-32202-HB <td< th=""><th>Amps</th><th></th><td>400V</td><td>12.2</td><td>0 to 468V</td><td>240 x 480 x 285</td><td>38</td><td></td></td<>	Amps		400V	12.2	0 to 468V	240 x 480 x 285	38	
20 Arrps       SA-3220-HB       380V       15.4       0 to 445V       300 x 500 x 345       54         Arrps       400V       16.2       0 to 468V       300 x 500 x 345       54         25 Arrps       SA-3225-HB       380V       19.3       0 to 445V       300 x 500 x 345       65         30 Arrps       SA-3225-HB       380V       20.3       0 to 445V       300 x 500 x 345       65         30 Arrps       SA-3230-HB       380V       23.1       0 to 445V       300 x 500 x 345       72         315 Arrps       SA-3235-HB       380V       27.0       0 to 445V       300 x 500 x 345       75         415V       25.2       0 to 445V       300 x 500 x 345       75       75         400       28.4       0 to 445V       300 x 500 x 345       75         400       28.4       0 to 445V       300 x 500 x 345       75         400       31.5       0 to 445V       300 x 500 x 345       75         50       SA-32252-HB       380V       38.6       0 to 445V       300 x 920 x 400       142         415V       32.6       0 to 445V       300 x 920 x 400       142       145V         60       SA-32302-HB       380V			415V	12.6	0 to 485V			
Amps       400V       16.2       0 to 468V       300 x 500 x 345       54         25       SA-3225-HB       380V       19.3       0 to 445V       300 x 500 x 345       65         30       SA-3225-HB       380V       20.3       0 to 445V       300 x 500 x 345       65         30       SA-3230-HB       380V       23.1       0 to 445V       300 x 500 x 345       72         30       SA-3235-HB       380V       23.1       0 to 445V       300 x 500 x 345       72         35       SA-3235-HB       380V       27.0       0 to 445V       300 x 500 x 345       75         400       28.4       0 to 468V       300 x 500 x 345       75       75         40       Amps       400V       28.4       0 to 468V       300 x 500 x 345       75         40       Amps       400V       32.4       0 to 468V       370 x 560 x 425       100         Amps       400V       32.4       0 to 468V       300 x 920 x 400       142         50       SA-32252-HB       380V       38.6       0 to 445V       300 x 920 x 400       142         60       SA-32202-HB       380V       46.3       0 to 445V       300 x 920 x 400       150	20	SA-3220-HB	380V	15.4	0 to 445V			
415V       16.8       0 to 485V         25       SA-3225-HB       380V       19.3       0 to 445V         400V       20.3       0 to 468V       300 x 500 x 345       65         30       SA-3230-HB       380V       23.1       0 to 445V         Amps       400V       24.3       0 to 445V       72         415V       25.2       0 to 445V       300 x 500 x 345       72         35       SA-3235-HB       380V       27.0       0 to 445V       300 x 500 x 345       75         400       28.4       0 to 485V       300 x 500 x 345       75       75         40       SA-3235-HB       380V       27.0       0 to 445V       300 x 500 x 345       75         40       XAmps       400V       28.4       0 to 485V       300 x 500 x 345       75         40       XAmps       400V       32.4       0 to 485V       300 x 500 x 345       100         40       XAmps       400V       32.4       0 to 485V       300 x 920 x 400       142         50       SA-32252-HB       380V       38.6       0 to 445V       300 x 920 x 400       142         60       XAmps       400V       46.3       0 to 44	Amps		400V	16.2	0 to 468V	300 x 500 x 345	54	
25 Amps         SA-3225-HB         380V         19.3         0 to 445V         300 x 500 x 345         65         SA-3240-HB           30 Amps         SA-3230-HB         380V         23.1         0 to 445V         300 x 500 x 345         72           30 Amps         SA-3230-HB         380V         23.1         0 to 445V         300 x 500 x 345         72           35 Amps         SA-3230-HB         380V         27.0         0 to 445V         300 x 500 x 345         72           400 Amps         SA-3235-HB         380V         27.0         0 to 445V         300 x 500 x 345         75           400 Amps         SA-3240-HB         380V         27.0         0 to 445V         300 x 500 x 345         75           400 Amps         SA-3240-HB         380V         30.8         0 to 445V         300 x 500 x 345         75           400 Amps         SA-3240-HB         380V         30.8         0 to 445V         370 x 560 x 425         100           415V         33.5         0 to 445V         300x 920 x 400         142         145V         300 x 920 x 400         142           60 Amps         SA-32302-HB         380V         46.3         0 to 445V         300 x 920 x 400         150           With			415V	16.8	0 to 485V			
Amps       400V       20.3       0 to 468V       300 x 500 x 345       65       SA-3240-HB         30       Amps       AAA       AAA       AAAA       AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	25	SA-3225-HB	380V	19.3	0 to 445V			
415V       21.0       0 to 485V         30       SA-3230-HB       380V       23.1       0 to 445V         Amps       400V       24.3       0 to 445V         415V       25.2       0 to 485V       72         35       SA-3235-HB       380V       27.0       0 to 445V         Amps       415V       25.2       0 to 485V       300 x 500 x 345       72         40       SA-3235-HB       380V       27.0       0 to 445V       300 x 500 x 345       75         40       SA-3240-HB       380V       30.8       0 to 445V       75       100         415V       29.4       0 to 485V       70 x 560 x 425       100       145V       150         50       SA-32252-HB       380V       38.6       0 to 445V       300 x 920 x 400       142         60       SA-32302-HB       380V       46.3       0 to 445V       300 x 920 x 400       150         415V       42.0       0 to 485V       300 x 920 x 400       150         400V       48.6       0 to 485V       300 x 920 x 400       150	Amps		400V	20.3	0 to 468V	300 x 500 x 345	65	SA-3240-HB
30 Amps         SA-3230-HB         380V         23.1         0 to 445V           Amps         400V         24.3         0 to 468V         300 x 500 x 345         72           35 Amps         SA-3235-HB         380V         27.0         0 to 468V         300 x 500 x 345         75           415V         25.2         0 to 468V         300 x 500 x 345         75           400V         28.4         0 to 468V         300 x 500 x 345         75           400         28.4         0 to 468V         300 x 500 x 345         75           400         28.4         0 to 468V         300 x 500 x 345         75           40         SA-3240-HB         380V         30.8         0 to 445V         400V           Amps         400V         32.4         0 to 468V         370 x 560 x 425         100           50         SA-32252-HB         380V         38.6         0 to 445V         300 x 920 x 400         142           60         SA-32302-HB         380V         46.3         0 to 445V         300 x 920 x 400         150           Amps         400V         48.6         0 to 468V         300 x 920 x 400         150           Mith Casing Terminal Covers         415V         50.4			415V	21.0	0 to 485V			
Amps       400V       24.3       0 to 468V       300 x 500 x 345       72         35       SA-3235-HB       380V       27.0       0 to 445V       300 x 500 x 345       75         415V       25.2       0 to 445V       300 x 500 x 345       75         400V       28.4       0 to 468V       300 x 500 x 345       75         400       28.4       0 to 468V       300 x 500 x 345       75         40       SA-3240-HB       380V       30.8       0 to 445V       400V       400V         Amps       Adov       30.8       0 to 445V       300 x 500 x 345       75       100         50       SA-32252-HB       380V       38.6       0 to 445V       300 x 920 x 400       142         60       SA-32302-HB       380V       46.3       0 to 445V       300 x 920 x 400       150         60       SA-32302-HB       380V       46.3       0 to 445V       300 x 920 x 400       150         415V       50.4       0 to 468V       300 x 920 x 400       150	30	SA-3230-HB	380V	23.1	0 to 445V			
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Amps       400V       28.4       0 to 468V       300 x 500 x 345       75         415V       29.4       0 to 485V       75       75         40       SA-3240-HB       380V       30.8       0 to 445V       70 x 560 x 425       100         Amps       400V       32.4       0 to 468V       370 x 560 x 425       100       100         50       SA-32252-HB       380V       38.6       0 to 445V       300x 920 x 400       142         50       SA-32202-HB       380V       46.3       0 to 445V       300x 920 x 400       142         60       SA-32302-HB       380V       46.3       0 to 445V       300 x 920 x 400       150         60       Amps       400V       48.6       0 to 485V       300 x 920 x 400       150         415V       50.4       0 to 485V       300 x 920 x 400       150       With Casing Terminal Covers	35	SA-3235-HB	380V	27.0	0 to 445V			2
415V         29.4         0 to 485V           40         SA-3240-HB         380V         30.8         0 to 445V           Amps         400V         32.4         0 to 468V         370 x 560 x 425         100           50         SA-32252-HB         380V         38.6         0 to 445V         300x 920 x 400         142           60         SA-32302-HB         380V         46.3         0 to 445V         300 x 920 x 400         150           60         SA-32302-HB         380V         46.3         0 to 445V         300 x 920 x 400         150           610         SA-32302-HB         380V         46.3         0 to 445V         300 x 920 x 400         150	Amps		400V	28.4	0 to 468V	300 x 500 x 345	75	(
40 Amps         SA-3240-HB         380V         30.8         0 to 445V           Amps         400V         32.4         0 to 468V         370 x 560 x 425         100           415V         33.5         0 to 468V         370 x 560 x 425         100           50         SA-32252-HB         380V         38.6         0 to 445V           Amps         400V         40.6         0 to 468V         300x 920 x 400         142           60         SA-32202-HB         380V         46.3         0 to 445V         With Casing Terminal Covers           415V         50.4         0 to 485V         300 x 920 x 400         150         With Casing Terminal Covers			415V	29.4	0 to 485V			
Amps         400V         32.4         0 to 468V         370 x 560 x 425         100           415V         33.5         0 to 468V         370 x 560 x 425         100           50         SA-32252-HB         380V         38.6         0 to 445V         300x 920 x 400         142           Amps         400V         40.6         0 to 485V         300x 920 x 400         142           60         SA-32302-HB         380V         46.3         0 to 445V         300 x 920 x 400         150           mps         400V         48.6         0 to 485V         300 x 920 x 400         150         With Casing Terminal Covers	40	SA-3240-HB	380V	30.8	0 to 445V			
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50 Amps         SA-32252-HB         380V         38.6         0 to 445V         300x 920 x 400         142           Amps         400V         40.6         0 to 468V         300x 920 x 400         142           60 Amps         SA-32302-HB         380V         46.3         0 to 445V         300 x 920 x 400         142           60 Amps         400V         48.6         0 to 468V         300 x 920 x 400         150           415V         50.4         0 to 485V         300 x 920 x 400         150			415V	33.5	0 to 485V			1
Amps         400V         40.6         0 to 468V         300x 920 x 400         142           415V         42.0         0 to 485V         142         142         142           60         SA-32302-HB         380V         46.3         0 to 445V         300 x 920 x 400         142           415V         50.4         0 to 485V         300 x 920 x 400         150         With Casing Terminal Covers	50	SA-32252-HB	380V	38.6	0 to 445V			
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60 Amps         SA-32302-HB         380V         46.3         0 to 445V         With Casing 300 x 920 x 400         With Casing Terminal Covers           415V         50.4         0 to 485V         150         150			415V	42.0	0 to 485V			-
Amps         400V         48.6         0 to 468V         300 x 920 x 400         150         With Casing Terminal Covers           415V         50.4         0 to 485V         150         150         150	60	SA-32302-HB	380V	46.3	0 to 445V			
415V 50.4 0 to 485V	Amps		400V	48.6	0 to 468V	300 x 920 x 400	150	With Casing Terminal Covers
			415V	50.4	0 to 485V			

For 440V, 460V & 480V see **SA-HB-480 SERIES** data sheet. Other voltage configurations available to special order. For larger ratings please refer to our **mSA-HB-DM-CB SERIES** motorised variable transformer range.

# Input Voltage: +6% of nominal (ie. 415V models are continuously rated at 439V)

**Technical Specification** 

	continuousiy rated at 439V)		
Output Voltage:	Continuously variable from 0 to 117% of input voltage		
Frequency:	47 to 60Hz		
Power Factor:	Any		
Efficiency:	98%		
Surge Rating:	10 x max. current rating for 1 second 3 x max. current rating for 60 seconds 2 x max. current rating for 5 minutes		
Environment:	Temperature range -15 to 45°C. Derate by 2% for each additional °C up to a max of 60°C. Suitable for indoor tropical use up to 95% RH (non-condensing). Maximum altitude 1000m. Derate by 2.5% for each additional 500m.		
CE Conformity:	<b>CE Marked</b> - compliant with European Union Directives 2004/108/EC (replaced EMC Directive 89/336/EEC from July 2009).		
RoHS:	Fully RoHS compliant		
Compliance:	BS EN 61558-1:2005 + AI:2009 & BS EN 61558-2-13:2009		
Warranty:	1 Year / 12 months from date of supply		
Notes:			

Safety Caution:

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When using variable transformers, installation and connection must be carried out in accordance with relevant safety standards and care must be taken to ensure local regulations are strictly adhered to. When utilised as components in other systems, the variable transformers must never be used without suitable safety protection being in place.

Typical Applications:

Performance Evaluation, Electronic Equipment Burn-In, Furnace Transformers, Test Benches, Lighting Dimmers, High Voltage Test Sets & DC Rectifiers.

Quality Control Testing, Low Voltage







### TAILORED VARIABLE TRANSFORMER SOLUTIONS

SINGLE & THREE PHASE

# **Cost Efficient Tailored Solutions**

### to your exact requirements

The team behind Sinalda UK have been manufacturing variable auto transformers for over 40 years, building standard as well as custom-designed products for industrial, commercial and military applications.

If our standard models do not meet your specific requirements, contact us. Our engineering staff are always available to solve your specific application requirements. With our extensive portfolio of proven designs, often it just requires a minor revision to an existing design, enabling us to be able to offer you a cost-efficient solution to your precise requirements.

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#### Extended Voltage Options

Our standard variable auto transformers are rated for

Model:	Single Phase	Three Phase (3 & 4 Wire)
H Series	220 to 240V	380 to 415V
		440 to 480V
L Series	110 to 120V	190 to 208V

In addition we are able to offer, on individual request, solutions for other nominal input voltages and configurations, including 440V & 480V three phase and applications where the output voltage is required to be able to go as high as 1000V.

i ypical Examples			
Model:	SA-201-HB-CB-X1000 (240V)		
	1 kVA Single Phase Variable Transformer		
Input:	240V Single Phase 2 Wire 50/60Hz		
Output:	0 to 1000V Single Phase 2 Wire 50/60Hz		
Rating:	1 Amp		
Model:	mSA-32353-HB-X600 (415V)		
	77 kVA Three Phase Motorised Variable Transformer		
Input:	415V Three Phase 4 Wire 50/60Hz		
Output:	0 to 600V Three Phase 3 Wire 50/60Hz		
Doting:	75 Ampa par Dhasa		

del:	iSA-200H-X485-AC	(415V)	

 168 kVA Three Phase Industrial Air

 Cooled Variable Induction Transformer

 Input:
 415V Three Phase 50/60Hz

 Output:
 20 to 485V Three Phase 50/60Hz

 Rating:
 200 Amps per Phase

# The Universal AC Power Source

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#### Other Power Solutions available from Sinalda (UK)

AC Voltage Stabilisers / Regulators & Power Conditioners



Provide protection against fluctuations and vagaries of the utility mains supply and enhance the power quality of the businesses and organisations they protect.

AC Volt Drop Compensators



Compensates for voltage drops inherent in long cable runs, allowing substantial savings to be made on electrical power cable costs.

AC Voltage Optimisers (AVOs)



Delivers reductions in energy usage by optimising the electricity supply voltage, enabling energy cost savings and reductions in carbon emissions.

Want to learn more about the Power Protection Solutions available from Sinalda UK?

Check us out online at .....

