

## PropSava® Electro-Servo Power Optimisation System Mark III - 3 Phase Units, 600KVA – 3,500KVA

### Example General Specifications:

<b>Regulation</b>		Servo motor compensated regulation, three phase unitive regulated
<b>Input</b>	<b>Voltage</b>	400V
	<b>Variance Range</b>	± 10% (360-440V)
	<b>Frequency</b>	47Hz ~ 63Hz
	<b>Power Factor</b>	0.95 ~ 1
<b>Output</b>	<b>Voltage</b>	380V or as per customer specifications
	<b>Regulated range</b>	± 1%~5%
	<b>Frequency</b>	As input
	<b>Range of Load PF</b>	0.8 ~ 1
<b>Efficiency</b>		≥98% (Full Load) above 50KVA
<b>Waveform Distortion</b>		≤0.1%
<b>Response time</b>		≤1.5 seconds
<b>Insulation Resistance</b>		≥2MΩ
<b>Insulation strength</b>		No damage at 2000V for 1 Minute
<b>Display</b>		Multifunctional LED display shows input/output Voltage, current. Protection state.
<b>Protection Function:</b>		Auto/Manual Bypass, Over/under voltage, Over load, Short circuit, Phase Drop, Wrong Phase, Alarm/Silence at Bypass.
<b>Overload ability</b>		150% for 10 seconds
<b>Surge Protection:</b>		IEC class II surge protection. Nominal discharge surge current is 20KA
<b>Noise</b>		≤ 45dB
<b>Cooling:</b>		Fan
<b>Size:</b>		Manufactured to Load/size specification
<b>Input/output Connection:</b>		Terminal plate
<b>Environment</b>	<b>Temperature</b>	-10°C ~ 45°C
	<b>Humidity</b>	0~95% (No freezing point)

## Surge Protection System:

### Overview:

All PropSava single and 3 Phase Power Optimisation Systems have a surge arrester fitted as standard. Surges are short-duration peak voltages – i.e. transient voltages – existing for only milliseconds; but can measure thousands of volts.

These surges are caused by:

1. Direct lightning strikes
2. Indirect lightning strikes within a distance of some kilometres
3. Switching operations in the power supply system
4. Faults due to switching operations within the installation

In the commercial sector, lightning or power surges cause 45% of electrical equipment damage. Overall, 28 out of 100 cases of damage to electronic equipment are caused by surges. Surges are by far the most frequent cause of damage and that is why surge arrestors are fitted as standard.

### PropSava-3 phase Standard Surge Arrester installed V 20-C/3+NPE-385 technical data:

Surge Controller surge arrester Description	V 20-C/3+NPE-385
Maximum continuous operating voltage $U_{C_{AC}}$ (max. permitted operating voltage) $U_{DC}$	385 V~ 505 V-
LPZ	1 → 2
Requirement class to VDE 0675, Part 6 (Draft 11.89) A1, A2 to IEC 61643-1	C Class II
Tested to:	IEC 61643-1, pr EN 61643-1, E DIN VDE 0675-6:1989-11 and Part 6/A1
Nominal discharge current of the upper part $I_n$ (8/20)	20KA
Max. Discharge current per block $I_{max}$ (8/20) Surge Controller V 20-C/3...	110 kA
Maximum discharge current of the upper part $I_{max}$ (8/20)	40 kA
Voltage protection level at 1 kA (8/20) $U_p$ at 5 kA (8/20) $U_p$ at $I_n$ $U_p$	$\leq 1.2$ kV $\leq 1.5$ kV $\leq 1.8$ kV
Response time $t_A$	<25 ns
Short-circuit withstand strength 25 kA with max. upstream fuse	125 A gL/gG
Connection cross-section	2.5-35 mm <sup>2</sup> (single and multi stranded); 2.5-25 mm <sup>2</sup> (fine-stranded with core end sleeves)
Mounting	Snap-fitting on 35 mm top-hat rail to DIN EN 50 022
IP Code	IP20
Temperature range $\vartheta$	-40 °C to +80 °C

## PropSava-3 phase Optional Surge Arrestor type V 25-B+C/3+NPE-385 technical data:

Surge Controller surge arrester Description	V 25-B+C/3+NPE-385
Maximum continuous operating voltage $U_{C_{AC}}$ (max. permitted operating voltage) $U_{C_{DC}}$	385 V $\sim$ 505 V-
LPZ	0 $\rightarrow$ 2
Requirement class to VDE 0675, Part 6 (Draft 11.89) A1, A2 to IEC 61643-1	B+C Class I+II
Tested to:	IEC 61643-1, pr EN 61643-1, E DIN VDE 0675-6:1989-11 and Part 6/A1
Nominal discharge current of the upper part $I_n$ (8/20)	50KA
Max. discharge current per block $I_{max}$ (8/20) Surge Controller V 20-C/3...	150 kA
Maximum discharge current of the upper part $I_{max}$ (8/20)	100 kA
Voltage protection level at 1 kA (8/20) $U_p$ at 5 kA (8/20) $U_p$ at $I_n$ $U_p$	$\leq 1.0$ kV $\leq 1.2$ kV $\leq 1.5$ kV
Response time $t_A$	<25 ns
Short-circuit withstand strength 25 kA with max. upstream fuse	160 A gl/gG
Connection cross-section	2.5-35 mm <sup>2</sup> (single and multi- stranded); 2.5-25 mm <sup>2</sup> (fine-stranded with core end sleeves)
Mounting	Snap-fitting on 35 mm top-hat rail to DIN EN 50 022
IP Code	IP20
Temperature range $\vartheta$	-40 °C to +80 °C