

**OPCS HD SERIES** - THREE PHASE - 6 to 300 kVA**Ashley-Edison** (UK)

Mains Voltage Control - Without Compromise

**POWER CONDITIONING PROTECTION**

against voltage fluctuations and line disturbances - ensuring a **CLEAN** supply.

**FEATURES**

- **Automatic Voltage Regulation**  
Step less automated voltage regulation - ideal for 95% of all applications.
- **Wide Range of Power Ratings**  
Three Phase - 6 to 300 KVA
- **Broad Input Voltage Swing Ranges**  
Input Swing -  $\pm 15\%$  (S15),  $\pm 20\%$  (S20),  $\pm 25\%$  (S25),  $\pm 30\%$  (S30),  $\pm 35\%$  (S35) &  $\pm 40\%$  (S40) - to specify.
- **Precise Output Voltage Regulation**
- **Transient Voltage Surge Suppression**  
TVSS - Protects loads against harmful high-energy surges, transients and spikes.
- **Input Isolation Transformer**  
Offering enhanced Transient Voltage and Electrical Noise protection.



## OUTDOOR - IP54 / NEMA 3 STYLE AC POWER LINE CONDITIONERS

SERVO ELECTRONIC DESIGN - **THREE PHASE** - 6 TO 300 kVA

380V - 400V - 415V - 50 or 60Hz

# OPCS

3 WIRE - NO NEUTRAL

## HD - THREE PHASE

**DELIVERING AN ENHANCED LEVEL OF POWER PROTECTION**

AC mains voltage fluctuations and line disturbances can cause equipment to behave erratically and malfunction. Some systems may even break down due to these fluctuations, noise or spikes. Failure to ensure the incoming mains voltage is stable and clean can often result in costly equipment repairs and unplanned down-time.

**Ashley-Edison AC Power Line Conditioners offer -**

- **An Enhanced Clean Supply**  
Incorporating all the features and protection levels found in an OSES Series Stabiliser, Ashley-Edison OPCS Power Conditioners also offer, through the integration of a double wound isolation transformer, enhanced transient voltage surge defense and additional common and transverse electrical noise protection - delivering what is commonly referred to as a "CLEAN" supply.
- **Durability & Dependability**  
With an impressively wide range of input voltage window options and precise output voltage regulation, the electro-mechanical / electronic servo design based OPCS Power Conditioners have repeatedly proven their durability and dependability in some of the world's harshest and most demanding power environments.
- **Energy Efficiency**  
Characterised by high efficiency, OPCS Conditioners are completely unaffected by power factor and load variations. Able to withstand high instantaneous overloads, OPCS Conditioners do not generate any magnetic interference - making them ideal for being located near to sensitive equipment. Through delivering a regulated, stable and optimised voltage to the equipment they support, OPCS Conditioners ensure you only pay for the actual energy you need.

**NOTE:** For most applications, where electrical noise is not considered to be an issue, a Voltage Stabiliser / Regulator is usually the most appropriate and more cost-efficient solution for delivering dependable stable voltage.

- **Inbuilt High Overload Capability**  
Ideal for loads with an inherent initial high current draw on start up.
- **High Efficiency**
- **Independent Phase Balancing & Control**  
Independent phase voltage sensing and control to ensure the individual phase voltages remain stable -
- **Soft-Switch On / Start Up Load Protection**  
Protection of the load from momentary over voltage
- **Lightning Surge Protection**  
Protection against extremely high voltage surges and transients caused by lightning strikes on the supply
- **Over / Low Voltage Protection**  
Ability to automatically shutdown the Voltage Stabiliser in the event of the input supply voltage
- **Bypass Control Switch**
- **Phase Failure Protection**
- **Free Standing Outdoor IP54 Enclosure**
- **Input Circuit Breaker**
- **Compliance with International Standards**  
Designed, manufactured and supplied to comply with leading international standards
- **CE Conformity**  
Fully compliant and labelled

## VOLTAGE CHOICES AVAILABLE

Also available as 4 Wire Solutions (With Neutral) - OPCS-H & LY SERIES

### 3 WIRE SOLUTIONS

THREE PHASE (+ GROUND/EARTH) - NO NEUTRAL

#### HD SERIES

6 to 300 kVA

High Voltage Models:

380V, 400V or 415V.

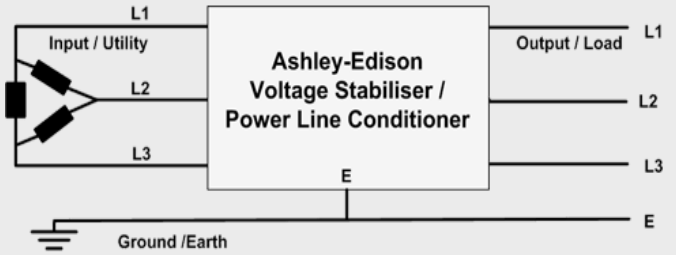
X468 Models: 440V, 460V or 480V

#### LD SERIES

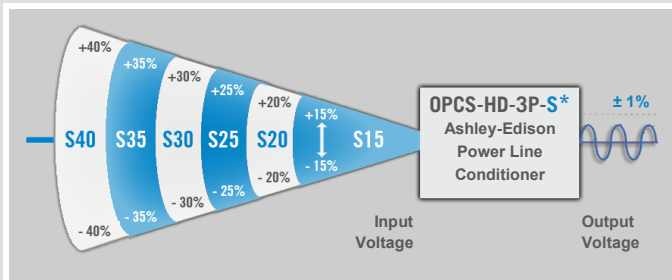
6 to 200kVA

Low Voltage Models:

190, 200V, 208V, 220V or 240V.



## HD SERIES INPUT VOLTAGE WINDOW OPTIONS



In situations where there is a reasonably good mains supply, a Conditioner offering an input variation swing of  $\pm 15\%$  (S15 Models) will usually be more than acceptable, but in more remote locations, or countries where the national supply infrastructure is less developed, variations of  $\pm 20\%$  or greater may be needed to be accommodated by the Conditioner..

**Please Note** – These Line Conditioners are not designed to support / protect voltage “back feed” applications, where energy is required to be also fed back into the utility supply.

## HD SERIES - OPCS-HD-3P-S\* Input Voltage Windows & Output Accuracy

Nominal Three Phase Voltage	Output Voltage Accuracy $\pm$ % of Nominal	INPUT VOLTAGE SWINGS / SWING MODEL NO VARIANTS					
		S15	S20	S25	S30	S35	S40
		6 to 300 kVA	6 to 250 kVA	6 to 200 kVA	6 to 150 kVA	6 to 120 kVA	6 to 100 kVA
380V	$\pm 1\%$	323v to 437v ( $\pm 15\%$ )	304v to 456v ( $\pm 20\%$ )	285v to 475v ( $\pm 25\%$ )	266v to 494v ( $\pm 30\%$ )	247v to 513v ( $\pm 35\%$ )	228v to 532v ( $\pm 40\%$ )
	$\pm 3\%$	315v to 448v (-17% / +18%)	296v to 467v (-22% / +23%)	277v to 486v (-27% / +28%)	258v to 505v (-32% / +33%)	239v to 524v (-37% / +38%)	220v to 543v (-42% / +43%)
	$\pm 5\%$	308v to 460v (-19% / +21%)	289v to 479v (-24% / +26%)	270v to 498v (-29% / +31%)	251v to 517v (-34% / +36%)	232v to 536v (-39% / +41%)	213v to 555v (-44% / +46%)
400V	$\pm 1\%$	340v to 460v ( $\pm 15\%$ )	320v to 480v ( $\pm 20\%$ )	300v to 500v ( $\pm 25\%$ )	280v to 520v ( $\pm 30\%$ )	260v to 540v ( $\pm 35\%$ )	240v to 560v ( $\pm 40\%$ )
	$\pm 3\%$	332v to 472v (-17% / +18%)	312v to 492v (-22% / +23%)	292v to 512v (-27% / +28%)	272v to 532v (-32% / +33%)	252v to 552v (-37% / +38%)	232v to 572v (-42% / +43%)
	$\pm 5\%$	324v to 484v (-19% / +21%)	304v to 504v (-24% / +26%)	284v to 524v (-29% / +31%)	264v to 544v (-34% / +36%)	244v to 564v (-39% / +41%)	224v to 584v (-44% / +46%)
415V	$\pm 1\%$	353v to 477v ( $\pm 15\%$ )	332v to 498v ( $\pm 20\%$ )	311v to 519v ( $\pm 25\%$ )	291v to 540v ( $\pm 30\%$ )	270v to 560v ( $\pm 35\%$ )	249v to 581v ( $\pm 40\%$ )
	$\pm 3\%$	344v to 490v (-17% / +18%)	324v to 510v (-22% / +23%)	303v to 531v (-27% / +28%)	282v to 552v (-32% / +33%)	261v to 573v (-37% / +38%)	241v to 593v (-42% / +43%)
	$\pm 5\%$	336v to 502v (-19% / +21%)	315v to 523v (-24% / +26%)	295v to 544v (-29% / +31%)	274v to 564v (-34% / +36%)	253v to 585v (-39% / +41%)	232v to 606v (-44% / +46%)

## TYPICAL APPLICATIONS

- Computers & Network Systems
- Medical Equipment
- Electronics Equipment
- Testing Equipment
- Laboratory Equipment
- POS Terminals
- Process Control Systems
- TV/Radio Broadcasting Stations
- Audio/Video Systems
- Security Systems
- Photo Processing Systems
- Marine Navigation Systems



# OPCS HD-S\* SERIES - THREE PHASE - 6 to 300 kVA

## TECHNICAL SPECIFICATION

<b>Technology:</b>	<b>Servo Electronic</b> - Variable Transformer controlled, series regulation transformer (buck-boost transformer with secondary wired in series with the load).				
<b>Input Voltage Swing Variant Options Available (S*):</b>	<b>Model / Accuracy</b>	<b>± 1%</b>	<b>± 3%</b>	<b>± 5%</b>	<b>Max Size</b>
	<b>S15</b>	± 15%	-17% +18%	-19% +21%	300 kVA
	<b>S20</b>	± 20%	-22% +23%	-24% +26%	250 kVA
	<b>S25</b>	± 25%	-27% +28%	-29% +31%	200 kVA
	<b>S30</b>	± 30%	-32% +33%	-34% +36%	150kVA
	<b>S35</b>	± 35%	-37% +38%	-39% +41%	120 kVA
	<b>S40</b>	± 40%	-42% +43%	-44% +46%	100 kVA
	<b>Three Phase, 3 Wire ( 3 Phase + G/E) - No Neutral</b> <i>Other swing options available to special quotation / order.</i>				
<b>Output Voltage:</b>	Presettable for any voltage between 380V, 400V, or 415V - <i>Customer to Specify</i> , Three Phase, 3 Wire. The permissible input voltage swing is relative to the preset output voltage.				
<b>Output Accuracy:</b>	± 1%, ± 3% & ± 5% - <i>auto selection based on the input voltage swing.</i>				
<b>Frequency:</b>	47 - 65Hz				
<b>Response Time:</b>	<1.5ms				
<b>Correction Time:</b>	A 10% supply variation will be corrected to within 2.5% in 0.6 seconds				
<b>Efficiency:</b>	98%				
<b>Power Factor:</b>	Any lagging to 0.95 leading				
<b>Surge ratings:</b>	10 x max. current rating for 2 seconds 3 x max. current rating for 1 minute 2 x max. current rating for 2 minutes				
<b>Surge Suppression:</b>	TVSS - Protects loads against harmful high-energy Spikes and Transient voltages.				
<b>Surge Arrester:</b>	40KA at 415V AC Class III (IEC 61643-1:1998-02, EN 61643-11:2001)				
<b>Total Harmonic Distortion:</b>	Less than 1%				
<b>Shielded Isolation Transformer:</b>	Shielded isolation transformer providing extra protection between the utility and the load. Protects against common and transverse mode electrical noise. Noise Attenuation - Common Mode - 120db@100khz - Normal Mode Noise - 60db@100khz				
<b>Independent Phase Control:</b>	Maintains each phase voltage stable irrespective of load unbalance, even up to 100% load unbalance.				
<b>Soft-Switch On:</b>	Ensures the output voltage is set at minimum upon Switch-On before commencing stabilisation - protects load equipment from damaging start up voltage surges.				
<b>Environment:</b>	Temperature range -15 to 45 °C. Derate by 2% for each additional °C Up to max 60 °C. Suitable for indoor tropical use 95% RH (non-condensing). Maximum altitude 1000m. Derate by 2.5% for each additional 500m.				
<b>Construction:</b>	Sheet Steel (Electro Galvanised) Enclosures to IP54 (NEMA 3S Style) - BS EN 60529				
<b>Paint Colour:</b>	RAL 7032 (Grey - Epoxy Powder Coating)				
<b>EMC Conformance:</b>	Complies with BS EN 55022 and the relevant parts of the BS EN 61000 series of standards – <i>as updated.</i>				
<b>CE Conformity:</b>	<b>CE Marked</b> - being fully compliant with European Union Directives 2004/108/EC and 2006/95/EC (The Low Voltage Directive) in force from January 2007.				
<b>Standard Warranty:</b>	Two Years / 24 Months from date of supply				
<b>Standard Features:</b>	Input Circuit Breaker, Lightning Arrestors, Over/Low Voltage Protection, Phase Failure Protection, Bypass Control Switch & Voltmeter / Phase Selector Switch (internal).				
<b>Optional Accessories:</b>	Output Circuit Breaker, Manual Maintenance Bypass Switch, Ammeter with Phase Selector Switch, No Volt Remote Monitoring Contacts, Digital Power Metering (with RS-485 interface option) & AquaStop Protective Coating - protection against damp and moisture ingress.				
<b>Optional Step-Down Voltage Feature:</b>	Ideal for applications where the utility supply voltage is different from the load equipment's requirement - see <b>OPCS-HLD SERIES</b> Step-Down AC Power Line Conditioners.				



Side and Front View



Rear View



## PRODUCT SELECTION TABLE

MODEL:	Rating KVA	Max Rating @ (Amps per Phase)			Dimensions, Weights & Enclosure Types
		380V	400V	415V	
OPCS-6HD-3P-S*	6	9.1	8.7	8.3	<i>Dimensions, Weights &amp; Enclosure Types available on Request - according to the S* Swing Model Variant required.</i>
OPCS-10HD-3P-S*	10	15.2	14.4	13.9	
OPCS-15HD-3P-S*	15	22.8	21.6	20.9	
OPCS-20HD-3P-S*	20	30.4	28.9	27.8	
OPCS-25HD-3P-S*	25	38	36	35	
OPCS-30HD-3P-S*	30	46	43	42	
OPCS-35HD-3P-S*	35	53	51	49	
OPCS-40HD-3P-S*	40	61	58	56	
OPCS-45HD-3P-S*	45	68	65	63	
OPCS-50HD-3P-S*	50	76	72	70	
OPCS-55HD-3P-S*	55	84	79	77	
OPCS-60HD-3P-S*	60	91	87	83	
OPCS-75HD-3P-S*	75	114	108	104	
OPCS-80HD-3P-S*	80	122	115	111	
OPCS-90HD-3P-S*	90	137	130	125	
OPCS-100HD-3P-S*	100	152	144	139	
OPCS-120HD-3P-S*	120	182	173	167	
OPCS-150HD-3P-S*	150	228	216	209	
OPCS-180HD-3P-S*	180	273	260	250	
OPCS-200HD-3P-S*	200	304	289	278	
OPCS-250HD-3P-S*	250	380	361	348	
OPCS-300HD-3P-S*	300	456	433	417	

**Note:** Higher kVA and alternative voltage options available to order / individual request.

Optional Accessories added may affect dimensions - subject to confirmation..