

Active Harmonic Filters and Power Optimizers

PQSine S-Series

Features

- Compact
- Modular in construction
- 3 Level Topology
- Low Loss
- Low Noise
- High Attenuation Efficiency



EPCOS has been offering a comprehensive range of key components for power factor correction (PFC) and power quality solutions (PQS) for many years. In past, most consumer loads were linear, i.e. when they were connected to a sinusoidal voltage, the current was also sinusoidal. In meantime, the use of power electronics has significantly increased. These devices are usually non-linear, i.e. when connected to a sinusoidal voltage they produce non-sinusoidal currents which may create problems for other devices. Besides passive filters, more and more active harmonic filters are now used, especially where the PF is close to 1 and harmonic disturbances change frequently.

Technical data and specifications

Rated voltage	380 V (228 V to 456 V)	480 V (384 V to 552 V)	690 V (480 V to 790 V)
Mains frequency	43...62Hz		
Filter current	25 A, 35 A, 50 A, 60 A 100 A, 150 A	75 A, 90 A	75 A, 90 A
Neutral filtering capability	3 times the rated filter current (in case of 4 wire device)		
Harmonic current compensation range	2 nd – 50 th harmonic order, or specified harmonics 0-110%		
Rate of harmonic reduction	> 95%		
Target power factor	Adjustable from -1 to 1		
Switching / Control frequency	20 kHz/20 kHz		
Reaction time	< 50 μ s		
Overall response time	< 5 ms		
Harmonic compensation	Available		
Reactive power compensation	Available		
Unbalance compensation	Available		
Display	All systems include a 7" TFT color control / display unit (touch screen)		
Communication ports	RS485 and network port (RJ45)		
Communication protocols	Modbus (RTU), TCP/IP(Ethernet)		
Fault alarm	Available, max. 500 alarm records		
Noise level	< 56dB (depending on the model)	< 65dB (depending on the model)	
Protection functions	Over-voltage, under-voltage, short-circuit, inverter bridge inverse, over-compensation		
Operating temperature	-10 to +40 °C without derating		
Relative humidity	5% to 95%, non-condensation		
Cooling	75,151,300,405 L/sec (25-35,50-60,75-100, 150 A)	359 L/sec	
Protection class	IP 20 according to IEC 529		
Panel color	RAL7035 light grey		
Altitude	1500; 1% up 1500 m. Between 1500 m to 4000 m, according to GB/T3859.2, the power decreases by 1% for every additional 100 m		
Qualifications	CE, IEEE 61000	CE, ETL(UL508), IEEE 61000	
Compliance with standards	IEEE 519, ER G5/4		