

powerPerfector iQ	
Responsive Power Optimiser Product Description	A powerPerfector with embedded winding for harmonic attenuation. Power Response achieved using the latest power electronic techniques and components without any mechanical switching parts to control the output voltage.
Nominal Input Voltage	400V ± 20%
Nominal System Frequency	50/60 Hz
Wire Connection	3 Phase – 4 wire (Neutral connection for iQ reference only)
Construction (powerPerfector)	Handmade optimiser with the highest purity cold-wound ribbon copper conductor, grain orientated sheet silicon steel
System Rating	175kVA (250A) · 220kVA (315A) · 280kVA (400A) · 350kVA (500A) 440kVA (630A) · 560kVA (800A) · 690kVA (1000A) · 830kVA (1200A) 1000kVA (1450A) · 1250kVA (1800A) · 1500kVA (2150A)
Intelligent Voltage Control	Precise output target voltage selection at 0.1V increments offering at least 440 optimisation steps.
Output Voltage Range	+11% to – 11% automatically selected based on pre-determined target voltage
Response Time	Immediate reaction within 250mS of an input voltage change and response within 500mS
Output Voltage Accuracy	Stable voltage profile within 0.5V of target voltage irrespective of input voltage fluctuations (dips/swells/sags/intervals)
Active 3 Phase Balancing	Actively corrects phase voltage imbalance to within 0.5V phase to phase
Voltage Recovery	Ability to boost incoming voltage during dips and sags as required to pre-determined target voltage
Harmonic Attenuation	Passive low filtration offered by powerPerfector primary winding plus a tertiary delta winding wrapped around the core to maximise attenuation.
User Interface	iQ has a built in Wi-Fi or LAN remote monitoring & intelligent control platform with multiple user logins. Energy consumption and voltage data information is stored and can easily be accessed and communicated (MODBUS) when configured.
System Efficiency	Peak efficiency 99.94%
System Impedance	0.5% ensuring that electrical integrity is not compromised, nor do existing circuit breaker timer settings require alteration
Insulation Class	H - 180°C (powerPerfector)
Short-Circuit Withstand – Tested (powerPerfector)	175kVA (250A) · 18kA for 1 second 350kVA (500A) · 35kA for 1 second 440kVA (630A) and above · 50kA for 1 second
Voltage Withstand - Tested	3kV
Environmental Operating Range	-10°C to + 40°C
Enclosure Descriptions (see separate dimensions sheet)	powerPerfector housed in a floor standing cabinet with louvre vents on each panel to allow natural airflow, fitted with aluminium lid for easy cable entry. For added safety and security panel removal requires multiple tools. Separate enclosures to allow for easy delivery and interconnection options.
	iQ power electronics self-contained within a floor standing cabinet with louvre vents on each panel to allow natural airflow. An access panel is provided to safely gain entry to the iQ protective devices. In the event of malfunction the iQ reverts to an automatic voltage bypass to 0% without mechanical parts. The power electronics can be isolated and removed without interruption to site supply.
Cooling Type	powerPerfector Natural Air (AN) iQ auto-temperature control with a ceramic fan offering assisted cooling (25yrs life)
Duty Type	Continuous Operation
CE Mark	EN 60076:11 · IEC 61439
Electromagnetic Compatibility	EN61000-6-2 · 61000-6-4
Standards	ISO 9001 · ISO 14001 · ISO 500001 · BS OHSAS 18001 · RoHS/REACH Compliant

General information