Active filters EG-ESP (wall-mount)
30A – 100A

Active filters can correct any type of harmonic contamination to protect the system from faults (e.g. burnt-out transformers, damaged capacitors, etc.), while also improving the power factor.

Applications

- Broadcasting
- Shopping centers
- Energy suppliers
- Transport infrastructure and control rooms
- Oil & Gas
- Healthcare sector

Features

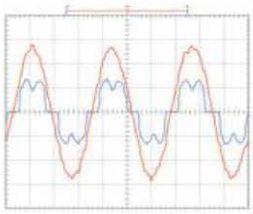
- Active wall-mount filters offer the most economical and effective solution.
- Versatile thanks to the modularity, high nominal current and possibility of parallel connection up to 400 A for the wall version.
- EG-ESP is available in two versions, 4 or 6 modules for 60 A, 80 A or 100 A, which can also be used in a mixed configuration within the same system.
- Maximum performance with 3-level DSP technology.
- Their compact, high-power-density design optimizes space.
- Multi-purpose: one model covers all three-phase systems (3-wire or 4-wire).
- Correction of all harmonics up to the 51st (up to the 25th for 30 A) with a response time of less than 1 ms.
- No overload effect.
- Selective mode to select the harmonics to be corrected.
- Phase balancing of three-phase loads.
- Open loop or closed loop installation.
- A single control module manages up to 8 power modules.
- All parameters are under control via the 7" color (2.7" LCD for 30 A model) touch screen display that shows: voltage and current waveforms, frequency spectrum, parameters and events.
- Events and parameters can be downloaded to a removable SD card.
- Advanced communication: dry contacts (3 in and 1 out), USB, RS485 Modbus, RJ45 Ethernet, programmable email alarm.

User-friendly user interface

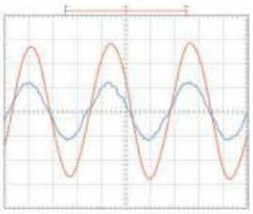
- The 7" color touch screen display can be used to set all parameters, read the event log file and download data to a removable SD card (for 60 A, 80 A, 100 A wall-mounting model).
- It can also show the voltage and current waveforms, before and after enabling the EG-ESP, along with a frequency spectrum bar graph.

Harmonic and PF correction that can be verified on the display

- EG-ESP not only actively corrects harmonic currents up to the 51st order, but also improves the inductive or capacitive power factor with a response time of less than 1 ms. The benefits can be seen easily on the display.



Without EG-ESP
THDi=30% PF=0.81



With EG-ESP
THDi=4.3% PF=1.0

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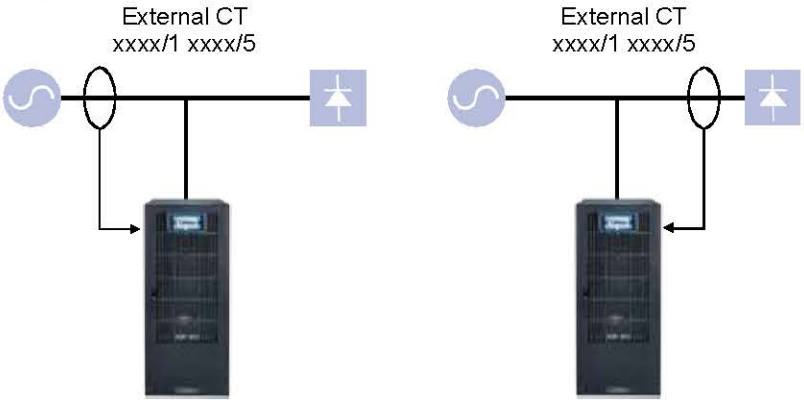
Technical Data Sheet

Model	EG-ESP 30	EG-ESP 60	EG-ESP 80	EG-ESP 100
Size [A]	30	60	80	100
ELECTRICAL SPECIFICATIONS				
Rated voltage	400 V +15%, -20%; 480 V +10%, -20%;			
Phases	Three-phase			
Frequency	50/60 ±3 Hz			
Harmonic correction	From the 2nd to the 51st 1)			
Power factor correction	Capacitive and inductive (selectable)			
Load balancing	Between two phases and between phase and neutral			
Response time	25 µs			
ENVIRONMENTAL PARAMETERS				
Operating temperature	-10°C to +40°C with no derating 2)			
Relative humidity	<95%			
Altitude (a.s.l.)	< 1000 m with no derating, > 1000 m with 1% derating for every 100 m			
Audible noise at 1 m	<55 dBA	<63 dBA		
GENERAL				
Dimensions (WxDxH) mm	348 x 164 x 598	500 x 286 x 775		
Weight (kg)	16	51	58	60
Protection class	IP30 / IP31			
Connections	4-wire / 3-wire			
Installation	Wall-mounting			
Type	Monolithic			
Parallel connection up to (A)	120	240	320	400
Max. parallel modules	4			
TA configuration	Source side TA: closed loop control – load side TA: open loop control			
CONNECTIVITY				
User interface	2.7" color LCD screen display	7" color LCD touch screen display		
Built-in communication ports	USB, RS-485 ModBus RTU, EPO and Dry contact board (1 input – 3 output)	USB, RS-485 ModBus RTU, EPO, Ethernet and Dry contact board (1 input – 3 output)		
Software	Data monitoring and storage software			
REGULATIONS				
Standards	EN61000-6-4, EN55011, CISPR 11, IEC 61000-3-12, IEC 61000-3-11 IEC 61000-6-2, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4 IEC 61000-4-5, IEC 61000-4-6, IEC 62477-1, EN 61000-4-8, EN61000-4-34			
Marking	CE, UKCA			

Specifications subject to change without notice.

Notes: 1) Up to the 25th for 30A.
2) EG-ESP 30 model: -10°C to +25°C without derating, above +25°C automatic derating to 20A.

Open/closed loop control



Closed loop Control **Open loop Control**

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Active filters EG-ESP (modular)
400A – 600A

Active filters can correct any type of harmonic contamination to protect the system from faults (e.g. burnt-out transformers, damaged capacitors, etc.), while also improving the power factor.

Applications

- Broadcasting
- Shopping centers
- Energy suppliers
- Transport infrastructure and control rooms
- Oil & Gas
- Healthcare sector

Features

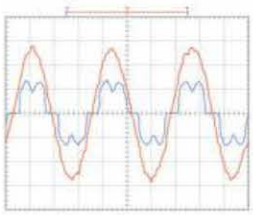
- Scalability of modular version protects your investment over time.
- The power modules are easy to install and are hot swappable: they can be replaced while the filter is operating.
- Versatile thanks to the modularity, high nominal current and possibility of parallel connection up to 2400 A.
- EG-ESP is available in two versions, 4 or 6 modules for 60 A, 80 A or 100 A, which can also be used in a mixed configuration within the same system.
- Maximum performance with 3-level DSP technology.
- Their compact, high-power-density design optimizes space.
- Multi-purpose: one model covers all three-phase systems (3-wire or 4-wire).
- Correction of all harmonics up to the 51st with a response time of less than 1 ms.
- No overload effect.
- Selective mode to select the harmonics to be corrected.
- Phase balancing of three-phase loads.
- Open loop or closed loop installation.
- A single control module manages up to 8 power modules.
- All parameters are under control via the 7" color touch screen display that shows: voltage and current waveforms, frequency spectrum, parameters and events.
- Events and parameters can be downloaded to a removable SD card.
- Advanced communication: dry contacts (3 in and 1 out), USB, RS485 Modbus, RJ45 Ethernet, programmable email alarm.

User-friendly user interface

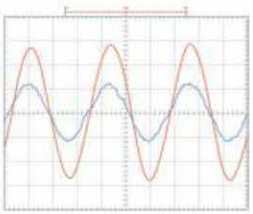
- The 7" color touch screen display can be used to set all parameters, read the event log file and download data to a removable SD card.
- It can also show the voltage and current waveforms, before and after enabling the EG-ESP, along with a frequency spectrum bar graph.

Harmonic and PF correction that can be verified on the display

- EG-ESP not only actively corrects harmonic currents up to the 51st order, but also improves the inductive or capacitive power factor with a response time of less than 1 ms. The benefits can be seen easily on the display.



Without EG-ESP
THDi=30% PF=0.81



With EG-ESP
THDi=4.3% PF=1.0

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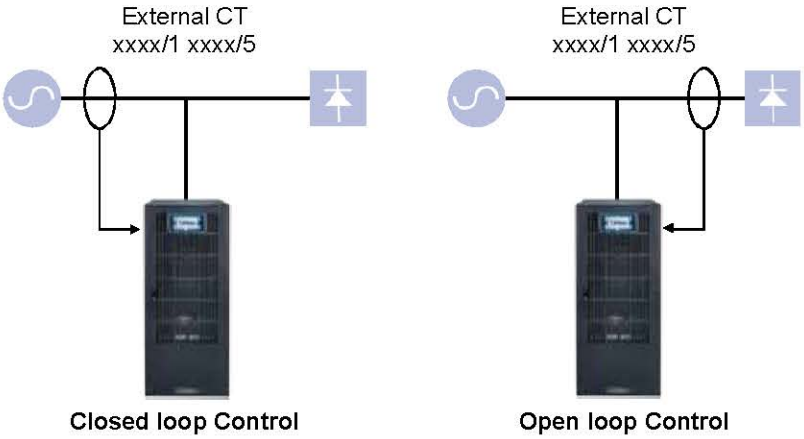
Technical Data Sheet

Model	EG-ESP 400	EG-ESP 600
Size [A]	400	600
POWER MODULE [A]	60-80-100	
ELECTRICAL SPECIFICATIONS		
Rated voltage	400 V +15%, -20%; 480 V +10%, -20%;	
Phases	Three-phase	
Frequency	50/60 ±3 Hz	
Harmonic correction	From the 2nd to the 51st	
Power factor correction	Capacitive and inductive (selectable)	
Load balancing	Between two phases and between phase and neutral	
Response time	25 µs	
ENVIRONMENTAL PARAMETERS		
Operating temperature	-10°C to +40°C with no derating	
Relative humidity	<95%	
Altitude (a.s.l.)	< 1000 m with no derating, > 1000 m with 1% derating for every 100 m	
Audible noise at 1 m	<63 dBA	
GENERAL		
Dimensions (WxDxH) mm	600 x 900 x 1500	600 x 900 x 1950
Weight (kg) [1]	150	196
Protection class	IP21	
Connections	4-wire / 3-wire	
Installation	Floor standing	
Type	Modular	
Parallel connection up to (A)	2400	
Max. no. of modules per system (60/80/100 A in a mixed configuration)	up to 4	up to 6
Max. parallel systems	6	4
TA configuration	Source side TA: closed loop control – load side TA: open loop control	
CONNECTIVITY		
User interface	7" color LCD touch screen display	
Built-in communication ports	USB, RS-485 ModBus RTU, EPO, Ethernet and Dry relay contacts (1 in / 3 out)	
Software	Data monitoring and storage software	
REGULATIONS		
Standards	EN61000-3-4, IEEE 519-1992, EN60146, EN50178; UL508, EN61000-6-4, EN55011, CISPR 11, IEC 61000-3-12, IEC 61000-3-11, IEC 61000-6-2, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 62477-1, IEC 61000-4-5, IEC 61000-4-6, EN 61000-4-8, EN61000-4-34	
Marking	CE, UKCA	

Specifications subject to change without notice.

Notes: 1) Weight without the control module and power modules.

Open/closed loop control



Closed loop Control **Open loop Control**

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