

Freemaq

Passive Filter



Variable speed drives are increasingly present in industrial environments and pumping systems, generating harmonic currents in distribution networks that affect the correct functioning of the grid.

The FQP Freemaq harmonic filter is installed at the entrance of the drive and is designed for both drives SD700 range of Power Electronics as other commercial inverters.

With a more compact and efficient design, Freemaq FQP provides a higher degree harmonics filtering through more stable tuning that provides values THDi below 5% in compliance with IEEE519.

Its construction is based on the installation of one or more filter modules in parallel will be controlled and protected at all times by the drive. A range that would fit the most demanding applications.



HIGH FILTERING
EFFICIENCY
THDI < 5% [1]



- Range from 380Vca-500Vac and 690Vac
- Power range from desde 22kW to 2000kW
- Reduce the THDI < 5% IEEE519
- Reliable and robust electronics conformally coated (IP54)
- Automatic protection

[1] In complianced with IEEE519.

TECHNICAL CHARACTERISTICS

INPUT	Rating Operating Voltage	(3-phase) 400VAC ($\pm 10\%$) (3-phase) 690VAC ($\pm 10\%$)
	Operating Frequency ^[1]	50Hz, 60Hz
	Rated Current ^[2]	9A to 2000A at 400V 52A to 1500A at 690V
	Rated Motor Power	5.5kW to 1200kW at 400V 55kW to 1500kW at 690V
MAIN FEATURES	Total Harmonic Current Distorsion (THDi) ^[3]	Model FQP__05: <5% rated power
	Efficiency	>97% at rated voltage and power
	Displacement (DPF = $\cos \varphi$)	≥ 0.99
	Overload capacity	120% during 60 sec. at 40°C Other under request
ENVIRONMENTAL CONDITIONS	Ambient temperature	-20°C to +40°C
	Altitude	1.000m
	Power altitude derating	>1.000m, -1% per 100m; 3.000m max.
	Degree of protection	IP20 e IP42
	Ambient humidity	<95%, non condensing
	Cooling	Internal forced cooling
STANDARDS ^[4]	Certifications	CE
	Electromagnetic compatibility	EMC Directive (2004/108/CE)
		IEC/EN 61800-3
		IEEE 519
	Design and construction	LVD Directive (2006/95/CE)
IEC/EN 61800-2 General requirements IEC/EN 61800-5-1 Safety		
PROTECTIONS	Free-potential contact on terminals with thermal protection for user ^[5]	

NOTES

[1] 60Hz upon request.

[2] Filter FQP reduces RMS input and peak current by reducing the harmonic currents and improving the power factor.

[3] General conditions:

-System requirements: THDv <2%, line voltage unbalance <1%.

-Harmonics are below the limits defined in IEEE519 for all ISC/L.

[4] Corresponding to SD700+Freemaq.

[5] The connection of one digital input of the SD700 configured as "External Fault" is recommended by Power Electronics.

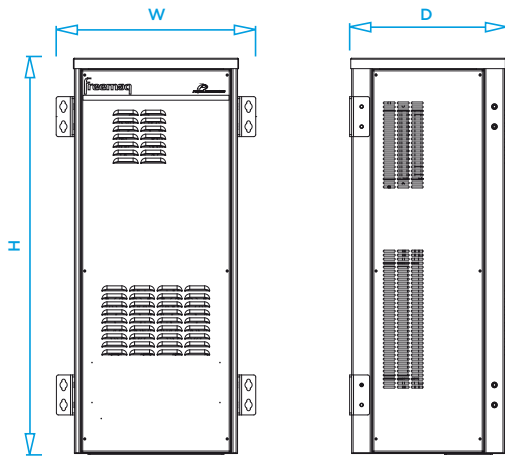
CONFIGURATION TABLE

Freemaq series	Model	Current ^[1]		Input Voltage		Protection degree		THDi	
		0006	6A	5	400Vac	5	IP20	05	5%
FQ	P HARMONICS PASSIVE FILTER	6	690Vac	2	IP42		
		2200	2200A						

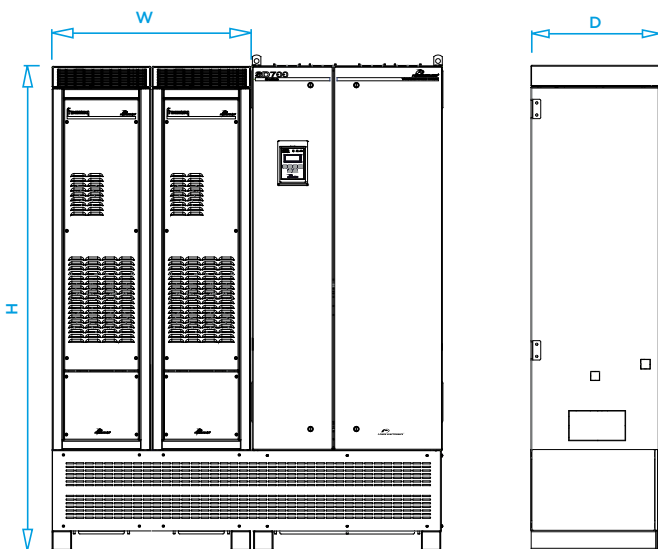
NOTE

[1] The filters are designed according to the nominal motor input power. Verify nominal current and power of the motor nameplate to guarantee the compatibility with the selected filter. Be aware that the selection of an inadequate filter could reduce effectiveness.

DIMENSIONS AND WEIGHTS



400Vac					
CODE	POWER kW	HEIGHT mm (H)	WIDTH mm (W)	DEPTH mm (D)	WEIGHT (kg)
FQP0006 5	2,2	508	207	279	50
FQP0009 5	4				
FQP0012 5	5,5				
FQP0018 5	7,5				
FQP0024 5	11	851	500	394	75
FQP0032 5	15				
FQP0038 5	18,5				
FQP0048 5	22				
FQP0060 5	30	990	500	395	110
FQP0075 5	37				
FQP0090 5	45				
FQP0115 5	55				
FQP0150 5	75	1207	608	440	180
FQP0170 5	90				
FQP0210 5	110	1670	507	529	460
FQP0250 5	132				
FQP0275 5	150				
FQP0330 5	160				
FQP0370 5	200	1670	820	529	1037
FQP0460 5	250				
FQP0580 5	315				
FQP0650 5	355				
FQP0720 5	400	1670	1230	529	1412
FQP0840 5	450				
FQP0925 5	500	1670	1640	529	2121
FQP0990 5	560				
FQP1150 5	630				
FQP1260 5	710				
FQP1440 5	900	1670	2050	529	2261
FQP1580 5	900				
FQP1800 5	1000	1670	2460	529	3007



690Vac					
CODE	POWER kW	HEIGHT mm (H)	WIDTH mm (W)	DEPTH mm (D)	WEIGHT (kg)
FQP0062 6	55	1207	608	443	180
FQP0080 6	75				
FQP0105 6	90				
FQP0150 6	132	1670	407	529	560
FQP0170 6	160				
FQP0210 6	200				
FQP0260 6	250				
FQP0320 6	315	1670	820	529	1093
FQP0385 6	355				
FQP0460 6	450	1670	1230	529	1606
FQP0550 6	500				
FQP0690 6	630				
FQP0750 6	800				
FQP0840 6	900	1670	2050	529	2561
FQP0950 6	1000				
FQP1140 6	1100	1670	2460	529	2930

NOTE Approximate dimensions, please consult Power Electronics.



24H/7D TECHNICAL ASSISTANCE	HEADQUARTERS -VALENCIA
	C/ Leonardo da Vinci, 24 - 26 - Parque Tecnológico - 46980 - PATERNA - VALENCIA - SPAIN Tel. 902 40 20 70 - Tel. (+34) 96 136 65 57 - Fax (+34) 96 131 82 01
	INTERNATIONAL SUBSIDIARIES
GERMANY	Power Electronics Solar GmbH - Dieselstrasse, 77 - D-90441 - NÜRNBERG - GERMANY Tel. (+49) 911 99 43 99 0 - Fax (+49) 911 99 43 99 8 • Email: info@ped-deutschland.de
AUSTRALIA	Power Electronics Australia Pty Ltd - U6, 30-34 Octal St, Yatala, - BRISBANE, QUEENSLAND 4207 • P.O. Box 6022, Yatala DC, Yatala Qld 4207 - AUSTRALIA Tel. (+61) 7 3386 1993 - Fax (+61) 7 3386 1993 • Email: sales@power-electronics.com.au
BRAZIL	Power Electronics Brazil Ltda - Rua Odeon, 102 - Centro • CEP 09720-290 SÃO BERNARDO DO CAMPO - SP - BRASIL - Tel. (+55) 11 5891 9612 - Tel. (+55) 11 5891 9762 Email: comercialbrasil@power-electronics.com
KOREA	Power Electronics Asia HQ Co - Room #305, SK Hub Primo Building - 953-1 Dokok-dong, Gangnam-gu - 135-270 - SEOUL - KOREA Tel. (+82) 2 3462 4656 - Fax (+82) 2 3462 4657 • Email: sales@power-electronics.kr
CHILE	Power Electronics Chile Ltda - Los Productores # 4439 - Huechuraba - SANTIAGO - CHILE Tel. (+56) (2) 244 0308 · 0327 · 0335 - Fax (+56) (2) 244 0395 • Email: ventas@pech.cl • Oficina Petronila # 246, Casa 19 - ANTOFAGASTA - CHILE - Tel. (+56) (55) 793 965
CHINA	Power Electronics Beijing - Room 606, Yiheng Building - No 28 East Road, Beisanhuan - 100013, Chaoyang District, BEIJING - R.P. CHINA - Tel. (+86 10) 6437 9197 - Fax (+86 10) 6437 9181 • Power Electronics Asia Ltd - 20/F Winbase Centre - 208 Queen's Road Central - HONG KONG - R.P. CHINA Email: sales@power-electronics.com.cn
UNITED STATES	Power Electronics USA Inc. • 505 Montgomery Street, 11th Floor San Francisco • CA 94111 • USA Tel.: (415) 874-3668 • Fax: (415) 874-3001 • Mob: (415) 376-1471 • Email: sales@power-electronics.us
INDIA	Power Electronics India - N°5, Cunningham Crescent, 1st floor. Bangalore- 560052 - INDIA Tel./Fax : +91 80 6569 0489 • Email: salesindia@power-electronics.com
ITALY	Power Electronics Italia Srl - Piazzale Cadorna, 6 - 20123 - MILANO - ITALIA Tel. (+39) 342 50 73 691 • Email: infoitalia@power-electronics.com
JAPAN	Power Electronics Japan KK - Nishi-Shinbashi 2-17-2 - HF Toranomom Bldg. 5F 105-0003 • Minato-Ku - TOKYO Tel. (+81) 03 6355 8911 - Fax (+81) 03 3436 5465 • Email: salesjapan@power-electronics.com
MEXICO	P.E. Internacional Mexico S de RL - Avda. Tejocotes lote 76 A S/N • San Martin Obispo Tepetlixpa • CP 54763 • CUAUTITLAN IZCALLI • MEXICO Tel. (+52) 55 5390 8818 • Tel. (+52) 55 5390 8363 • Email: ventasmexico@power-electronics.com
MOROCCO	Power Electronics - Ekoakua • Geea sarl , N°184 Bloc Hay EL.Massira Ait Melloul •CP 80150 • Agadir • MAROC Tel: + 212 5 28 24 04 57 • Mob: (+34) 628 11 76 72 • Email: ventesmaroc@power-electronics.com
NEW ZEALAND	Power Electronics New Zealand Ltd - 12A Opawa Road, Waltham - CHRISTCHURCH 8023 P.O. Box 1269 CHRISTCHURCH 8140 • NEW ZEALAND Tel. (+64 3) 379 98 26 - Fax.(+64 3) 379 98 27 • Email: sales@power-electronics.co.nz
TURKEY	Perpa Ticaret Merkezi A Blok Kat:2 No:9/0034 - 34384 Okmeydanı Şişli • Istanbul • TURKEY Tel: 0 212 221 48 48 (124) - F: 0 212 221 17 00 Email: turkiyesatis@power-electronics.com
UNITED KINGDOM	Power Electronics UK Pty Ltd - Wells House, 80 Upper Street, Islington · London, N1 0NU · 147080 Islington 5 Tel. (+44) 149 437 0029 • Email: uksales@power-electronics.com
SOUTH AFRICA	Power Electronics South Africa Pty Ltd · Central Office Park Unit 5 · 257 Jean Avenue · Centurion 0157 Tel. (+34) 96 136 65 57 · Fax (+34) 96 131 82 01 • Email: salesza@power-electronics.com