FMSE...

EXP10 11

HFRA...

Power factor systems *(automatic)* 400/440V

For applications with varying capacitor requirements. An automatic reactive controller monitors the network and only switches capacitor banks when required, avoiding potential over or under compensation in a network.

FMSE series floor standing systems (138 - 975 kvar - 400V)

Complete ready-to-install system comprising following:

- Suitably ventilated floor standing enclosure *(thermostatically controlled roof mounted exhaust fan)*
- Mains isolator, door interlocking *(with early make/late break auxiliary contact)*
- High end reactive control relay DCRG 8 *(incorporating digital display of all important network parameters)*
  Able to monitor all three phase voltage and current to providing accurate indication of:
  - Active, Apparent Power as well as Active, Reactive, Apparent Energy monitoring
  - Current and Voltage Harmonics analysis *(up to 31st harmonic)*
  - Calendar-clock with backup reserve power
  - Event logging: alarms, setup changes, events etc. *(internal memory stores last 250 events)*
  - Internal panel temperature monitoring
  - Expandable with up to 4 expansion modules for: additional steps, analog Inputs/Outputs, RS323, RS485, Ethernet, GPRS/GSM modem communication

type	kvar at:		steps (kvar) at 400V				expands	dimensions (mm)		
	400V	440V	12.5	25	50	100	to (kvar)	(H)	(W)	(D)

FMSE series floor standing complete power factor systems (440V capacitors)

- Reverse-flow roof mounted exhaust fan *(improved cooling and ventilation of the entire panel)*
- Bottom cable entry *(top entry available on request)*
- RC series racks heavy duty cylindrical capacitors, fusegear and busbars
  "special" capacitor switching contactors incorporating limiting inductances

FMSE13804	**138**	165	1	1	2	–	450	2180	600	630
FMSE17504	**175**	210	–	1	3	–	475	2180	600	630
FMSE20004	**200**	240	–	2	3	–	475	2180	600	630
FMSE23804	**238**	285	1	1	2	1	425	2180	600	630
FMSE27504	**275**	330	–	1	3	1	475	2180	600	630
FMSE30004	**300**	360	–	2	1	2	425	2180	600	630
FMSE33804	**338**	405	1	1	2	2	425	2180	600	630
FMSE37504	**375**	450	–	1	1	3	475	2180	600	630
FMSE40004	**400**	480	–	2	1	3	500	2180	600	630
FMSE43804	**438**	525	1	1	2	3	500	2180	600	630
FMSE47504	**475**	570	–	1	1	4	500	2180	600	630
FMSE50004	**500**	600	–	–	2	4	–	2180	600	630
FMSE53824*	**538**	645	1	1	2	4	975	2180	1200	630
FMSE57524*	**575**	690	–	1	1	5	975	2180	1200	630
FMSE67524*	**675**	810	–	1	1	6	975	2180	1200	630
FMSE77524*	**775**	930	–	1	1	7	975	2180	1200	630
FMSE87524*	**875**	1050	–	1	1	8	975	2180	1200	630
FMSE97524*	**975**	1170	–	1	1	9	–	2180	1200	630

* *Made up by combining two panels with one controller operating all capacitor banks*

Remote monitoring devices

For remote monitoring and control of all electrical network parameters *(including harmonics),* panel internal temperature, alarms, events and all setup parameters.

Plug-in communication modules simply plug into controller and are automatically configured, to offer various communication protocols.

EXP1011	opto-isolated	RS232 plug-in communication	expansion module
EXP1012	opto-isolated	RS485 plug-in communication	expansion module
EXP1013	opto-isolated	ETHERNET with web server function	expansion module
EXP1014	opto-isolated	Profibus-DP plug-in communication	expansion module

De-tuned anti-harmonic reactors 400V, 50 Hz

Detuned reactors protect capacitors against harmonics, avoiding parallel resonance and amplification of harmonics flowing in the network.

- Detuning Degree: 7%, 189 Hz
- Insulation: F class insulation, 155°C
- Internal thermal protection: Thermal cutout (125°C) incorporated *(on centre phase)*
- Reference standards: IEC/EN 60076-6, 61558-2-20

type	kvar at:		description	dimensions (mm)			
	400V	440V		Ln (mH)	(H)	(W)	(D)
HFRA1207	**12.5**	15	anti-harmonic reactor	2.89	210	210	125
HFRA2507	**25**	30	anti-harmonic reactor	1.43	185	240	170
HFRA5007	**50**	60	anti-harmonic reactor	0.713	230	300	180