

# EMi3 A

Servomotor voltage stabiliser 15 kVA - 2.5 MVA

## EMi3 A: Constant stabilisation and savings in overvoltages

Issues such as the constant variation of loads connected to the mains, interference generated by the loads themselves, possible failures in distribution lines, voltage drops due to the length of the lines and problems caused by lightning make it impossible to have an electricity supply with a stable voltage. Salicru's **EMi3 A** servomotor voltage stabilisers are the ideal solution to protect sensitive equipment from constant voltage fluctuations in the power supply.

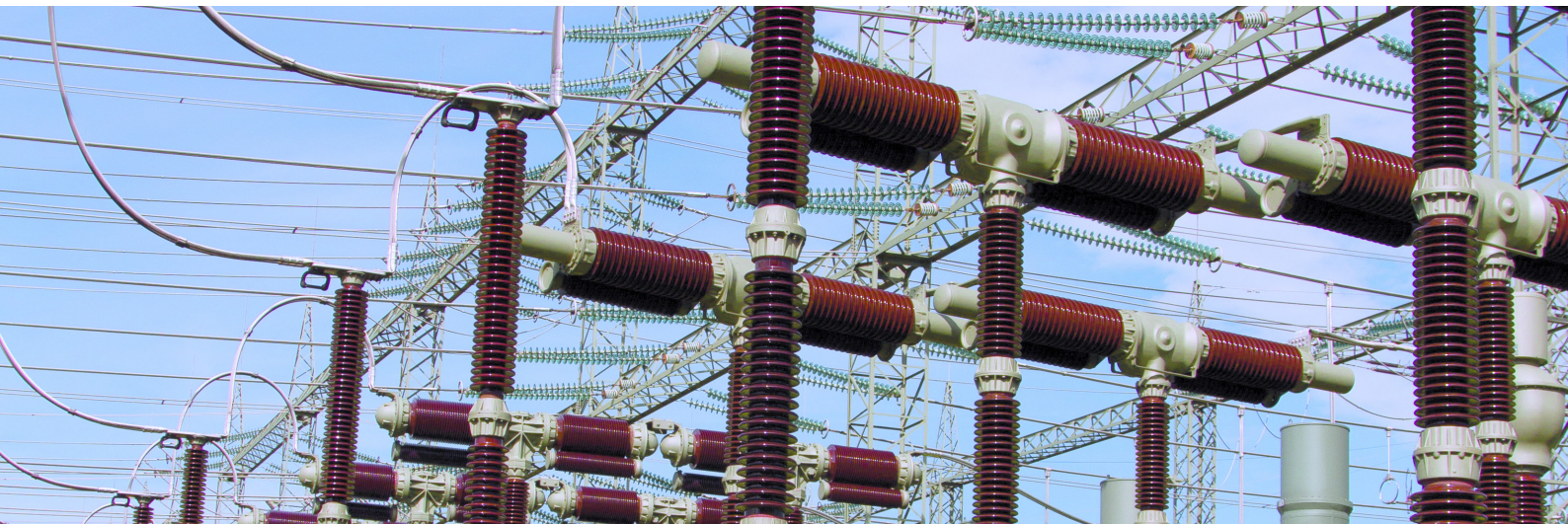
Moreover, in the event of drops in the total consumption of a power line, voltage tends to rise, causing overconsumption in the equipment that remains connected. By using a stabiliser, overconsumption can be eliminated, thereby producing significant cost savings and ensuring that connected loads function within the voltage range for which they were designed.

The operating principle is based on regulation, by means of a control circuit, of the variable autotransformer that supplies the voltage for the booster transformer in series, either in phase or in phase opposition, to achieve the rated value of the output voltage.



## Applications: Effective protection for all types of critical load

Actions and operations in electrical substations, electric ovens, numerical controls, lifts, graphic printing equipment, production lines, medical equipment, TV repeater stations, machine tools (milling machines, trimming machines, presses, lathes, polishing machines, electrical discharge machines, etc.) are some of the applications, because of their power, extremely reactive nature and high sensitivity to voltage variations.



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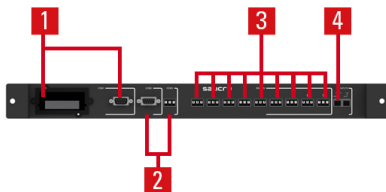
## Performances

- Power range, single and three-phase, up to 2500 kVA.
- Fast and efficient toroidal autotransformers for the entire power range.
- Output accuracy better than 1% (adjustable).
- In three-phase units, independent regulation per phase, unaffected by imbalances.
- Input regulation range  $\pm 15\%$  standard.
- High efficiency, up to 97.5%.
- High speed regulation, up to 70 V/s.
- Full LCD display for stabiliser control and monitoring.
- Guaranteed output stability through a MosFET servo control.
- Unaffected by line voltage harmonics; stabilisation based on true RMS.
- Stable operation in the event of load and/or voltage variations.
- Wide operating temperature range (-10°C to +55°C).
- Dry contact interface (2 standard and up to 11 optional).
- No harmonics injection.
- Mechanically-optimised design, easier maintenance.
- Transient overloads of up to 1000% of the rated admissible.
- Highly robust and reliable (high MTBF).
- Quiet operation.
- Overvoltage surge suppression protection.
- Suitable for regenerative loads.



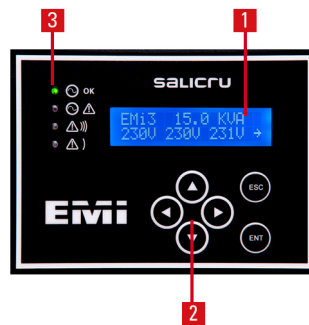
## Communications

1. Slot for remote management or RS-232 interface.
2. RS-485 serial ports. MODBUS communications protocol.
3. Programmable dry contact interface (x5).
4. Digital input.



## Wide voltage regulation range

The range includes models with standard regulation ( $\pm 15\%$ ), as well as extended  $\pm 30\%$  versions for environments with greater voltage fluctuations.



## Display

1. LCD 2x16 characters.
2. Navigation keys.
3. LEDs (alarm, bypass, normal operation and communications).

## Options

- Output current, power and overload measurement.
- Maximum and minimum output voltage protection.
- Manual and automatic bypass.
- Overload contactor.
- Communications and relay module.
- Other regulation ranges.
- Galvanic isolation transformer.
- Output circuit breaker.
- Extended ambient operating temperature from -20°C.



## Range

MODEL	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
EMI3 T 15-2F 3x220V	6A5FA000034	15000 / 15000	895 × 460 × 705	144
EMI3 T 20-2F 3x220V	6A5FA000067	20000 / 20000	895 × 460 × 705	161
EMI3 T 35-2F 3x220V	6A5FA000054	55000 / 55000	840 × 604 × 2115	370
EMI3 T 55-2F 3x220V	6A5FA000018	70000 / 70000	840 × 604 × 2115	527
EMI3 T 70-2F 3x220V	6A5FA000069	90000 / 90000	840 × 604 × 2115	463
EMI3 T 90-2F 3x220V	6A5FA000070	35000 / 35000	640 × 604 × 1315	313
EMI3 T 110-2F 3x220V	6A5FA000053	110000 / 110000	840 × 804 × 2115	473
EMI3 T 140-2F 3x220V	6A5FA000015	140000 / 140000	840 × 1204 × 2115	516
EMI3 T 175-2F 3x220V	6A5FA000047	175000 / 175000	840 × 1204 × 2115	755
EMI3 T 220-2F 3x220V	6A5FA000113	220000 / 220000	840 × 1204 × 2115	863
EMI3 T 275-2F 3x220V	6A5FA000114	275000 / 275000	840 × 1604 × 2240	891
EMI3 T 330-2F 3x220V	6A5FA000115	330000 / 330000	840 × 1604 × 2240	1223
EMI3 T 375-2F 3x220V	6A5FA000116	375000 / 375000	840 × 1604 × 2240	1275
EMI3 T 450-2F 3x220V	6A5FA000117	450000 / 450000	840 × 1604 × 2240	1503
EMI3 T 500-2F 3x220V	6A5FA000118	500000 / 500000	840 × 1604 × 2240	1628
EMi3 T 600-2F 3x220V	6A5FA000119	600000 / 600000	840 × 3204 × 2240	1946
EMi3 T 800-2F 3x220V	6A5FA000135	800000 / 800000	1225 × 5613 × 2240	3772
EMi3 T 1000-2F 3x220V	6A5FA000136	1000000 / 1000000	1225 × 5613 × 2240	4675
EMI3 T 1250-2F 3x220V	6A5FA000137	1250000 / 1250000	1225 × 5613 × 2240	5805
EMI3 T 1600-2F 3x220V	6A5FA000138	1600000 / 1600000	840 × 3204 × 2240	2400
EMI3 T 2000-2F 3x220V	6A5FA000139	2000000 / 2000000	840 × 3204 × 2240	3120
EMI3 T 2500-2F 3x220V	6A5FA000140	2500000 / 2500000	1225 × 5613 × 2240	3772

## Range

MODEL	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
EMI3 T 15-4F 3x480V	6A5FA000048	15000 / 15000	895 × 460 × 705	133
EMI3 T 20-4F 3x480V	6A5FA000120	20000 / 20000	895 × 460 × 705	166
EMi3 T 35-4F 3x480V	6A5FA000121	35000 / 35000	640 × 604 × 1315	185
EMi3 T 55-4F 3x480V	6A5FA000122	55000 / 55000	640 × 604 × 1315	360
EMi3 T 70-4F 3x480V	6A5FA000123	70000 / 70000	840 × 604 × 2115	416
EMi3 T 90-4F 3x480V	6A5FA000124	90000 / 90000	840 × 604 × 2115	599
EMI3 T 110-4F 3x480V	6A5FA000125	110000 / 110000	840 × 604 × 2115	500
EMI3 T 140-4F 3x480V	6A5FA000126	140000 / 140000	840 × 604 × 2115	532
EMI3 T 175-4F 3x480V	6A5FA000127	175000 / 175000	840 × 1204 × 2115	570
EMI3 T 220-4F 3x480V	6A5FA000128	220000 / 220000	840 × 1204 × 2115	840
EMi3 T 275-4F 3x480V	6A5FA000129	275000 / 275000	840 × 1204 × 2115	955
EMi3 T 330-4F 3x480V	6A5FA000130	330000 / 330000	840 × 1204 × 2115	1020
EMI3 T 375-4F 3x480V	6A5FA000131	375000 / 375000	840 × 1604 × 2240	1025
EMI3 T 450-4F 3x480V	6A5FA000132	450000 / 450000	840 × 1604 × 2240	1406
EMI3 T 500-4F 3x480V	6A5FA000133	500000 / 500000	840 × 1604 × 2240	1466
EMI3 T 600-4F 3x480V	6A5FA000134	600000 / 600000	840 × 1604 × 2240	1728

# Technical specifications

MODEL		EMi3 A
INPUT	Three-phase voltage	3x208 / 3x220 / 3x480 V (3F+N) <sup>(1)</sup>
	Regulation range	±15% <sup>(2)</sup>
	Frequency range	47.5 ÷ 63 Hz
OUTPUT	Three-phase rated voltage	3x208 / 3x220 / 3x480 V (3F+N) <sup>(1)</sup>
	Accuracy	± 3% (adjustable between 1% ÷ 5%)
	Output voltage setting	± 10%
	Total harmonic distortion (THDv)	<0.2%
	Frequency	47,5 ÷ 63 Hz
	Regulation speed	Up to 70 V/s
	Performance	Between 96.5% and 97.5%
	Voltage disconnection value	Adjustable <sup>(3)</sup>
	Admissible overloads	Up to 200% for 20 s
	Possible load variation	0 ÷ 100%
	Power factor influence	Null
COMMUNICATION	Ports	2 Dry contacts / RS-232 <sup>(4)</sup>
	Intelligent slot	One <sup>(4)</sup>
INDICATIONS	Type	LCD display (2x16 characters) + 4 status LEDs
GENERAL	Ambient temperature	-10° C ÷ +55° C <sup>(2)</sup>
	Storage temperature	-20° C ÷ +85° C
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	2,400 m.a.s.l.
	Cooling	Natural or forced depending on power rate <sup>(5)</sup>
	Acoustic noise at 1 metre	<45 dB(A) <sup>(6)</sup>
	Mean time between failures (MTBF)	60,000 hours
Mean time to repair (MTTR)	30 minutes	
STANDARDS	Safety	IEC/EN 61558-2-14
	Electromagnetic compatibility (EMC)	IEC/EN 62041
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) Ask for other settings

(2) Other ranges available on request

(3) With optional voltage maximum-minimum

(4) Mutually exclusive ports

(5) Forced from 20 kVA

(6) &lt;65 dB(A) for models with forced ventilation

Information subject to change without notice.

