



FAC Q - FAC M - FAC S

Battery chargers

FAC Q - FAC M - FAC S: Battery chargers for industrial applications

Traditionally battery charging has been done with units limited to charging the battery, taking little or no care of such important aspects as the efficiency, the DC output voltage curl, the flexibility, the weight, the size, the temperature, the charging control and a long etc.

The Salicru Batter Charger Units, using the technology used in high quality power supplies for telecommunications equipment, are characterised by their architecture based on high frequency switching and offering numerous additional services as opposed to other solutions, which gives greater profitability in the industrial process. The **FAC Q**, **FAC M** and **FAC S** series are easily adaptable to a wide range of possible applications and contribute to maintaining a clean, reliable environment.

On the mechanical level, the **FAC Q** and **FAC M** are characterised as offering the wall solution as the most effective in industrial environments lacking in space, while the **FAC S** deals with the portability of the battery charge.

Performances

- Switched technology.
- High efficiency and precision.
- Low output voltage curl.
- Great flexibility in powers and voltages.
- Permanent protection against short circuits and overloading.
- Excellent dynamic behaviour.
- Capacity to withstand large starting peaks.
- High power factor.
- Low starting current.
- Lower weight and heating.



FAC M



FAC Q



FAC S

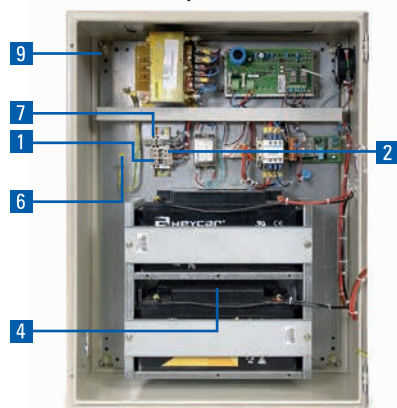
Applications: Electrical protection and battery charging

The **FAC Q** series is especially conceived to correctly supply all kinds of emergency lighting, surgery lamps, security and alarm circuits, power supply circuits to machines with irreversible processes, converters, breakers, etc.

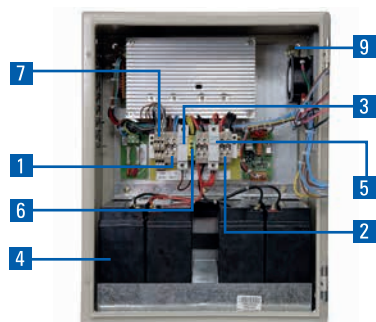
The **FAC M** series is conceived, amongst other applications, to face the usual requirements of automatic remote control, so the battery is provided with the capacity to withstand a large amount of high current peaks.

The **FAC S** series, with digital switched technology, covers a market niche traditionally unattended with regard to the technology involved: applications of handling and remote control, power generation, mini-stations or process control in the industrial and electrical sectors, to mention the most representative.

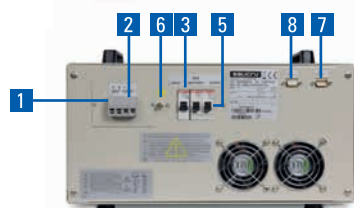
Unit connectivity



FAC Q



FAC M



FAC S

1. AC input.
2. DC output (or AC in **FAC Q**).
3. Input protection (on door in **FAC Q**).
4. Batteries.
5. Battery protection (on door in **FAC Q**).
6. Ground socket.
7. Relay interface.
8. RS-485 interface.
9. Drill holes for fixing to the wall.

Optional

- LCD display.
- Ni-Cd batteries.
- Relay interface.
- Voltmeter / Ammeter.
- Positive and negative ground failure detector.
- Version I for **FAC Q**: Normal Contactor / Emergency.

Communication & services

- Standard relay interface and 3 kV isolation.
- Pre-sale and after sale advisory service.
- Multiple formulae for maintenance and telemaintenance.



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Battery chargers



TECHNICAL SPECIFICATIONS

MODEL		FAC M		FAC Q	FAC S
		FAC 165 M	FAC 1000 M		
INPUT	AC input	230 V ± 15%		230 V ± 10%	230 V ± 15% / -20%
	Power factor	0.7	0.99	0.7	
	Efficiency	> 85%	> 90%	> 85%	> 90%
	Frequency	50 / 60 Hz			
	Protection	Fuse		Circuit breaker	
OUTPUT	Voltage	12, 24, 48 V DC	12, 24, 48, 110, 125 V DC	Normal 24 V AC / Emergency 24 V DC	12, 24, 48, 110, 125 V DC
	Current	Depending on the model			
	Power	165 W ⁽¹⁾	1000 W ⁽¹⁾	250, 350, 500, 600, 700 W	1000 W ⁽¹⁾
	Accuracy (with charged batteries)	± 1%	± 0.1%	± 1%	± 0.09%
	Ripple	< 200 mVpp	< 20 mVpp	< 200 mVpp	< 20 mVpp
BATTERIES	Protection	Switch with fuse	Circuit breaker	Circuit breaker	Circuit breaker
	Charge type	I / U			
	Charging current	1 A	0,1 C	3 A	0,1 C
	Protection against overvoltages and undervoltages	Yes			
	Ni-Cd / Pb-Ca	Optional / Yes			NA / Yes
COMMUNICATIONS	Standard relay interface	Optional	Optional	Yes	Optional
	Allocation	Rect. fault / Mains fault	Programmables	Rect. fault / Mains fault ⁽²⁾	Programmables
	Contact quantity	2	5	2 ⁽³⁾	5
	Remote shutdown	No	Yes	-	-
	3 kV insulation interface	-	Optional	-	Optional
SIGNALLING	LED synoptic	Yes			
	LCD panel	No	Optional	No	Optional
	Voltmeter / Ammeter	-	-	Optional	-
GENERALS	Acoustic end of autonomy	-	-	Yes	-
	Positive and negative earth fault	-	-	-	Optional
	Structure	Single phase			
STANDARDS	Protection degree ac. to standards	IP21			
	Insulation	> 10 MΩ			
	Acoustic noise at 1 metre	< 40 dB			
	Cooling	Natural	Forced	Natural	Forced
	Operating temperature	0° C ÷ + 40° C			
	Storage temperature	- 20° C ÷ + 70° C			
	Relative humidity	Up to 95%, non-condensing			
	Maximum operating altitude	2400 m.a.s.l.			
	Mean Time Between Failures (MTBF)	60,000 hours			
	Mean Time To Repair (MTTR)	30 minutes			
	Safety	EN 60950-1			
	Electromagnetic Compatibility (CEM)	EN 61204-3			
	Quality and Environmental management	ISO 9001 and ISO 14001			

(1) Except 12 and 24 Vdc.

(2) Version I: Standard + Normal / Emergency contact (optional).

(3) 3 contacts for version I.

Data may change without previous notice.

RANGE

MODEL	DIMENSIONS (D x W x H mm.)	WEIGHT (Kg)
FAC 165 M	200 x 400 x 550	Depending on the model
FAC 1000 M	220 x 400 x 650	Depending on the model
FAC Q	300 x 600 x 800	Depending on the model
FAC S	550 x 400 x 230	Depending on the model