



FAC Q - FAC M - FAC S

BATTERY CHARGERS

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

Traditionally the battery charging has been carried out by equipments that were only charging the batteries, making low or null incidence over the aspects so important as the efficiency, the DC output voltage ripple, the flexibility, the weight, the size, the temperature, the charge control and a long etcetera.

Taking advantage of the technology used in power supply of high quality for telecommunication equipments, the Battery Chargers of **SALICRU**, are characterized by both their architecture based on high frequency switching and to offer additional benefits in front of other solutions, which redounds in a better profitability of the industrial process. The **FAC Q**, **FAC M** and **FAC S** series are easily adapted to a wide range of possible applications and they allow contributing in a clean and reliable environment.

At mechanical level, the **FAC Q** and **FAC M** are characterized by offering a wall mounting solution as the most effective in those industrial environments that has lack of space, while the **FAC S** impacts in the portability of the battery charging.

► FAC Q



► FAC M



► FAC S



► QUALITY PERFORMANCES

- Switching technology.
- High efficiency and accuracy.
- Low output voltage ripple.
- High flexibility in power and voltages.
- Permanent protection against short-circuits and overloads.
- Excellent dynamic behaviour.
- Capacity to support high inrush currents.
- High power factor.
- Low inrush current.
- Light weight and low heat losses.

► APPLICATIONS: Electrical protection and battery charging

The **FAC Q** series is specially designed to give a correct power supply for any emergency lights, operating theatre lamps, safety and alarm circuits, power supply circuits for machines with irreversible processes, converters, switches, etc.

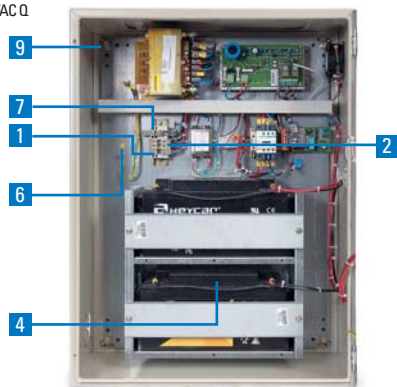
The **FAC M** series is thought, among other applications, to make front to the usual requirements of automatic remote controls, therefore the battery is able to support important inrush currents.

The **FAC S** series with digital switching technology, covers the market niche that is traditionally unattended in regards of the used technology: Applications of manoeuvre and remote control, cogeneration, small power stations or process control in industrial and electrical sectors, in order to mention the most representative.

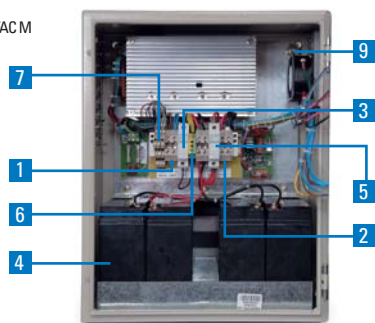
► EQUIPMENT connectivity

1. AC input.
2. DC output (or AC in FAC Q).
3. Input protection (in the door in FAC Q model).
4. Batteries.
5. Battery protection (in the door in FAC Q model).
6. Main earthing terminal.
7. Relay interface.
8. RS-485 interface.
9. Wholes for wall fixing.

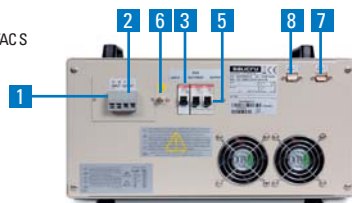
► FAC Q



► FAC M



► FAC S



► OPTIONS

- LCD panel.
- Ni-Cd batteries.
- Relay interface.
- Voltmeter / Ammeter.
- Positive and negative earth fault detector.
- I version for FAC Q: Normal contactor / Emergency.

► COMMUNICATIONS & services

- Standard and 3 kV insulation relay interfaces.
- Before and after sales advice service.
- Several maintenance and telemaintenance formulas.

► 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	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	Switch or 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	-
	Acoustic end of autonomy	-	-	Yes	-
	Positive and negative earth fault	-	-	-	Optional
GENERALS	Structure	Single phase			
	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			
STANDARDS	Mean Time To Repair (MTTR)	30 minutes			
	Safety	EN 60950-1			
	Electromagnetic compatibility (EMC)	EN 61204-3			
	Marking	CE			
	Manufacturing	ISO-9001 TÜV			

(1) Except 12 and 24 Vdc

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

(3) 3 contacts for version I

► RANGE

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

Data liable to changes without prior notice.