**fCharge Automatic Battery Charger**

**Features**
- Cost effective
- Micro-processor control
- Small footprint & compact size
- Din rail mounting
- Automatic multi-stage charging
- Continuously rated
- Protections:
  - Short circuit and overload
  - Over voltage
  - Over temperature
  - Reverse battery
- Universal AC input range
- Low ripple output
- Naturally cooled
- Simple calibration procedure
- Comprehensive alarm monitoring
- Fail alarm contact set

**Applications**
- Standby & prime power generators
- Engine driven pumps and compressors
- Switch gear tripping
- Industrial control systems
- Robust PSU
- Alarm systems
- Navigational aids

**fCharge** automatic battery chargers provide a cost effective solution to most industrial battery charging requirements.

Utilising the latest high efficiency switch-mode technology and micro-processor control, the range is suitable for charging most sealed or flooded batteries and is easily calibrated by the end user to suit the battery type. The multi-stage intelligent charging characteristic ensures accurate and efficient battery charging and is designed for permanent connection to the batteries maintaining them in a fully charged condition without overcharging.

The fCharge is fully protected against overload, reverse battery connection, over voltage and over temperature.

**Input Specification**
- Voltage range, $V_{IN}$: 100 - 264V AC
- Frequency: 47 - 63Hz
- Input current: 2.5A max.
- Leakage current: <1mA / 240VAC

**Output Specification**
- Voltage / Current: 24.0V Nominal 10A.
- Ripple and noise: ±0.5%
- Line regulation: ±0.5%
- Load regulation: ±1.0%
- Efficiency: Up to 88%
- Overload protection: Constant current limit
- Over temp. protection: Output shutdown with automatic recovery
- Reversed battery protection: Automatic protection. Disabled when in PSU mode.

**Alarms and Levels**
- DC output voltages:
  - Float = Factory set to 27.6V.
  - Boost (Bulk/Absorb) = Float Voltage +4%.
- AC / charger fail:
  - Loss of AC input or DC output voltage control
- Low DC voltage alarm:
  - Float voltage -12% alarm, -8% reset
- High DC voltage alarm:
  - Float voltage +7% alarm, +5% reset
- Over voltage protection:
  - 30.3 Instantaneous lockout
- Battery disconnected:
  - Open circuit on DC output (Disabled in PSU mode)
ISOLATION

Withstand voltage: Input - Output, Input - Earth 1.5kV AC
Isolation resistance: Input - Output, Input - Earth, Output - Earth 500V DC / 100M Ohms

ENVIRONMENTAL SPECIFICATION

Working temperature: -10°C to +50°C
Working humidity: 20 - 90% RH
Storage temperature: -20°C to +85°C
Storage humidity: 10 - 95% RH
Unpacked weight: 1.2 kgs

FINISH

Aluminium / RAL9005 black fine texture

FAIL ALARM RELAY CONTACT SET (OPTIONAL)

Volt-free form C relay contact set for signalling of a fault alarm condition. The relay contacts de-energise 60 seconds after a fault occurs. The overvoltage protection shutdown alarm de-energises the contacts instantly.

GENERAL ARRANGEMENT

TERMINATION

AC input and DC output:
Connections terminate to rising clamp screw terminals and will accept 6.0mm² stranded cable.

Fail alarm:
Connections terminate to rising clamp screw terminals and will accept 2.5mm² stranded cable.

Connector 'C1' (signals):
Pins 7 and 8 should be linked when the charger should also function as a PSU.

NOTE: Reverse battery and battery disconnected alarms are disabled in PSU mode.
The remaining pins are for expansion modules, communication interfaces, firmware upgrade etc. and should not be used.

ORDERING INFORMATION

Model No. DC output
MAS 1024R 24V-10A 24V 10A