

Flex

Power Supply



ENG / 05.2013

One solution, many applications

ADELSYSTEM

Integrated Electronic Solutions



A new way to make and use Power Supplies

Yet another strong proposition by Adelsystem for power supplies and power continuity specialists.

Adelsystem aim is to provide designers and users with a complete range of solutions in power supplies and power continuity products, focusing on both standard and special applications.

Our target is to deliver problem-free solutions so that you can safely dedicate your attention to the rest of the automation project.

The FLEX technology is the result of these corner stones of our corporate identity.

Designed taking into account the pressure to optimal use of space, FLEX units are very compact in size.

The wide input voltage range allows to have just one article for many applications and minimize stock.

FLEX is based on semi-resonant switching circuit which allows efficiency up to 93% and a very dynamic and robust power supply to a wide range of loads such as PLC, sensors, motors, resistive/ inductive loads, etc.

The FLEX range conforms with the highest quality standards and guarantees a reliable and durable operation with a MTBF up to 500.000 hours and 3 year warrantee.

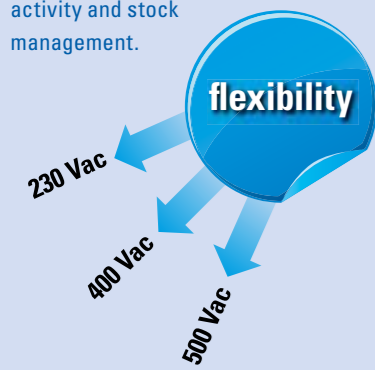
FLEX

ADELSYSTEM

Integrated Electronic Solutions

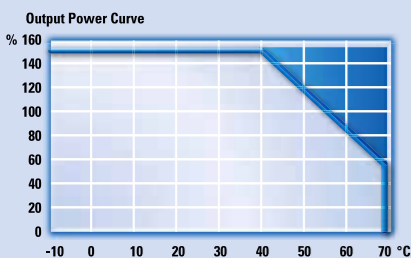
More flexibility in input voltage

The power supplies FLEX90, FLEX170 and FLEX280 B are suitable to a wide range of input voltage. With a single type it is therefore possible to meet the requirements of more applications and consequently improve design activity and stock management.



More power: "Power Boost"

As an example, Flex17024A is a 24Vdc power supply that features a continuous duty current of 5A at 60°C and a Power Boost of 150%, equivalent to 7,5A, for at least 3 min. This feature allows the use of a smaller size unit to power demanding loads such as motors, solenoid valves, lamps and other loads with transient overload behavior which would otherwise require an oversize power supply.

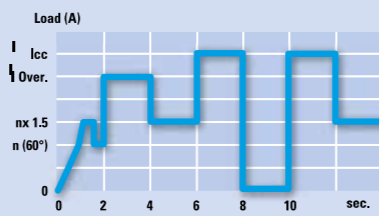
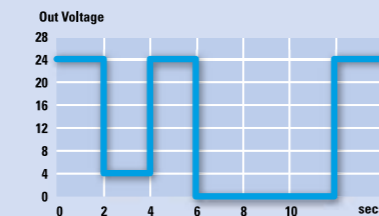


three
modes for output protection

Three modes for output protection.

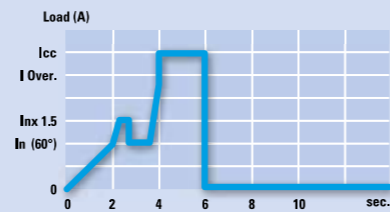
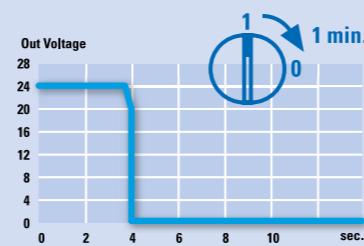
Hiccup Mode Automatic Restart

This is the default factory setting of all FLEX units. In case of short-circuit or overloading, the output current is interrupted. The device tries again to re-establish output voltage and normal condition about every 2 second till the problem is cleared.



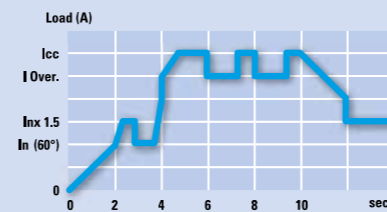
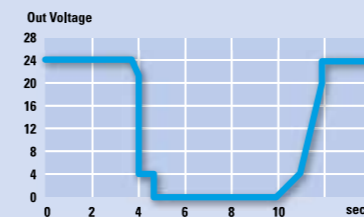
Manual reset manual Restart by Operator

In case of short-circuit or overload, the output current is interrupted. In order to restart the output it is necessary to switch-off the input circuit for about 1 minute. This protection mode is particularly suggested in applications where safety procedures require that reset be carried out only by an authorized person.



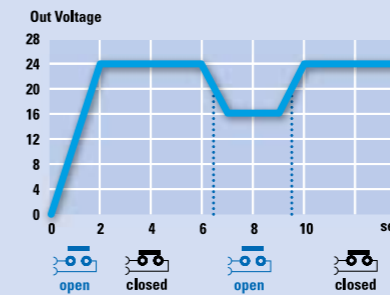
"Continuous Output mode"

In case of short-circuit or overload, the output current is kept at high values with near zero voltage. In case of short circuit the current can reach up to 3 times the rated current at 60°C. This protection mode is used to meet the requirements of demanding loads such as motors, solenoid valves, lamps, PLC with highly capacitive input circuits and other loads with marked transient overload behavior.



"Power Good" relay for monitoring the output voltage level

Output voltage is continuously monitored. The units 24 Vdc output FLEX170, FLEX280 and FLEX500 are equipped with Power Good relay. The NO contact triggers any time the output voltage level goes below 20Vdc (24 Vdc output). This feature is particularly useful in redundant applications.



Applications in compliance with the norm EN 60204-1

FLEX units comply with the norm requirement that an overload of 50% over the nominal current be withstand by the power supply for at least 1 hour to allow the tripping of magneto-thermic switches on the output. These features allows the implementation of "Control of commands and Emergency stops" by means of industrial PCs, PLC, remote I/O, etc. required by the norm. Adelsystem supplies a table for the sizing and length of connecting cables and the choice of proper magneto-thermic switches.

Output circuits protected by magneto-thermic circuit breakers

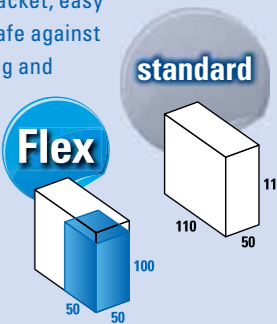
Standard output circuit breakers can be triggered quickly and reliably with FLEX technology, which allows three times the nominal current at 60°C. Defective current paths are selectively disconnected, the defect is limited and the important parts of the system remain in operation. This together with the 50% overload capacity in compliance with EN60204-1 allows to safely manage any overload and short circuit condition.

Flex



Reduced dimensions and snap-on DIN rail bracket

The higher performances obtained with the FLEX! line, allow almost half dimensions as conventional technology and higher performances. An example is Flex6024A 60W with maximum current till 6A. In permanent duty at 40°C it can deliver 3A at 24Vdc. All FLEX units feature the new DIN rail mounting bracket, easy to use and safe against heavy loading and vibrations.



Easy Parallel connection

With FLEX technology it is easier to double capacity. The units FLEX280 and FLEX500 can be easily connected in parallel without needing high precision instruments, but a normal tester. Just remove the jumper and the trick is done!



Jumper settings



ADELSYSTEM

Integrated Electronic Solutions

Product range



**DC UPS
"All In One"**
DC Power Back Up units. Multi-function devices: power supply, battery charger and back-up module in the same casing together with Adel Battery Care software



Flex
DIN rail Switching Power Supplies. Very compact in size, 150% power boost, wide input voltage range 110 - 230 - 400 - 500 Vac. Selectable output protection mode



D-Flex
High efficiency Power Supplies in DIN type modules. For all kinds of small power. Requirements in installation, building automation and Industrial applications.



CB
New generation of Battery Chargers with 4 charging levels, equipped with Adel Battery Care software. One product for all batteries types.



**Power supply
low input voltage**
Switching power supply for direct connection to secondary transformer In 24 Vac Out 12-24-48 Vdc Watt: 25 - 460.



Dc / Dc converter
Dc / Dc Converter, step Up and Step down. Input - Output isolated, low voltage. With or without DIN Rail.



Interfaces
Wide range of passive interfaces units for Input and Output connections, for PLC and CNC machine.



BM
Battery Modules and Battery holders for connection to DC-UPS or battery charger units
Battery sizes:
1.2; 3; 7.2; 12 Ah at 12Vdc and 24 Vdc.



Auxiliary Module
- Decoupling Modules for redundancy applications.
- Electronic Fuses for Over Load output control, up to 4 channel



SFP
Safety Power. Power continuity solutions for alarm systems and fire alarms. Available as a fully enclosed device conforming with EN54.4 or as a component to be integrated in other instrumentation.

Innovation and Functionality

Persist the technical proposal of ADEL system dedicated to the innovative products for the electrical continuity in DIN rail applications. The research objective of the design team, aimed to offer products which are able to solving in an innovative and functional way every application. The wide range of power supplies ADEL system SW, PFAL, PSM, PST, is added to the last generation of products that changes the way of Power Supply, FLEX!. Since 1991 ADELsystem designs and produces products in Italy, since the second half of 2008 in a new building located in Reggio Emilia, it is consolidated in logistics and production process the aim of achieving greater efficiency and innovative technology.

ADELSYSTEM

ADEL system srl · Via Luigi Barchi 9/B · 42124 Reggio Emilia · Italy · Tel. +39 0522 345518 · Fax +39 0522 345551 · mail: info@adelsystem.it

www.adelsystem.com