Flex
PowerSupply

one solution, many application

ADELSYSTEM

Integrated Electronic Solution

Flex Power Supply

- Based on Semi-resonant Switching Technology: high performance till 93% and highly dynamic output power.
- Very compact in size and cost-effective, they are the perfect choice when power supply is needed for electronic loads, PLCs, sensors, resistive, inductive and capacitive loads.
- One single article in your stock suits all input voltage options.
- High reliability and durability: MTBF values up to 500.000 hours. 3 years Warranty.

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Products Range Out: 24 Vdc

Model	Output Current A 40°C	Input Voltage Vac	Output voltage Vdc
FLEX6024A	3	115 - 230	24
FLEX9024A	5	115 - 230	24
FLEX17024A	7.5	115 - 230	24
FLEX28024A	14	115 - 230	24
FLEX50024A	25	115 - 230	24
FLEX9024B	5	230-400-500	24
FLEX17024B	7.5	230-400-500	24
FLEX28024B	14	230-400-500	24
FLEX50024B	25	400-500 3ph	24

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Products Range Out: 5, 12, 48 Vdc

Model	Output Current A 40°C	Input Voltage Vac	Output voltage Vdc
FLEX6005A	5	115 – 230	5
FLEX6012A	6	115 – 230	12
FLEX17012A	12	115 – 230	12
FLEX28012A	17	115 – 230	12
FLEX17048A	3,75	115 – 230	48
FLEX28048A	7	115 – 230	48
FLEX50048A	12	115 – 230	48

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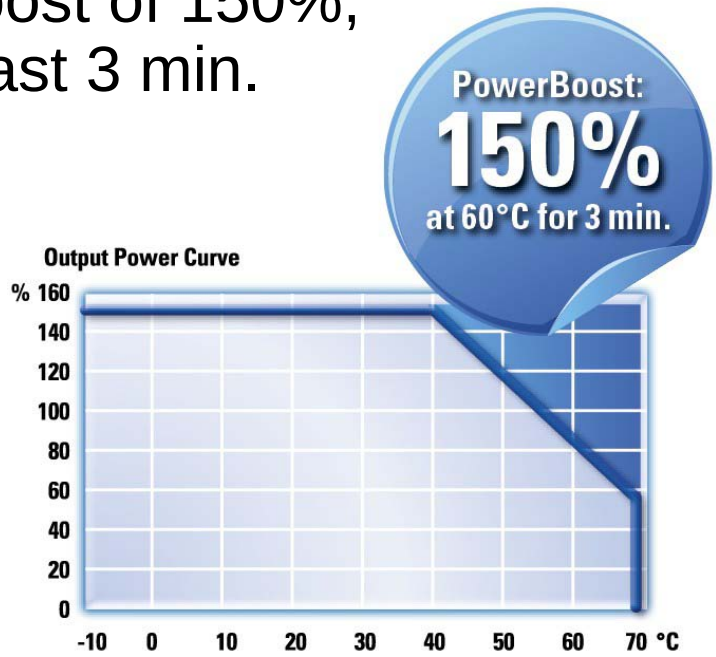
Main Flexibility input voltage

- FLEX Products 90, 170 and 280 B, can be used with the most common mains voltage input
- It simplifies 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 features 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.



More Power at varying rated temperature

- Do you need more current?
- Do you need a wider operating temperature range?

FLEX fits all applications !

As an example, Flex17024A can be the right solution for two design cases in very different temperature conditions

7.5A, 24Vdc in continuous duty at 40°C

5A, 24Vdc in continuous duty at 60°C + Power Boost 7,5 for at least 3 min.

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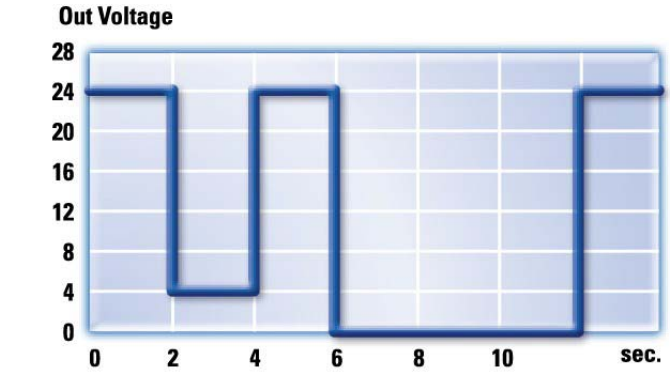
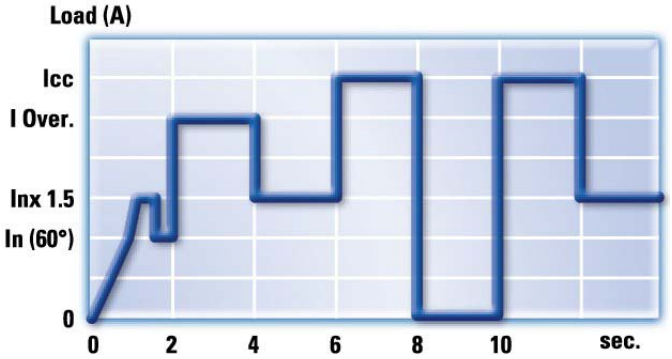
Hiccup Mode: Automatic Restart

- 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.





Jumper settings

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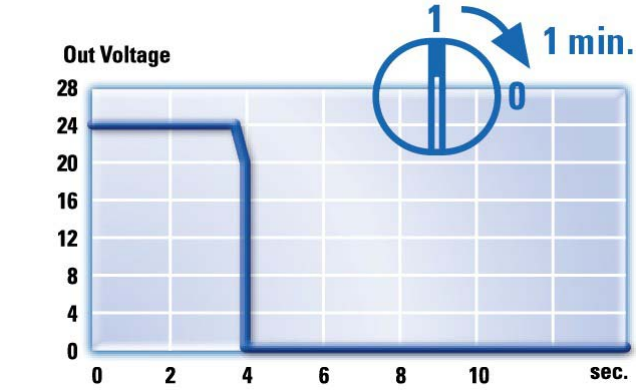
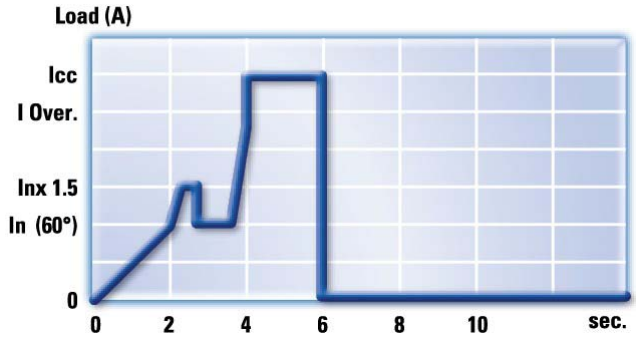
three modes for output protection

Manual Reset: restart by operator

- In case of short-circuit or overloading, 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.





Jumper settings

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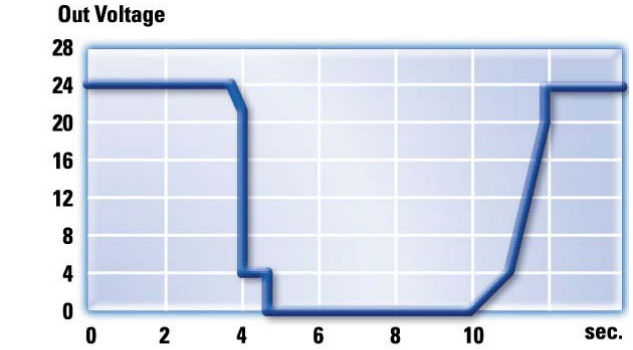
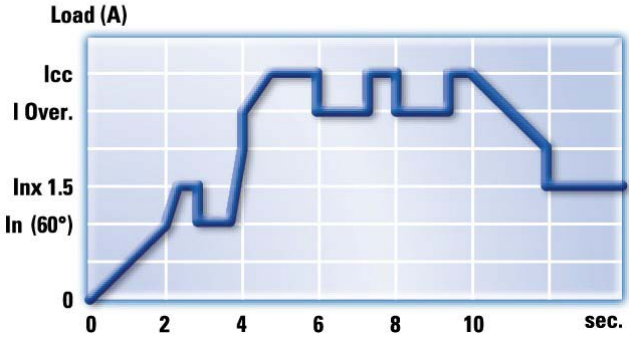
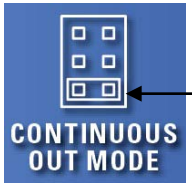
three modes for output protection

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.







Jumper settings

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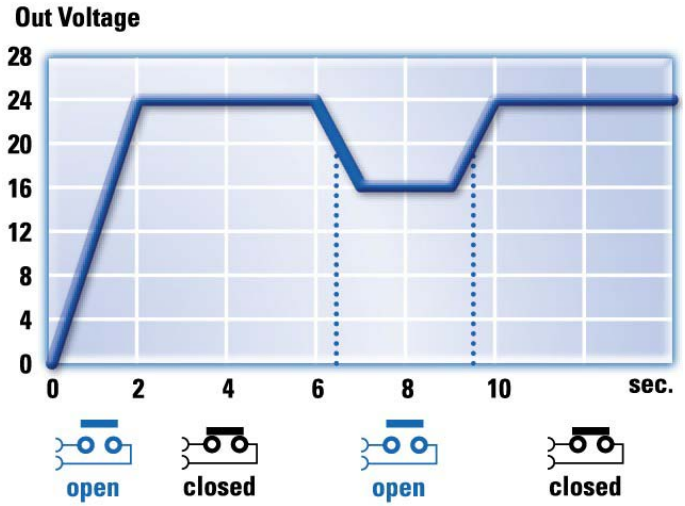
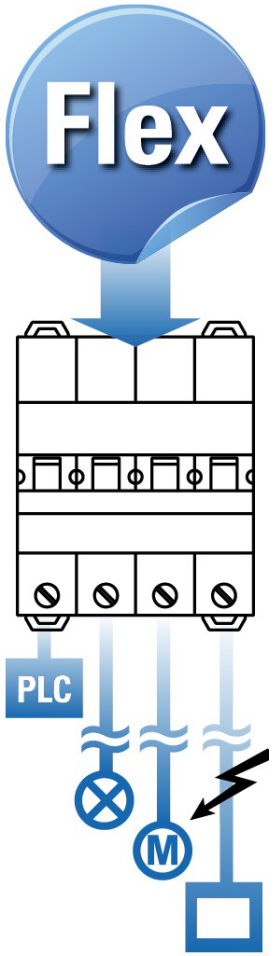
“Power Good” relay
Monitoring the Output Voltage Level

- Output voltage is continuously monitored. The units FLEX90, 170, 280, 500 are equipped with Power Good relay.
- The NO contact triggers any time the output voltage level goes below 20 Vdc.
- This feature is particularly useful in redundant applications.



Output circuits protected by Magneto-thermal 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.



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FLEX Meets EN 60204-1 Regulation

- 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 magnetothermic 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 norm.
- Adelsystem supplies a table for the sizing and lenght of connecting cables and the choice of proper magneto-thermic switches.

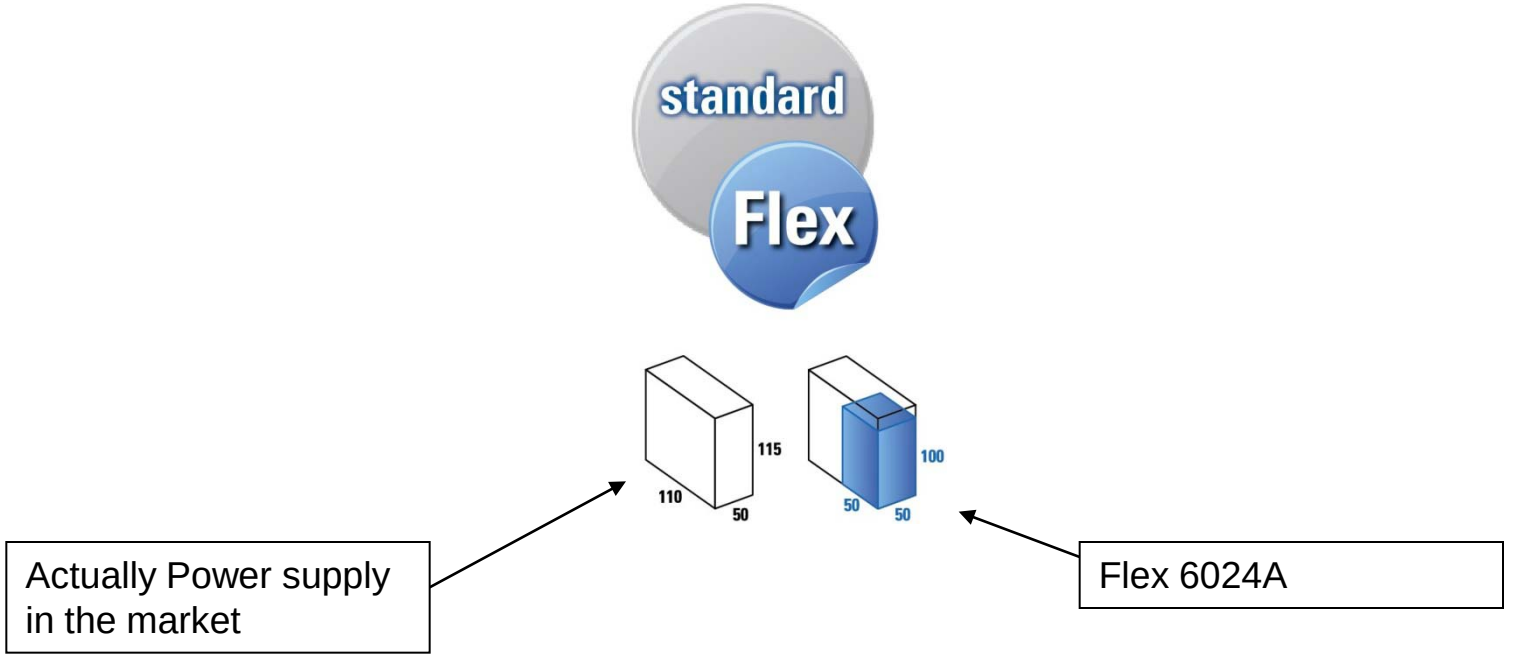
Easy parallel connection

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 trick is done!

Very small dimensions

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.



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Norms & Certifications

The FLEX series complies with the most demanding current norms and standards.

FLEX devices are conforming with:

- **cULus listed 508 approved: all range 24 Vdc output**
- **UL 508 conform: for range 5, 12, 48 Vdc output**
- **89/336/EEC EMC Directive**
- **2006/95/EC (Low Voltage)**
- **Emission: IEC 61000-6-4**
- **Immunity: IEC 61000-6-2**


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