

• **Limits the inrush current at start-up**

*avoid to oversizing protections
 protection of power sources like batteries
 increases system availability and safety
 avoid the blocking of power supplies*

• **Wide operating range possible**

*Nominal voltage from 20Vdc to 300Vdc
 or 48 Vac to 265Vac
 Nominal current up to 16A
 Bypass relay embedded*

• **Applications**

*Current limiter for capacitive load
 DC/DC converter, power supplies ...*



The LCA37 is a active inrush current limiter with a temporized bypass relay ensuring a more efficiency operation compare to a NTC. It cut-off the current peak in the load at the installations start-up and does not dissipate power when operating.

Operation :

The tripping current or inrush current is the name of a transient overcurrent that occur when powering up some electrical devices. (ex: AC/DC - DC/DC converters, capacitor, ...)

This peak current can reach 10 to 20 times the steady state current. By limiting this transient current, the LCA37 decrease the voltage drops in the cable, allowing to reduce the cable sections and to install small and fast breakers for better protection and more reliable starting without overloads. (avoid the blocking of some power supplies)

The LCA37 is designed for use in automation system that require high availability, allowing the non triggering of protection at the power up or reboot. It limits also the constraints on battery powered systems. It is suitable when DC/DC converters operate in parallel which can generate peak current up to several hundred amperes.

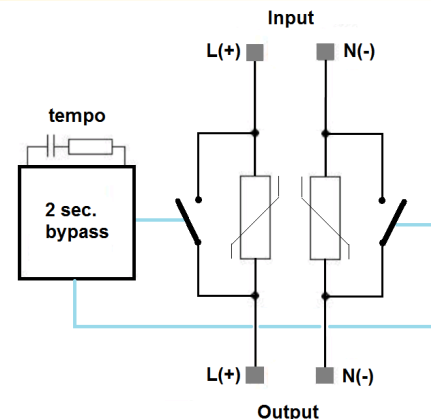
Characteristics:

- Universal AC and DC power supply, rated voltage to be defined
- Limiting current up to 50A, rated current to be defined
- Low dissipated power < 1 Watts
- Not polarized
- Limitation time: 2 seconds typical

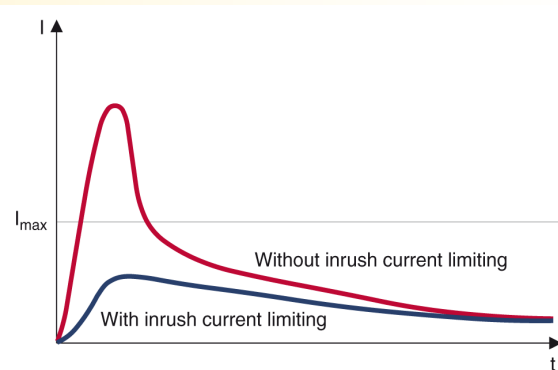
Features:

- DIN rail mounting (symmetrical) according to EN 50022
- Wiring on screw terminal blocks (wire section up to 4 mm²)
- Conformal coating.
- Protection rating (case/terminal blocks) : IP20
- Modular case UL94V-0 according to DIN43880
- Resistant to shock and vibrations

Synoptic



Inrush current curve



Version and order code:

[Request a quote](#)

LCA37 - U - i / i max : inrush current limiter
 U : rated operating voltage
 i : rated current consumed by the load
 i max : tripping limitation current.

LIMITER CHARACTERISTICS

Current limitation delay 2 seconds typical
 Dissipated peak power (during limitation) 500 Watts maxi
 Dissipated power (operating without limitation) < 1 W
 Number of start cycles 4 per minute maxi
 Cooling natural convection
 Voltage drop (operating without limitation) < 0.2V (bypass relay ON)

POWER SUPPLY

48.....265 Vac / 20...300Vdc (rated voltage must be defined)
 Not polarized
 rated current 16A / peak 100A

ENVIRONMENT

Operating temperature -25 to 60 °C
 Storage temperature -40 to 85 °C
 Humidity 95 % not condensed
 Climatic endurance : 500 hours at 95% Hr in air at 55°C
 Weight 150 g
 Protection rating IP 20
 MTBF (MIL HDBK 217F) > 2 000 000 Hrs @ 25°C
 MTBF (MIL HDBK 217F) > 500 000 Hrs @ 70°C
 Life time > 100 000 Hrs @ 30°C
 Life time > 50 000 Hrs @ 50°C
 Dielectric strength No isolation
 Insulation resistance No isolation
 Shock IEC 60068-2-27 (operating) 15 G / 11 ms
 Bump IEC 60068-2-29 (transportation) 40 G / 6 ms
 Vibration IEC 60068-2-6 (operating) 1 G / 10 - 150 Hz
 Vibration CEI 60068-2-6 (transportation) 2 G / 10 - 150 Hz

Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE

Immunity standard for industrial environments EN 61000-6-2		Emission standard for industrial environments EN 61000-6-4
EN 61000-4-2 ESD	EN 61000-4-8 AC MF	EN 55011 group 1 class A
EN 61000-4-3 RF	EN 61000-4-9 pulse MF	
EN 61000-4-4 EFT	EN 61000-4-11 AC dips	
EN 61000-4-5 CWG	EN 61000-4-12 ring wave	
EN 61000-4-6 RF	EN 61000-4-29 DC dips	



WIRING AND OUTLINE DIMENSIONS:

