

SELF-POWERED CURRENT LIMITERS



Ensures design flexibility with
single -and dual- line solutions



The CLT03 series of current limiters drastically reduces input losses while improving EMC robustness

Offering additional design flexibility, our new single- and dual-line CLT03 current limiters also ensure reduced power consumption. Reverse plug-in compatible, these devices are self-powered and consume no power when in Off state.

Designed to operate with type 1 and type 3 sensors according to IEC 61131-2 with a 3 mA limited current, up to 0.5 W can be saved per device compared to discrete solutions.

Like all CLT devices in our portfolio, robustness is a key parameter for CLT03 current limiters with compliance to IEC61000-4-2 surge standards. EMI robustness is also enhanced thanks to an integrated digital glitch filter.

ST is a sustainable partner as CLT03 devices are included in our longevity program.

KEY FEATURES & BENEFITS

Flexibility

- No power supply required.
CLT03-xx devices are activated via the input signal
- Able to drive either isolated opto-couplers or non-isolated LVTTTL digital input terminations
- High- and low-side compatible

Robustness

- IEC 61000-4-2: ± 2 kV contact and ± 4 kV air
- Inputs are reverse plug-in compatible
- Digital filter for high EMI robustness
- 60 V maximum input voltage

KEY APPLICATIONS

- Factory automation
- Building automation
- Remote I/O controllers



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	CLT3-4B	PCLT-2A	CLT03-2Q3	CLT03-1SC3	SCLT3-8B	CLT01-38S
Control	SPI @ 6.25 MHz					■
	Scalable (daisy chain)				■	■
	Thermal Alarm				■	■
Output	OverVoltage Alarm				■	■
	Under Voltage Alarm				■	■
Specific features	SPI interface				■	■
	CMOS interface		■	■	■	■
	Optocoupler interface	■	■	■	■	■
	LED output for visual status	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
Immunity	High side / Low side inputs	<input type="checkbox"/>	<input type="checkbox"/>	■	■	<input type="checkbox"/>
	Self powered	<input type="checkbox"/>	<input type="checkbox"/>	■	■	<input type="checkbox"/>
	Programmable current	<input type="checkbox"/>	■	<input type="checkbox"/>	<input type="checkbox"/>	■
	Digital filter	<input type="checkbox"/>	<input type="checkbox"/>	■	■	<input type="checkbox"/>
Sensors	Reverse polarity	■	■	■	■	■
	ESD protection	■	■	■	■	■
	Current limiter	■	■	■	■	■
	Number of channels	4	2	2	1	8
Sensors	IEC61131-2 compliant					
	·Type 1	■	■	■	■	■
	·Type 2	<input type="checkbox"/>	■	<input type="checkbox"/>	<input type="checkbox"/>	■
	·Type 3	■	■	■	■	■
	TSSOP20	TSSOP14	QFN-16L	SOT23-8L	QFN-48L HTSSOP38	QFN-48L HTSSOP38

Evaluation Board



The STEVAL-IFP035V1 evaluation board is designed to help you evaluate circuit protection strategies for factory automation using digital input current limiters between industrial sensor devices and processing units such as programmable logic controllers (PLC). This board embeds two independent CLT03-2Q3 self-powered digital input current limiters.



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