



CEP System

Cabur Electronic Protection

May 2007

Why

Characteristics of A, B, C, D mcb

	A	B	C	D	
T	$I_1 (t \geq 1h)^{1)}$	$1,13 \times I_n$	$1,13 \times I_n$	$1,13 \times I_n$	$1,13 \times I_n$
	$I_2 (t < 1h)^{2)}$	$1,45 \times I_n$	$1,45 \times I_n$	$1,45 \times I_n$	$1,45 \times I_n$
m	$I_4 (t \geq 0,1s)^{3)}$	$2 \times I_n$	$3,5 \times I_n$	$7 \times I_n$	$15 \times I_n$
	$I_5 (t < 0,1s)^{3)}$	$3 \times I_n$	$5 \times I_n$	$10 \times I_n$	$20 \times I_n$

T = sganciatore termico

m = sganciatore elettromagnetico

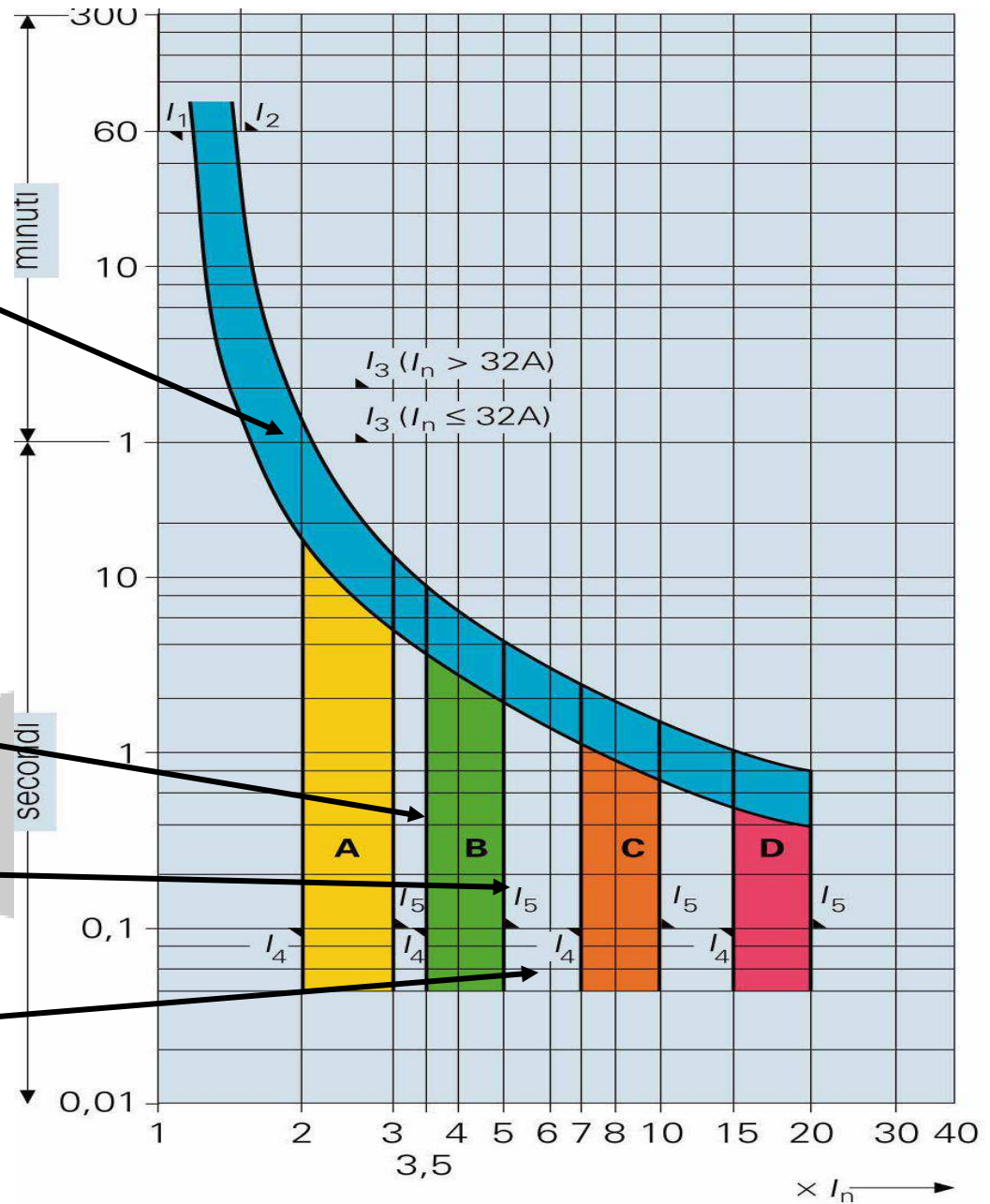
Indicated values are in AC ; with DC currents I₄ and I₅ of instantaneous switch off of electromagnetic current really “m” must be multiplied x 1.4

Curve I - t
of thermal
switch

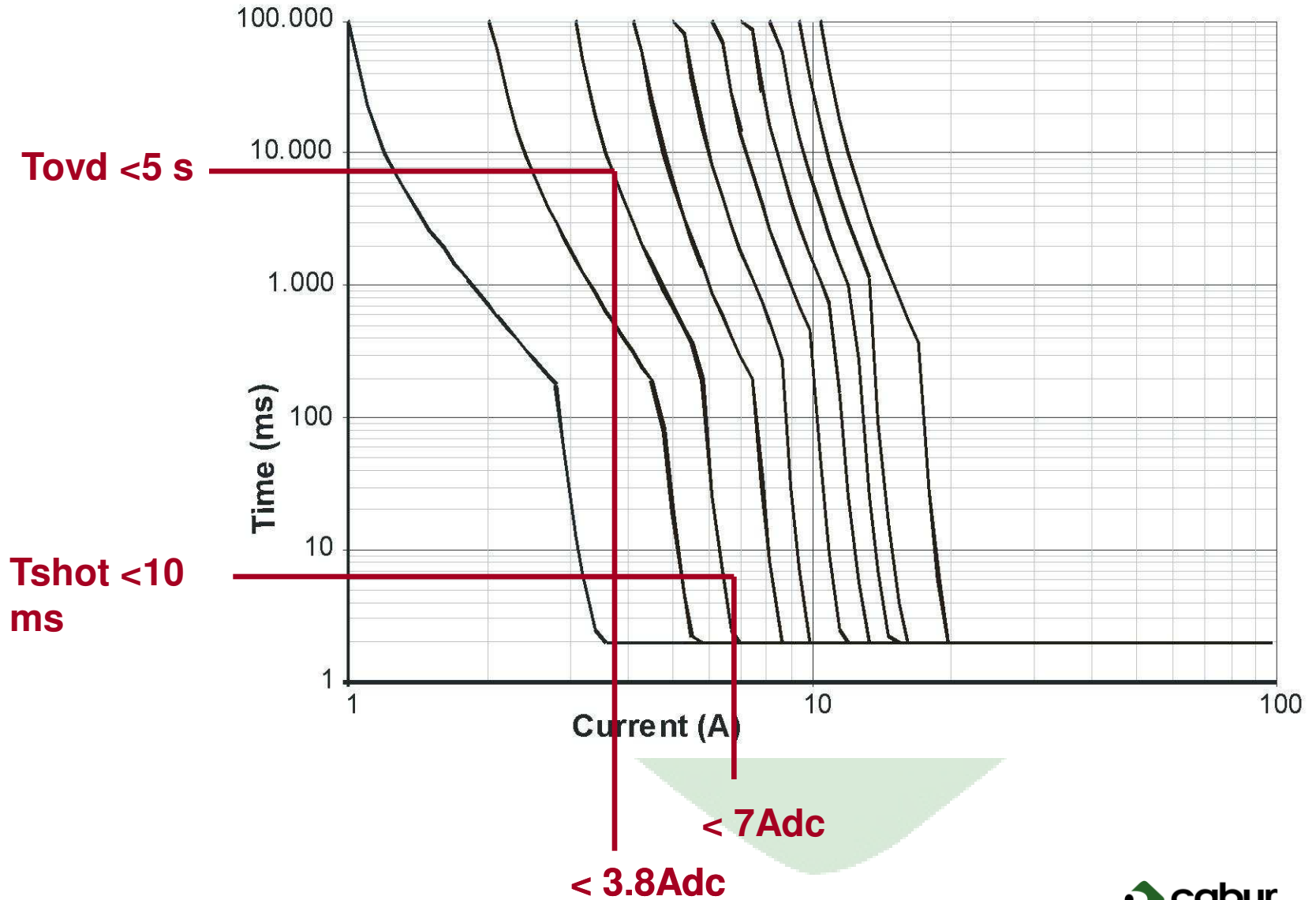
Min I switch off

Max I swicth off

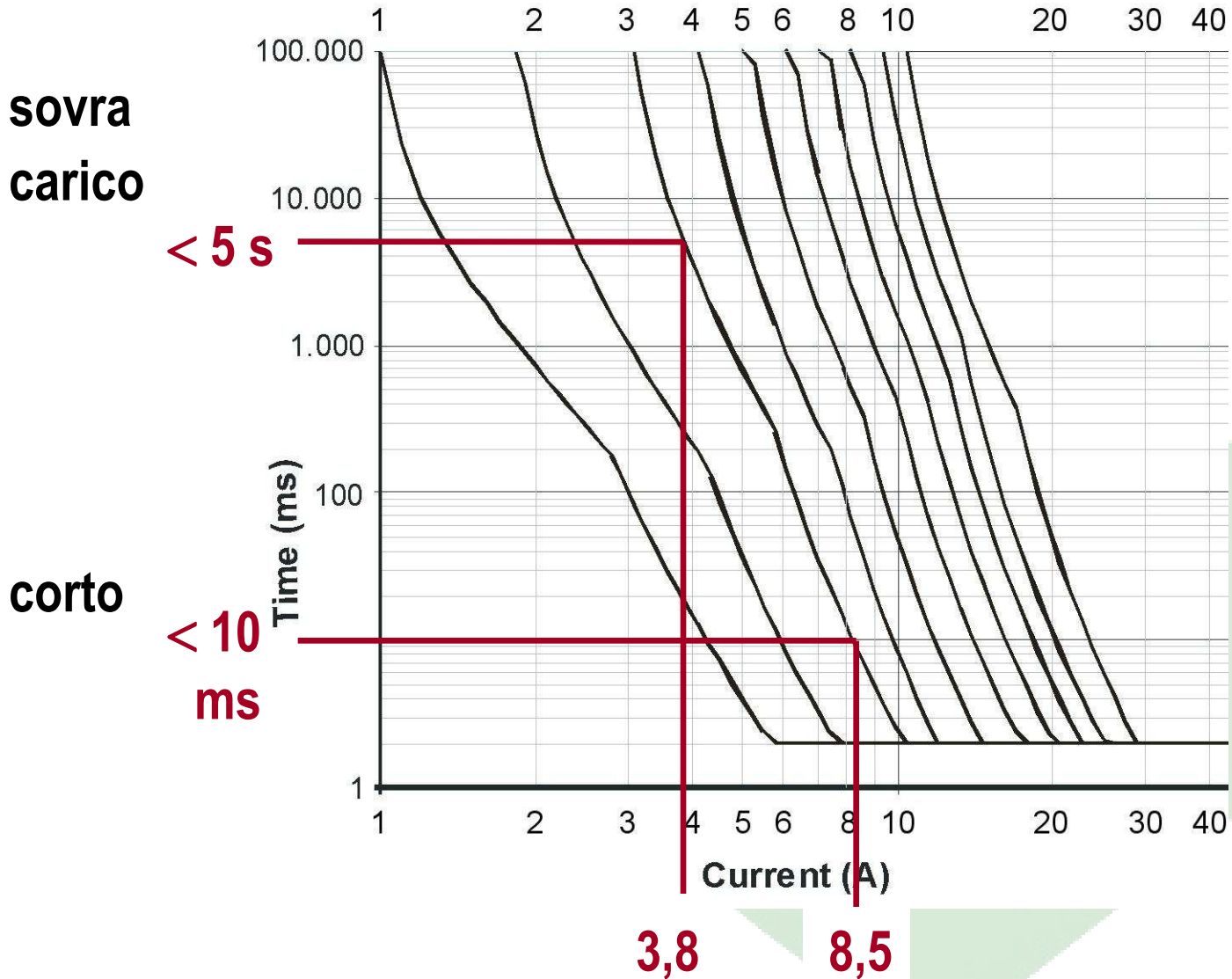
I for “sure switch
off”



CEP fast curve 3A : T with short circuit and overload



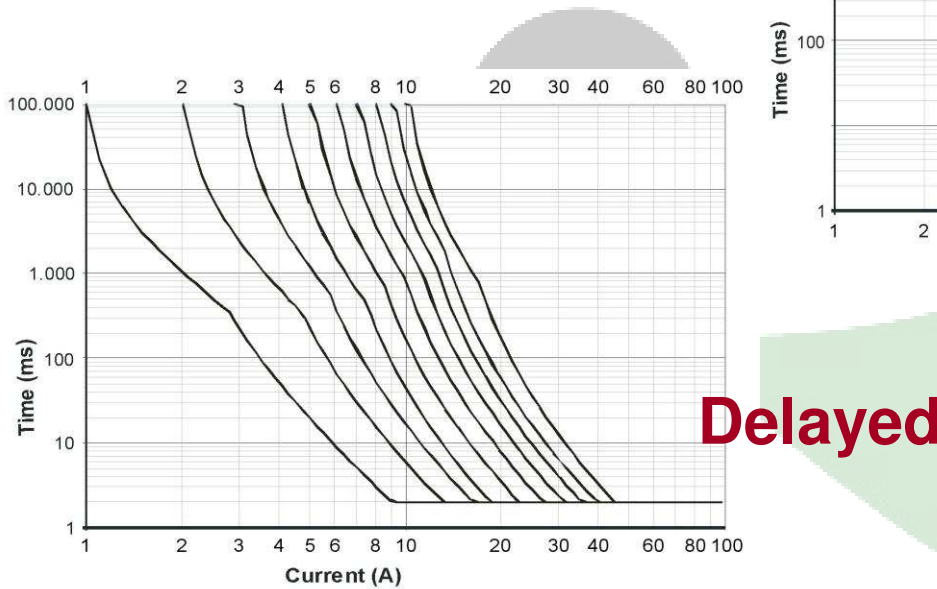
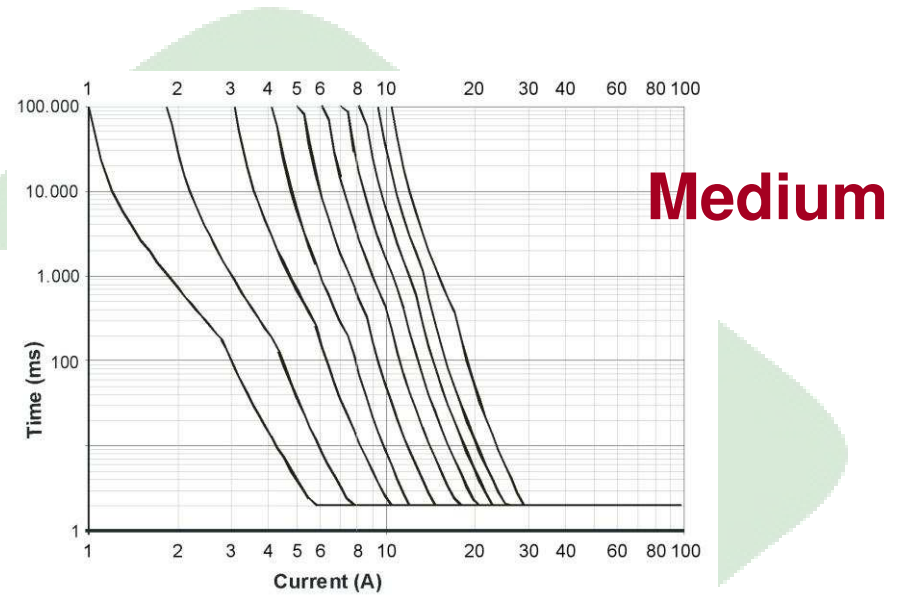
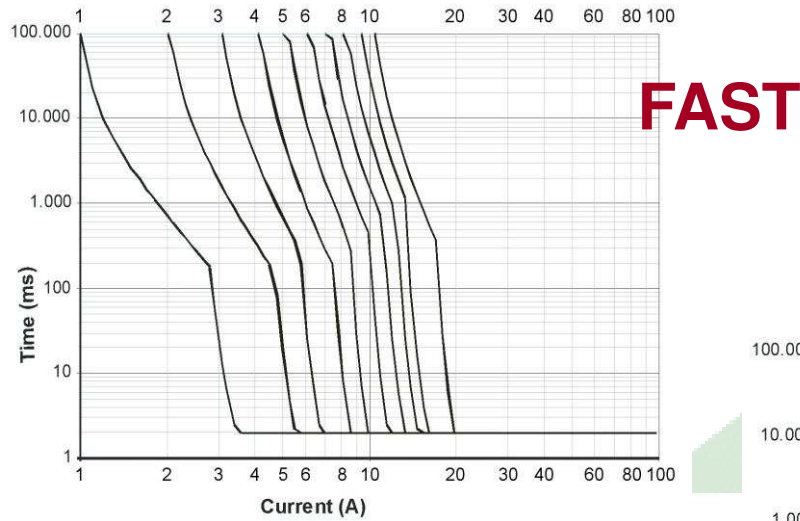
CEP medium curve 3A : T with short circuit and overload



CEP : the two curves in numbers

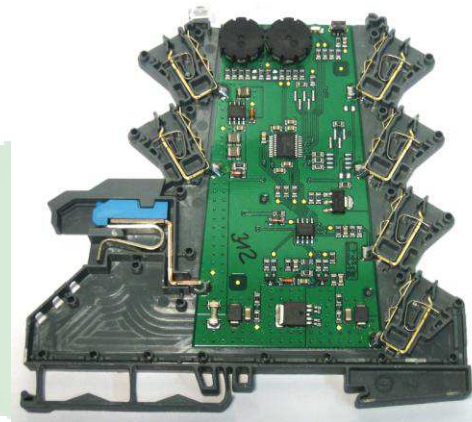
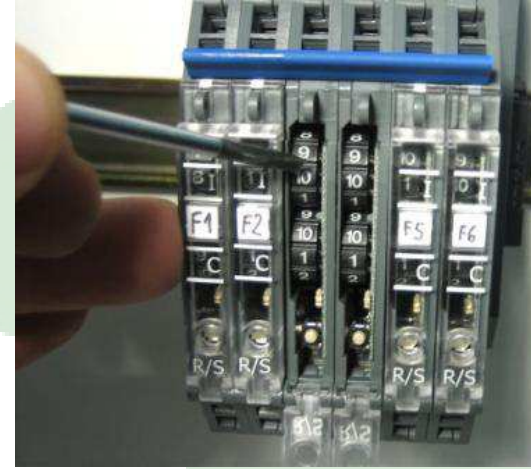
Curve	< 5 s overload	< 10 ms short circuit
B3	6 Adc	21 Adc
C3	6 Adc	42 Adc
CEP fast	< 4,5 Adc	7 Adc
CEP medium	< 3,8 Adc	8,5 Adc

Three programmable curves



The function

It is an electronic programmable fuse



Performances

Max current DC 10A

Sealable front cover for set up protection

Programmable in 10 steps of 1A each

Possibilità marcatura

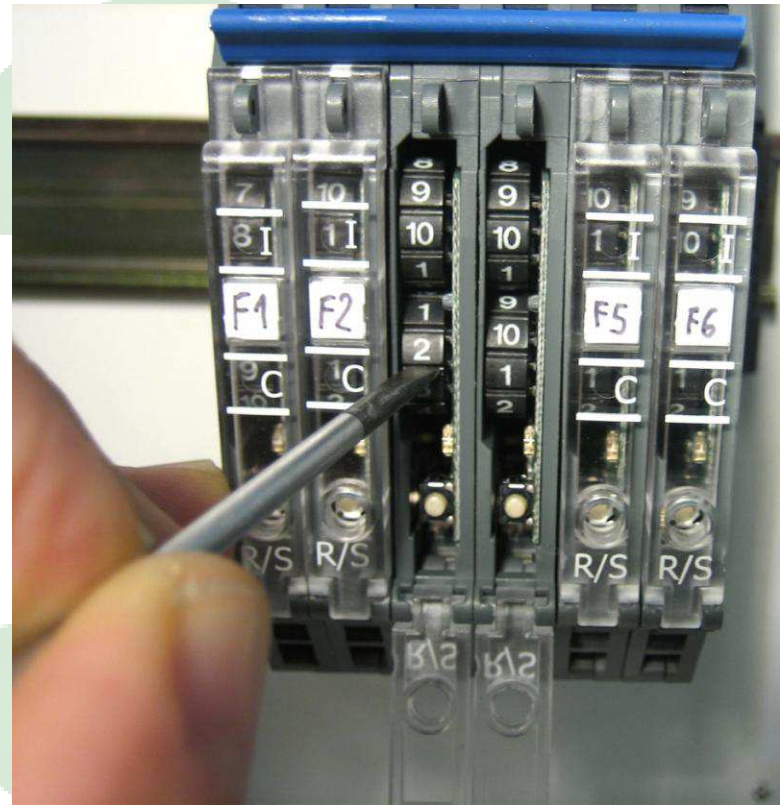
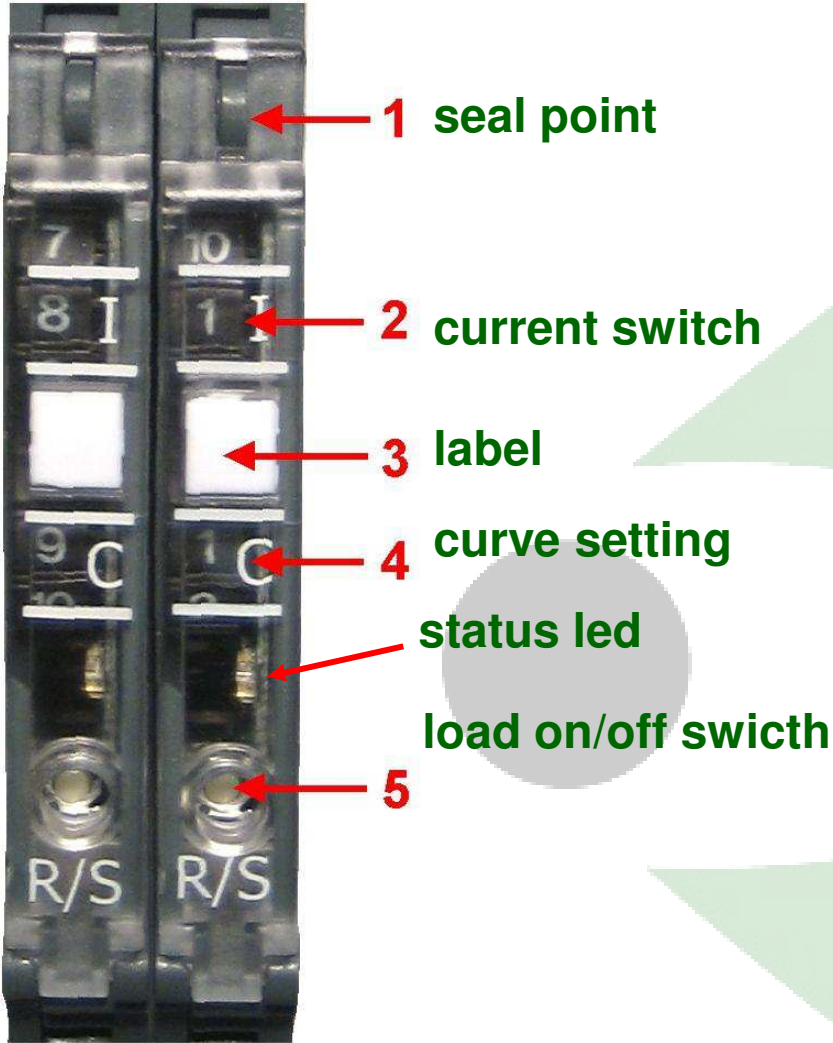
**Caratteristiche (curve) programmabili
(fast, medium, slow)**

manual load ON/OFF switch

remote load ON/OFF command form PLC

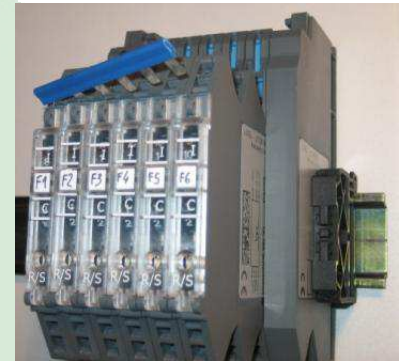
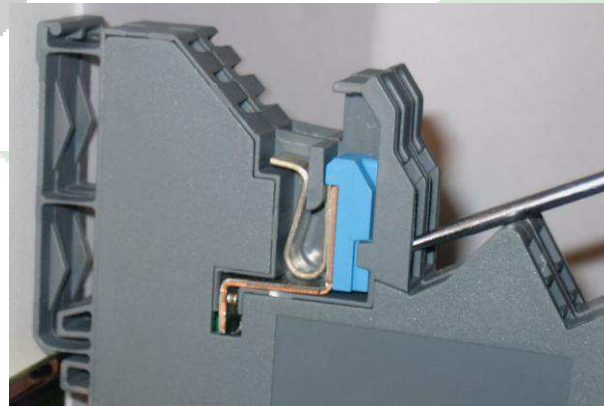
LED display indicating OK / 90% of I_n / OVL

Functions



Comfortable to use

- Can be used as a single or multiple module
- Can be replaced without stopping other CEP
- Load can be permanently switched off by a slide contact
- Local and remote status signal
- Memorization of the events



Performances

Constant and accurate switch off current threshold not depending on ambient temperature

Can feed capacitive loads

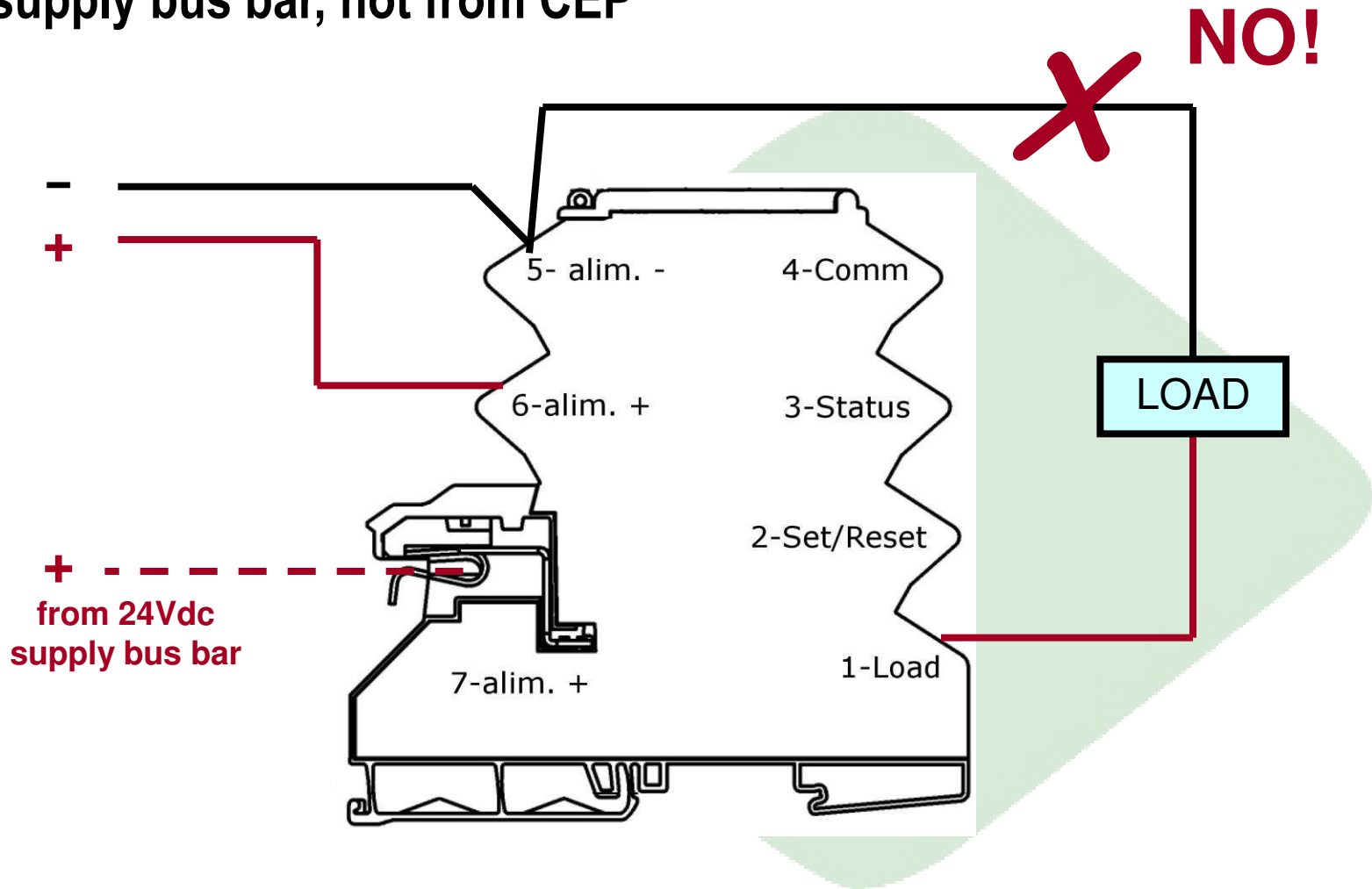
the most compact : 8,1mm pitch

UL60950 approved



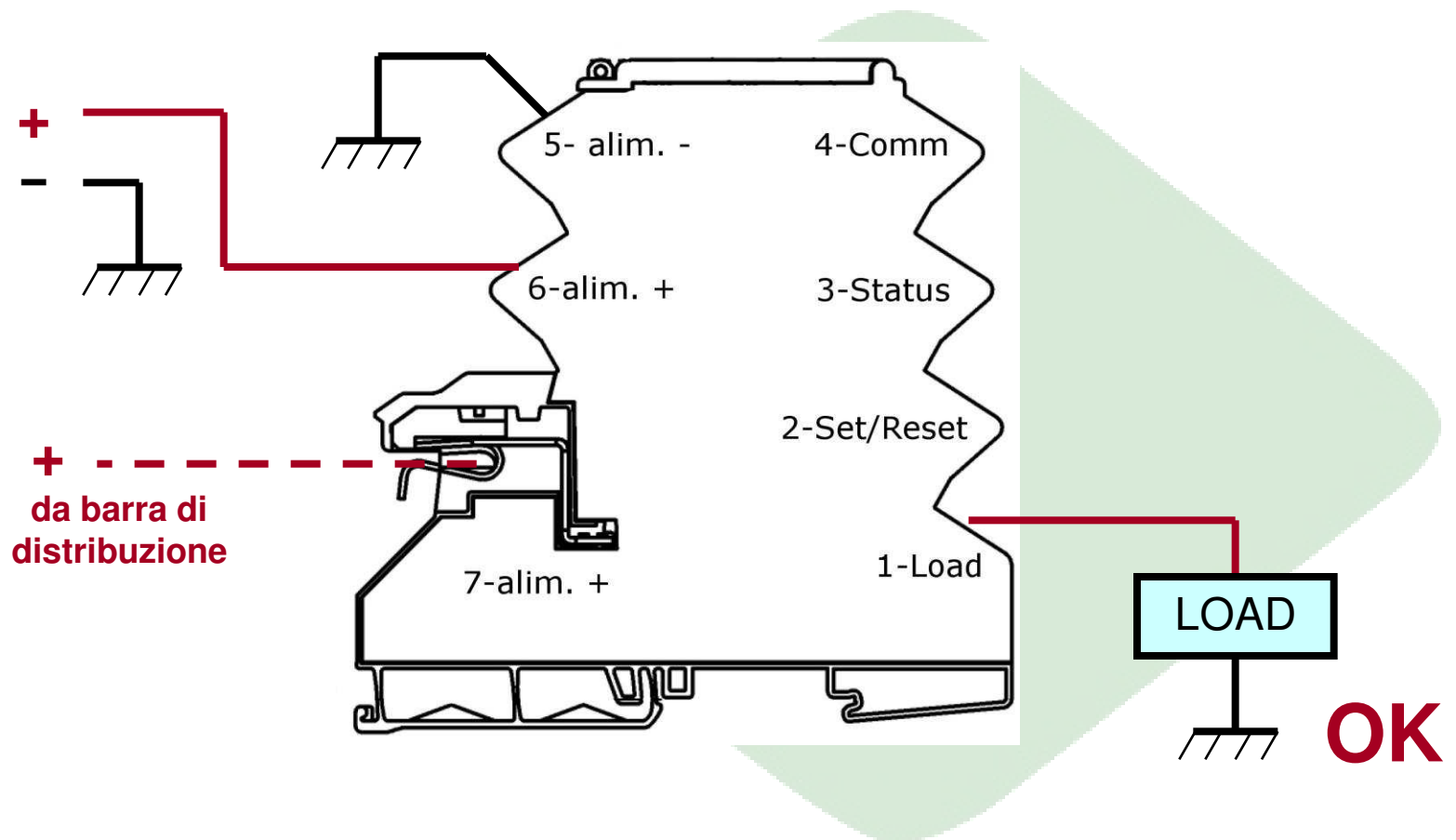
How to connect CEP

The load negative wire must be feeded directly from the supply bus bar, not from CEP



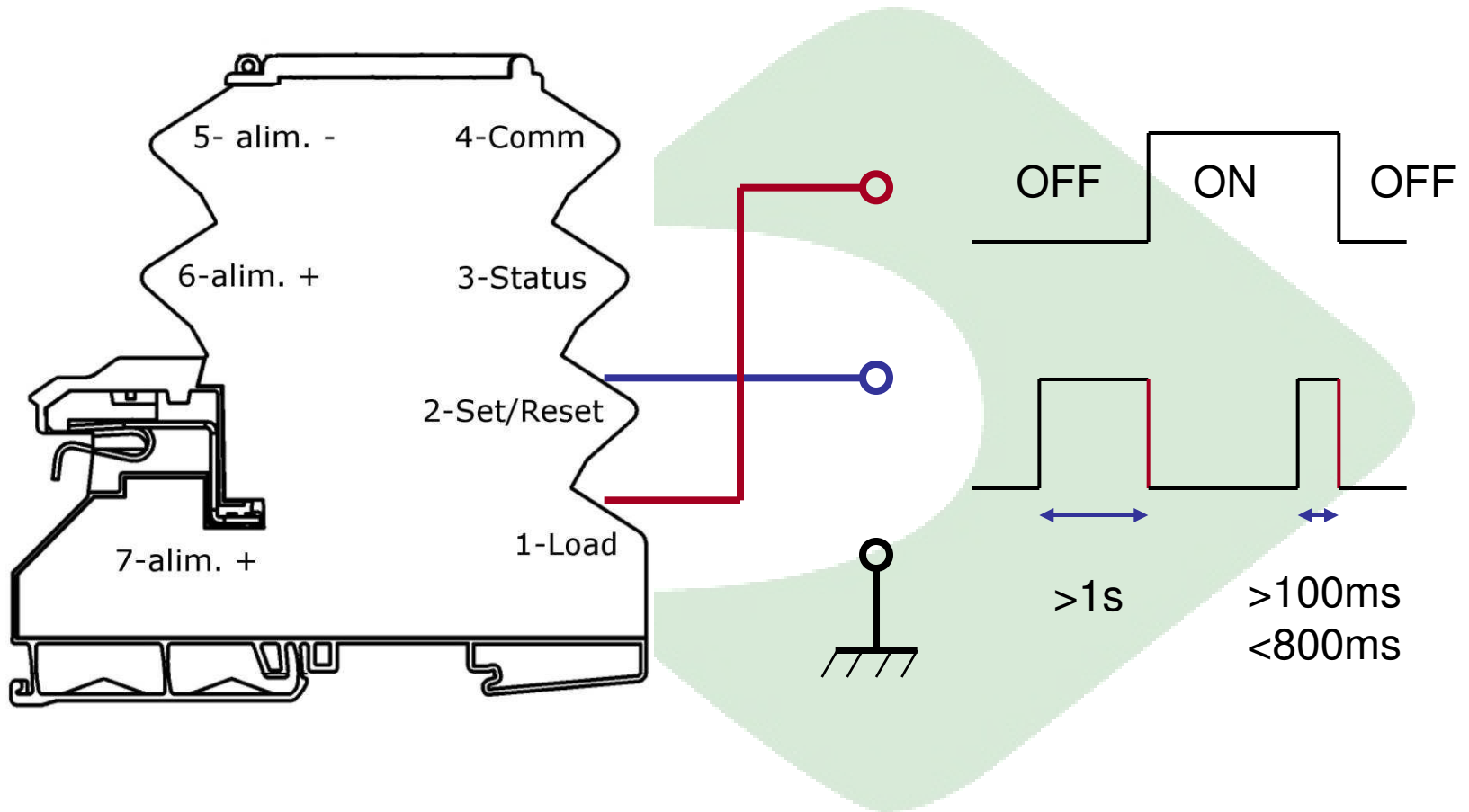
How to connect CEP

The load negative wire must be feeded directly from the supply bus bar, not from CEP



Set/Reset

Set / Rest commands can be performed by the pushbutton on front pannel as well as by a PLC output



Functions and versions

Functions	Description
Set /Reset	Digital signal 24 Vdc for on /off remote command of CEP-Dx OFF: 24 Vdc (pulse > 100ms and < 800ms, falling slope) ON : 24 Vdc (pulse > 1sec, falling slope)
Single or centralized failure signal	Digital output 24 Vdc for remote failure signal (see pic. 4 for connections) CEP-D1 High status = OK Low status = load supply switched off for ovd or short cc CEP-D2 High status = OK Low status = load supply switched off for ovd or short cc CEP-D3 The behaviour is programable
One wire BUS	Available on CEP-D3 version

Staus LED indicatison

Stauts indications	Function	Description
LED green	OK	Status OK, normal function.
LED red	OFF	Manual switched off.
LED green, blinking 1Hz	load at 90%	Current has reached 90% of selected current value
LED red, blinking 1Hz	overload	output switched off for overcurrent
LED red, blinking 5Hz	error	the module failed and must be replaced