



■ **Main Features**

- Ultra-compact DC Overcurrent Protector with 2 independent channels
- Classic circuit breaker shape
- Input: 10...31Vdc / 20A Max.
- Output: 10A Max. / channel (user settable, independently)
- Digital Power regulation
- Programmable Static Switch function
- Advanced CPU control – allows set-up of various tripping curves
- Modbus over USB interface for control and monitoring
- Suitable for **POWERMASTER** software (available for Windows and Android OS)

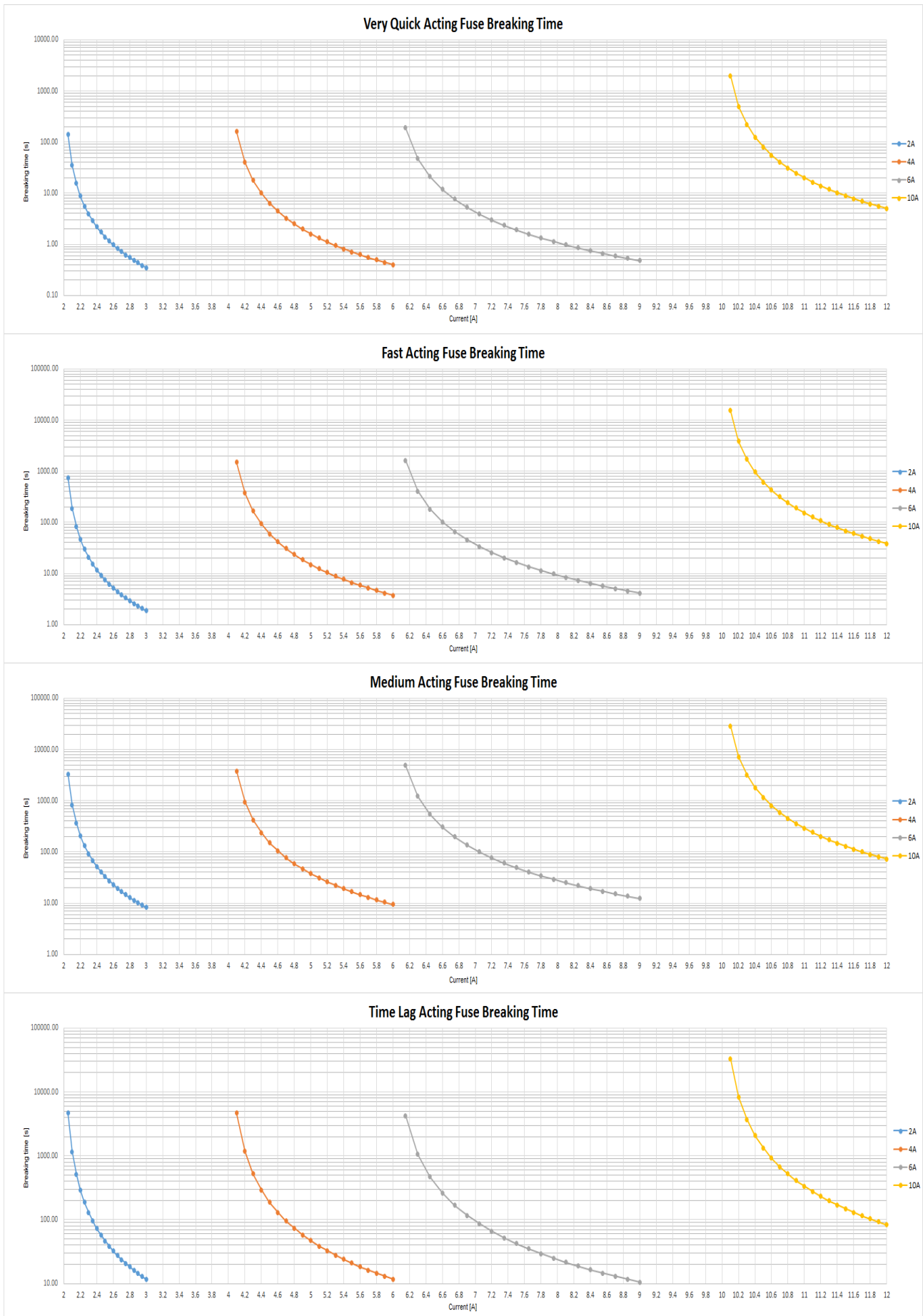
TECHNICAL DATA

Model type	NEF210	
GENERAL DATA		
Rated surge voltage	0.5kVdc	
Input DC rated voltage	10...31Vdc	
Maximum input current	20A	
Maximum capacitive load circuit	> 40000µF (per channel at 24Vdc)	
Active current limitation	1.5 x I _N (2A / 4A / 6A), 1.2 x I _N (10A)	
Tripping thresholds	2A / 4A / 6A / 10A per channel, user settable via front keys or USB	
Time - current characteristic (see charts on Fig.1)	<ul style="list-style-type: none"> ▪ Very Quick Acting ▪ Fast Acting ▪ Medium Acting ▪ Time Lag ▪ User settable via Modbus 	
Waiting time after switch OFF of a channel	20s (overload / short circuit)	
Conduction resistance	< 25mΩ	
Efficiency	> 98.5%	
Dissipated power	< 5.5W	
Standby power	< 1W	
Required backup fuse	Not required, integrated failsafe element	
Internal protection fuse	15Adc (per output channel)	
Protections	Overvoltage > 33V	
Status Signals	<ul style="list-style-type: none"> ▪ OUT A/B - OK one LED of the channel is ON ▪ OUT A/B - TRIPPED all the LEDs of the channel are blinking ▪ STATUS SIGNAL - remote fault indicator (at least 1 channel tripped) by optoisolator (30Vdc / 50mA / Open collector) 	
User interface	<ul style="list-style-type: none"> ▪ RESET - remote reset INPUT by optoisolator (5...30Vdc / 20mA) ▪ SET A/B - key for channel arming / rearming ▪ Modbus over mini USB-B interface, suitable for POWERMASTER software 	
Operating temperature	- 40°C...+ 70°C	
Derating	No derating	
Storage temperature	- 40°C...+ 80°C	
Humidity	5...95% r.H. non condensing	
Overvoltage category	▪ EN50178	I
Pollution degree	▪ IEC60664-1	2
Protection Class	▪ Class	II
Safety Standards	▪ EN60950	(reference)
	▪ EN50178	(reference)
EMC Emission	▪ EN55011 (CISPR11)	Class B
	▪ EN55022 (CISPR22)	Class B
EMC Immunity	▪ EN61000-4-2	Level 3
	▪ EN61000-4-3	Level 3
	▪ EN61000-4-4	Level 2
	▪ EN61000-4-5	Level 1
	▪ EN61000-4-11	Level 2
Protection degree	▪ EN60529	IP20
Vibration sinusoidal	▪ IEC 60068-2-6	(5-17.8Hz: ±1.6mm; 17.8-500Hz: 2g 2hours / axis (X,Y,Z)
Shock	▪ IEC 60068-2-27	(30g 6ms, 20g 11ms; 3 bumps / direction, 18 bumps total)
Connection terminals	2.5mm ² , screw type header (24...12AWG)	
Case material	Plastic, Flame retardant UL94 V-0	
Weight	0.10kg	
Size (W x H x D)	35.0 x 90.0 x 61.5mm	

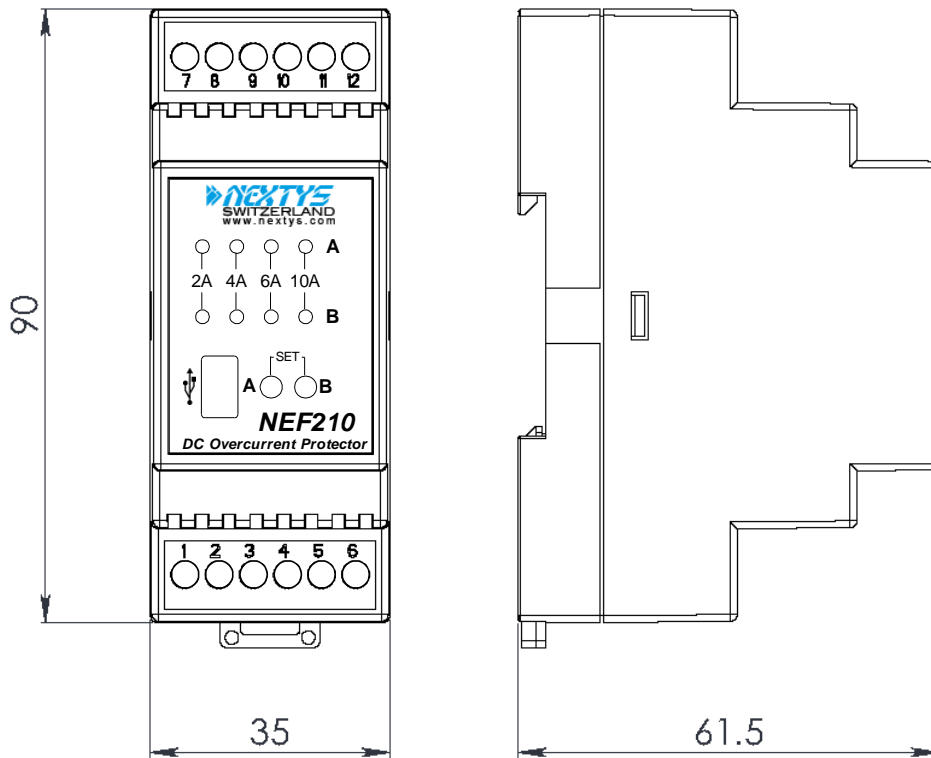
Notes:

- For more details, performance and descriptions regarding all parameters not indicated in the above table, please refer to the user manual downloadable from www.nextys.com
- Technical parameters are typical, measured in laboratory environment at 25°C and 24Vdc, at nominal values, after minimum 5 minutes of operation.
- Power rating, losses, efficiency, ripple, thermal behaviour and start-up may change outside of the nominal rated input range. Contact factory for details.
- Data may change without prior notice in order to improve the product.

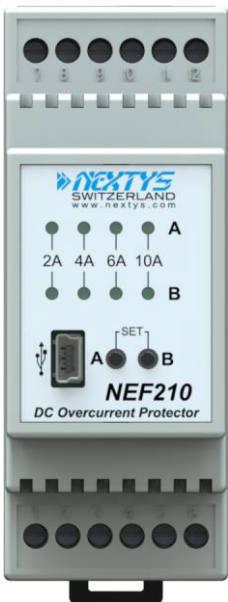
Fig.1



DIMENSIONS



CONNECTION



Input Connection:

- += Positive DC (1/2)
- -= Negative DC (3/4)

Output Connection:

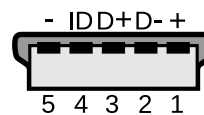
- Output A:**
- += Positive DC (8)
 - -= Negative DC (7)
- Output B:**
- += Positive DC (12)
 - -= Negative DC (11)

Signalling:

- STATUS SIGNAL:**
(30Vdc / 50mA Open collector)
- += Positive DC (10)
 - -= Negative DC (9)

- RESET:** (5...30Vdc / 20mA)
- += Positive DC (6)
 - -= Negative DC (5)

Mini USB-B Type



- 1 = VBUS (+5V)
- 2 = Data (D-)
- 3 = Data (D+)
- 4 = Not connected (ID)
- 5 = GND