LCR-Series DIN-Rail Power

10 to 100 Watt 24V Switch Mode Power Supply -10°C...+60°C 90-264Vac Input

Short Specification:

- Housing for circuit breaker boxes
- Natural cooling
- Galvanic insolated
- Shortcircuit protected
- Low- & over-voltage protection
- Over temperature protection
- Softstart
- Auto-recovery after faulty operation
- Hold-up time >80ms (230Vac)
- No base load required

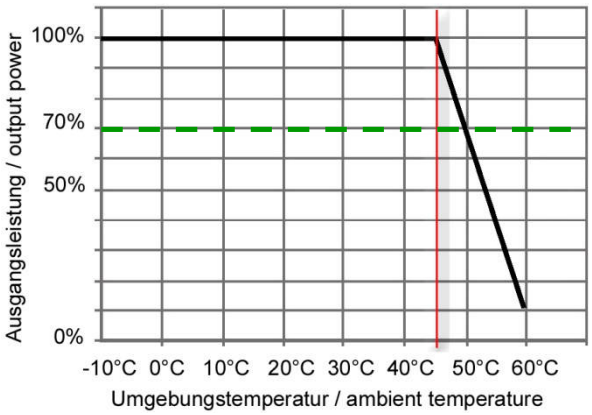


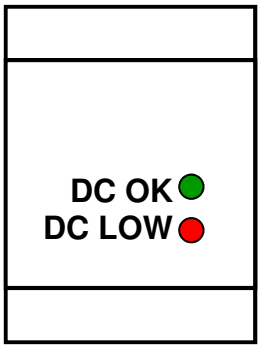
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Tel. +49 (721) 46596-0 - Fax +49 (721) 46596-77 – www.camtec-gmbh.com - info@camtec-gmbh.com
(Subject to alterations. This product must not be used in applications such as life support systems wherein a failure or malfunction could result in injury or death)

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Technische Daten

Model	LCR010.24	LCR030.24	LCR060.24	LCR100.24
Part Number	3041095001TP	3041096001TP	3041097001TP	3041098001TP
Nominal Power	10W	30W	60W	100W
DC Output Voltage	24V	24V	24V	24V
DC Nominal Current	420mA	1,25A	2,5A	4,2A
DC Voltage Adjustable Range	24-28V	24-28V	24-28V	24-28V
DC Over Voltage Protection	33V	32V	30V	30V
DC Current Limiting (typical)	750mA (Hiccup)	1,7A (Hiccup)	3,0A (Hiccup)	5,5A (Hiccup)
Ripple 230Vac 20MHz Nominal Load	7mVss	7mVss	7mVss	8mVss
Frequency @ Nominal Current	119 KHz	40 KHz	66 KHz	59 KHz
Load Regulation (static)	± 0,02%	± 0,01%	± 0,01%	± 0,015%
Load Regulation (dynamically)	± 0,02%	± 0,02%	± 0,02%	± 0,02%
Load Regulation Time (typical)	4,4ms	5,8ms	4,2ms	4,5ms
Start Time (typical)	80ms	630ms	1010ms	1090ms
Efficiency 100/230Vac (typical)	78/82%	84/85%	84/85%	85/86%
Hold-up Time 230Vac Nominal Load	90ms	160ms	80ms	80ms
Short Circuit Current	1,13A	3,9A	4,5A	8,2A
Inrush Current @ Cold Start	41A	41A	81A	51A
EMI	EN55022 class B	EN55022 class B	EN55022 class A	EN55022 class A
Net Weight	70 gram	190 gram	250 gram	370 gram
MTBF (IEC61709) 40°C	299.743h	287.223h	250.132h	248.172h
MTTF (IEC60050) 40°C/230Vac/70%	70.382h	70.286h	63.412h	43.591h
Base Load	None			
Short Circuit Resistance	Continuous(auto-recovery)			
Cooling	Natural Cooling			
Ambient Temperature Operation	- 10°C…+60°C			
Over Temperature Protection	Yes (shutdown, auto-recovery)			
Storage Temperature Range	-40 °C…+75°C			
AC Input	90...264Vac 47…63Hz , 140…340Vdc			
AC Nominal Input Voltage	100...240Vac			
EMI	FCC / CISPR22			
EMC	EN55011, EN55022, EN61000-3-2, EN61000-4-2/3/4/5/6/8/11, EN61000-6-2, EN61204-3			
Safety	EN60950-1, EN60204-1			
Safety Class (PELV)	II A			
Relative Humidity Operation	20-90% non condensing			
Relative Humidity Storage	20-90% non condensing			
Altitude Operation (maximum)	3000m height above sea level			
Galvanic Isolation	AC-Input/DC-Output : 3KV, Input/Floating-GND 2KV, Output/Floating-GND 500Vdc			
Mechanical Dimensions	See drawing page 6			
Housing	Plastic: PFA, burn proof class: 94V-0, IP20 Housing for circuit breaker boxes according to DIN VDE0603			
Screw-type Terminals	AWG 18 – AWG13 (0,8 - 2,5mm²), wire protection			
DIN-Rail (EN60715)	TS35/7.5 and TS35/15			
Guarantee	2 years delivery date			



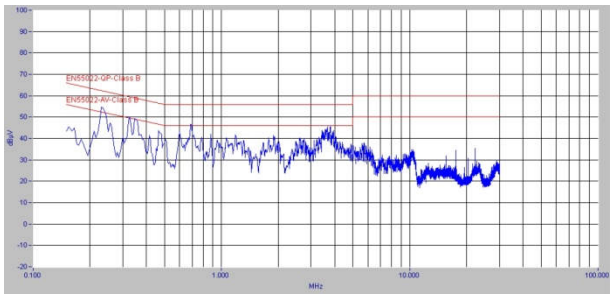


Signalization

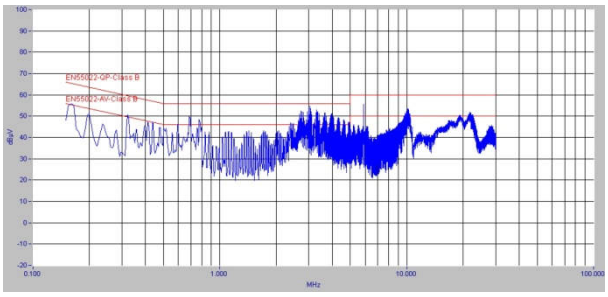
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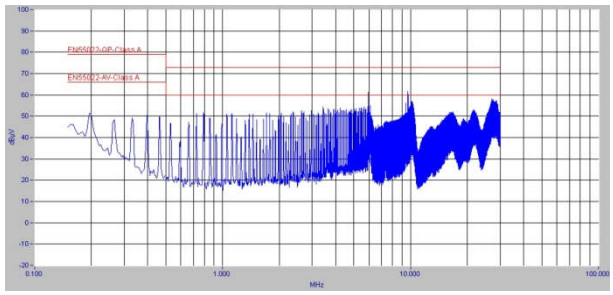
EMI Diagraphs "Mains-Born Disturbances" Quasi-Peak-Recording EMI-Receiver AFJ ER55C



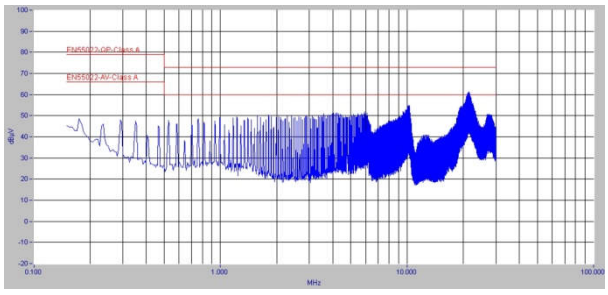
LCR010.24 (class B)



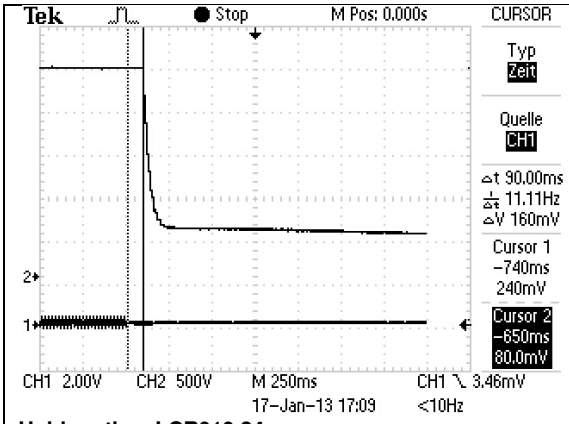
LCR030.24 (class B)



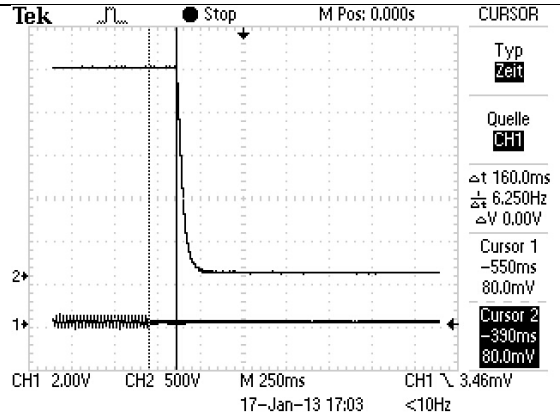
LCR060.24 (class A)



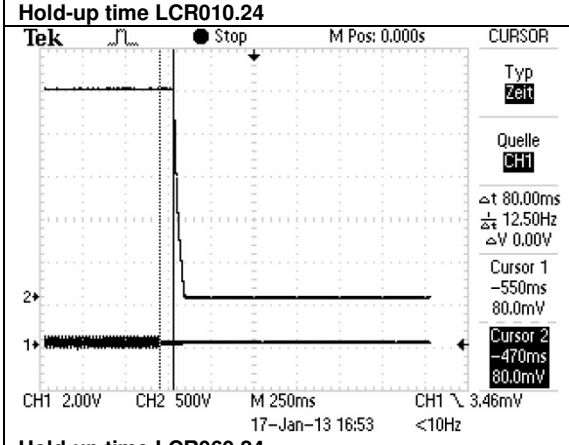
LCR100.24 (class A)



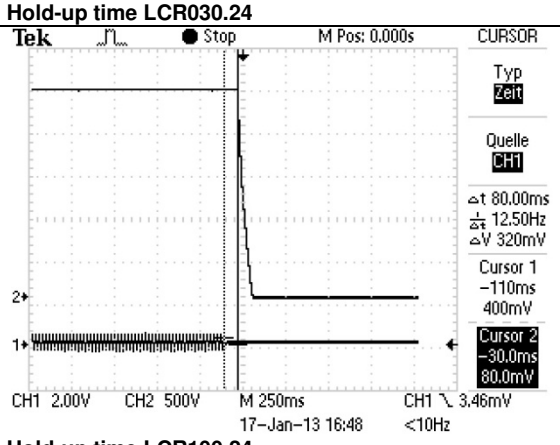
Hold-up time LCR010.24



Hold-up time LCR030.24

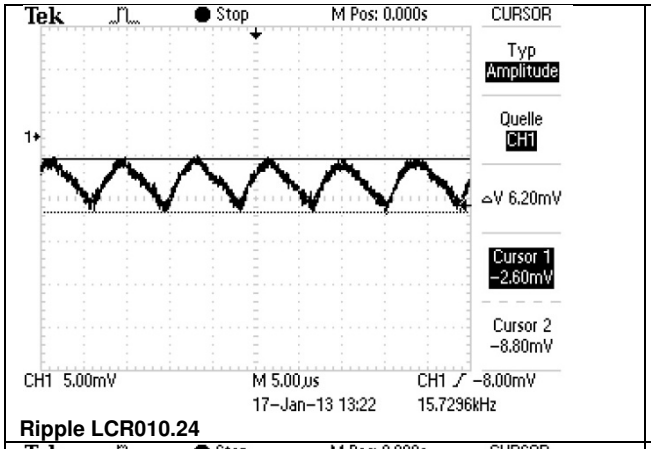


Hold-up time LCR060.24

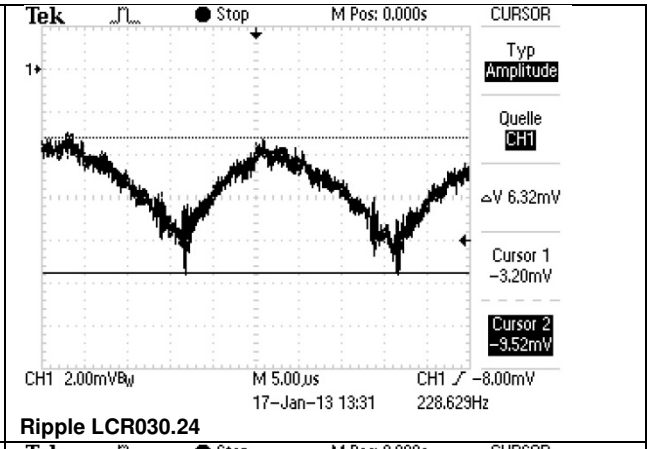


Hold-up time LCR100.24

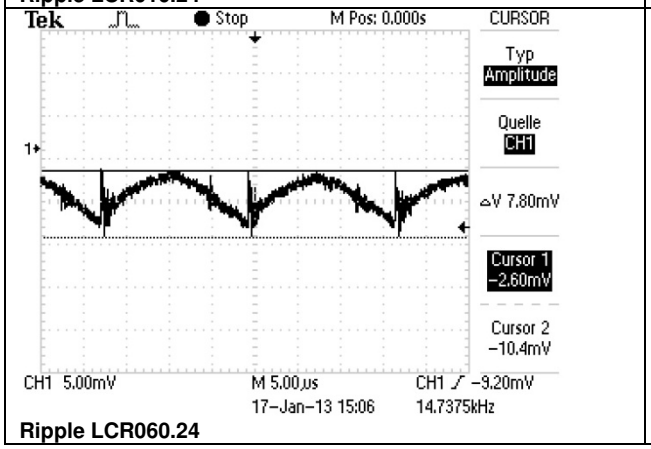
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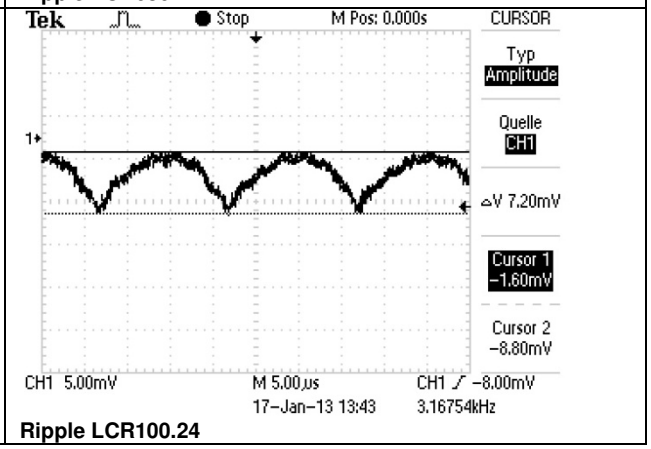
Ripple LCR010.24



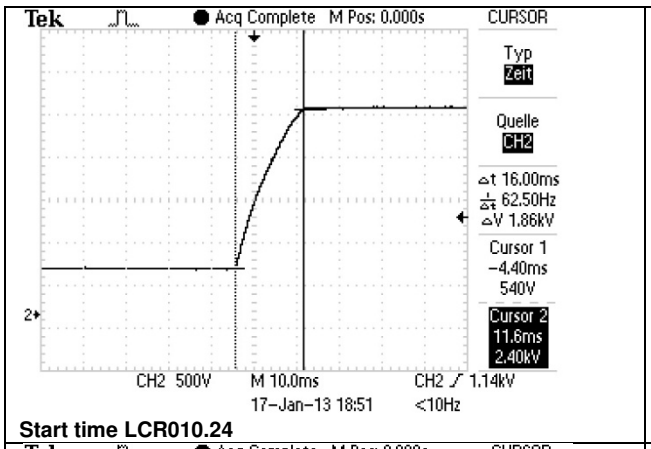
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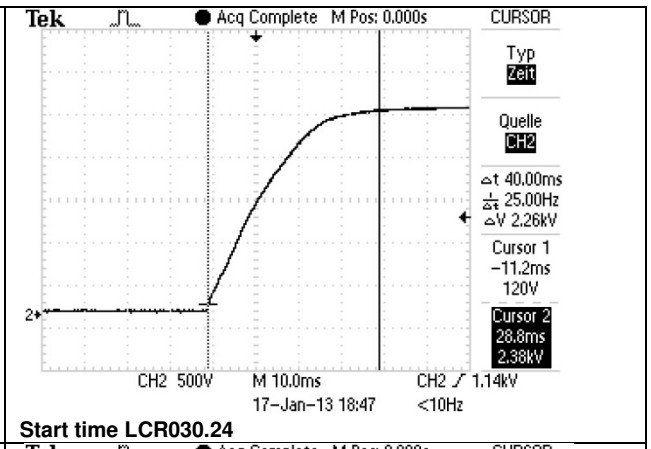
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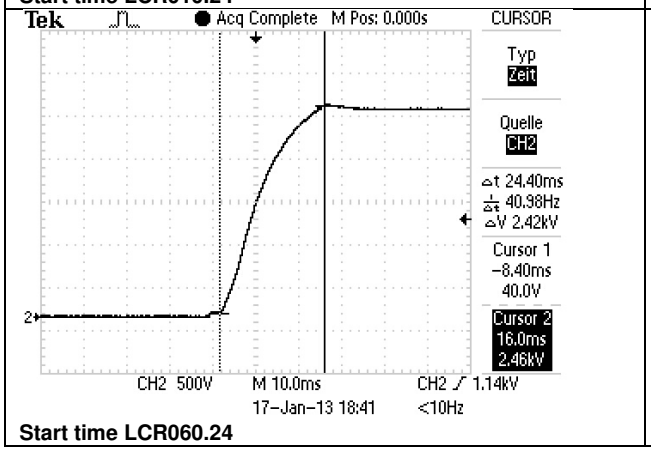
Ripple LCR100.24



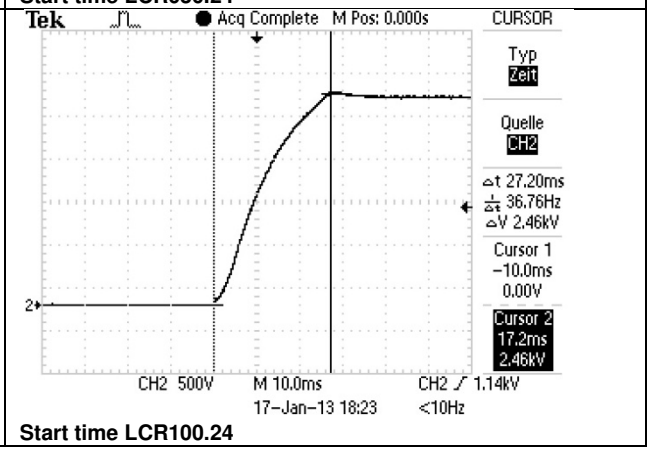
Start time LCR010.24



Start time LCR030.24

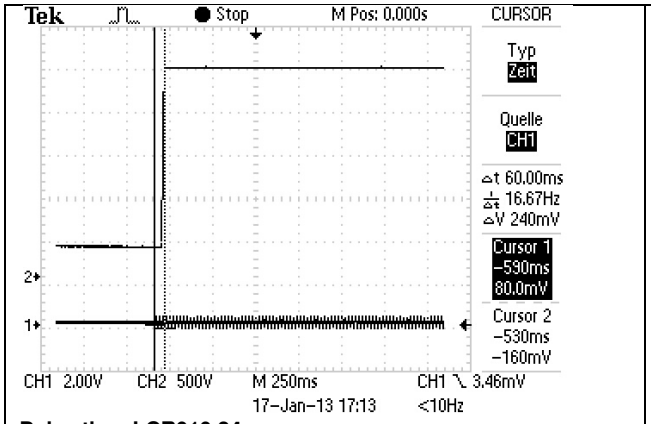


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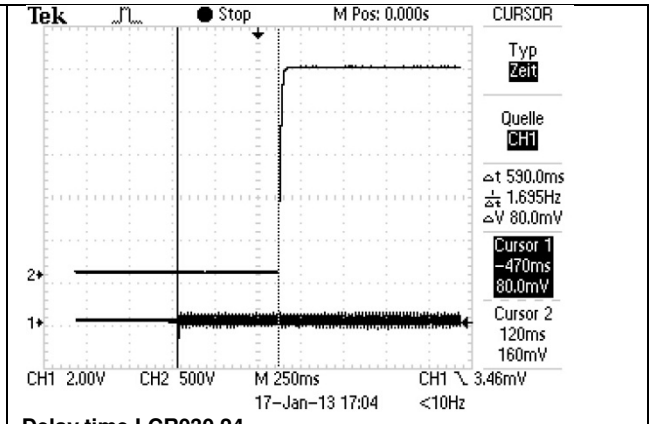


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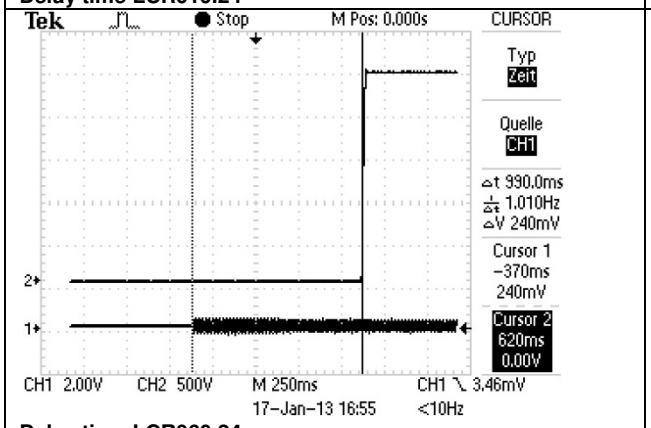
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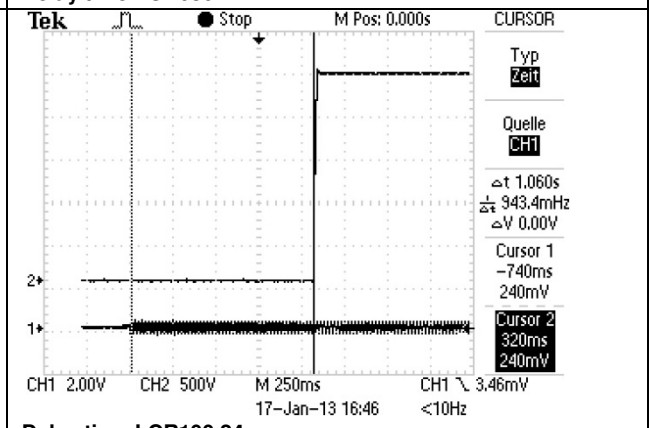
Delay time LCR010.24



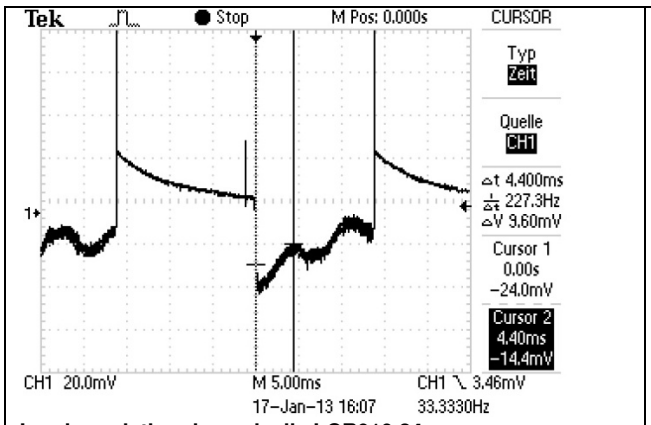
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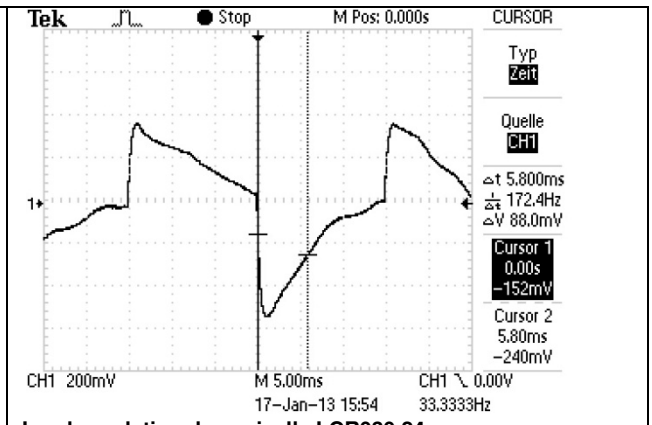
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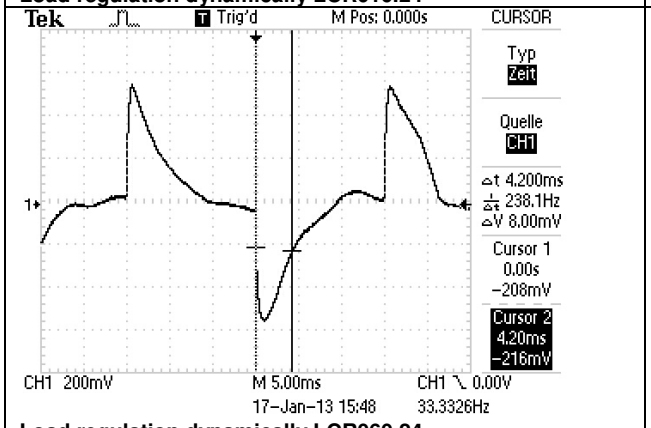
Delay time LCR100.24



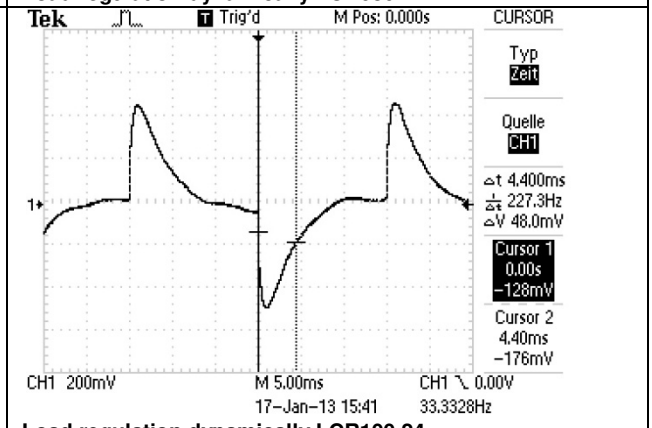
Load regulation dynamically LCR010.24



Load regulation dynamically LCR030.24



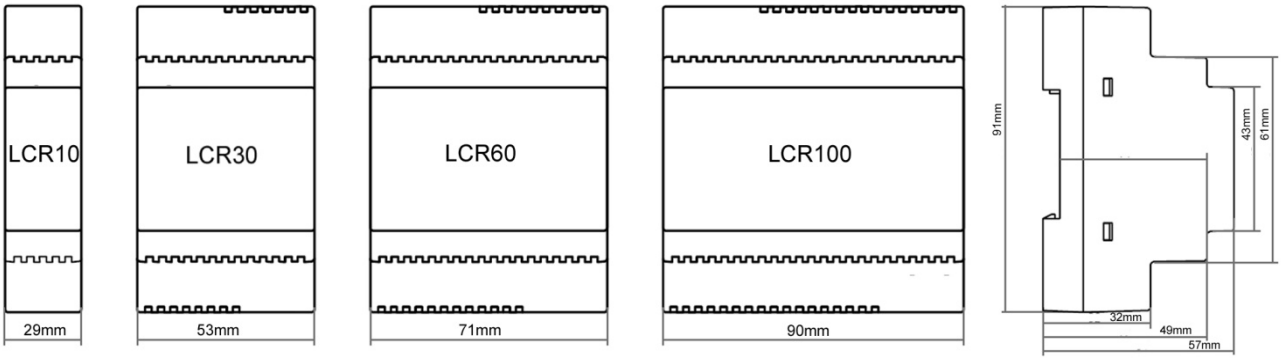
Load regulation dynamically LCR060.24

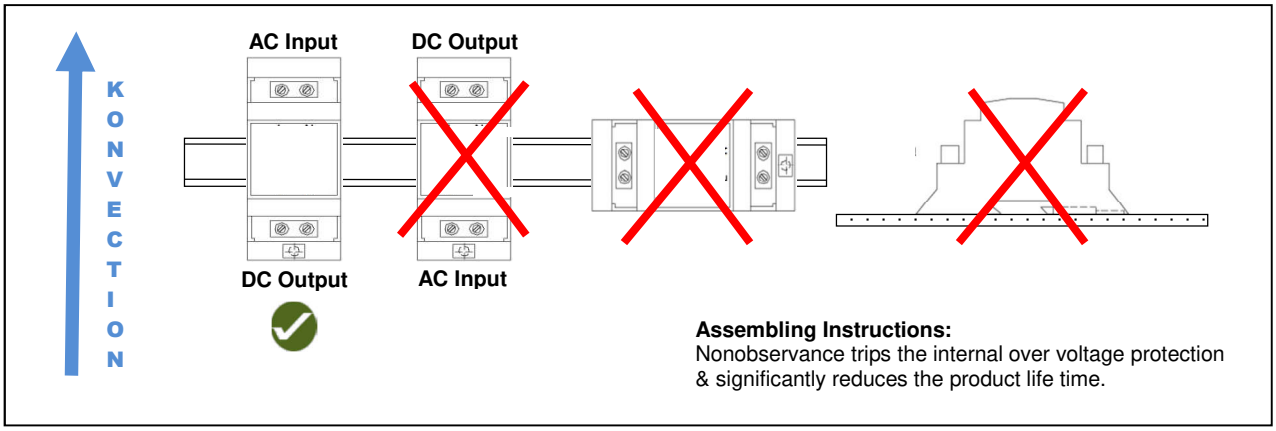


Load regulation dynamically LCR100.24

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Assembling Instructions:
Nonobservance trips the internal over voltage protection & significantly reduces the product life time.

Safety Instructions: Please read all warnings and advices carefully before installing or operating the device. Retain this operation manual always ready to hand.The device must be installed by specialist staff only.

Installation:

1.) The device is designed for systems fulfilling the safety norms of dangerous voltages/energy and fire prevention
2.) Installation is restricted to specialists only, make sure that the AC wire system is free of voltage
3.) Opening the device, making any modifications to it, dismounting any screws from it, operating the device out of specification and/or using it in appropriate area will unevitably result in loosing manufactureres guarantee; we decline taking any responsibility for risk of demages caused to someones health or to any installed system.
4.) Attention: The device has an internal input fuse. It is necessary to wire an automatic circuit braker to the line. We suggest to use a 16A-type with B-characteristic. It essential to install a line switch before the device.

Warnings:

Disregard these warnings can cause fire, electic shock, serious accident and death.

1. **Before connecting the device to the AC wire system make all wires free of voltage and assure accidently switch on**
2. **Allow neat and professionel cabeling**
3. **Never open nor try to repair the device by yourself. Inside are dangerous voltages that can cause electric shock hazard.**
4. **Avoid metal pieces or other conductive material to fall into the device**
5. **Do not operate the device under damp or wet conditions**
6. **It is verboten to operate the device under Ex conditions or in an Ex-Area**

All parameters base on 15 minutes run-in @ full load / 25°C / 230Vac 50/60Hz, as otherwise stated.

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