

CDN for Lightning Surge Immunity Tests on Unshielded Asymmetric

Communication Line

CDN 405AF8

Datasheet



In Compliance with

- > EN/IEC 61000-4-5
- > ITU-T K.20
- > ITU-T K21
- > ITU-T K.45
- > GB/T 17626.5

Introduction

The CDN 405AF8 unshielded asymmetric coupling/decoupling network is designed for surge testing on low-speed communication lines (up to 10 MBit/s Ethernet speed). There is no need for extra protection of AE because of high decoupling capacity of CDN 405AF8 to make sure test repeatability. Max. residual voltage on AE port is only 90 V when the surge voltage is 2 kV. It fully meets the requirements of figure 9 in IEC/EN 61000 - 4 – 5: 2017. It also boasts stable decoupling capacity and transmission rate, easy to operate and compact size.

Features

- > Data rate up to 10 MBit/s;
- > Test output to 1 pair, 2-pair or 4-pair communication line;
- > No need to extra protect AE;
- > Replaceable current-limiting resistors;
- > Compatible with the output port of other company's generators for communication test;

Application Areas

- | | |
|-----------------|--------------|
| > Communication | > IT |
| > Telecom | > Military |
| > Medical | > Avionics |
| > Broadcasting | > New energy |
| > Railway | |

Technical parameters	
Coupling	1.2/50 μ s, 8/20 μ s
Waveform	
Pulse Voltage	6 kV (10 kV can be customized)
Coupling Mode	4 pair unshielded asymmetric line
Coupling Device	SCD 90 (90 V gas discharging tube, built-in)
Output Impedance	40 $\Omega \pm 5\%$
Communication Interface	4 mm port (for telecom lines)
Pin assignment	Pair 1: pins 1/2
	Pair 2: pins 3/4
	Pair 3: pins 5/6
	Pair 4: pins 7/8
Data Rate	Up to 10 MBit/s
Operating Voltage	DC 3 V – 90 V
Operating current	Max. 1 A
Decoupling Inductance	20 mH
Residual Voltage	< 15% (surge voltage)

General Parameters	
Weight	Approx. 10 kg
Dimension	360 mm(L)×220 mm(W)×135 mm(H)
Shell Material	Aluminum
Operating Temperature	15 °C - 35 °C
Operating Humidity	45% - 75%
Package	Carton

Standard Accessories		
HV cable	1 m HV silicone-rubber line with banana plug	1 pc
Grounding cable	0.5 m yellow/green	1 pc
Short-circuit cable	black	1 pc
SZR40	Current-limiting module	1 pc
SZR0	Current-limiting module	1 pc
Network cable	1 m	2 pcs
Documents	Factory test report	1 pc
	User manual	1 pc

Optional Accessories	
SZR100	100 Ω
SZR160	160 Ω
SZR200	200 Ω
SZR320	320 Ω

Equipment Connection Diagram

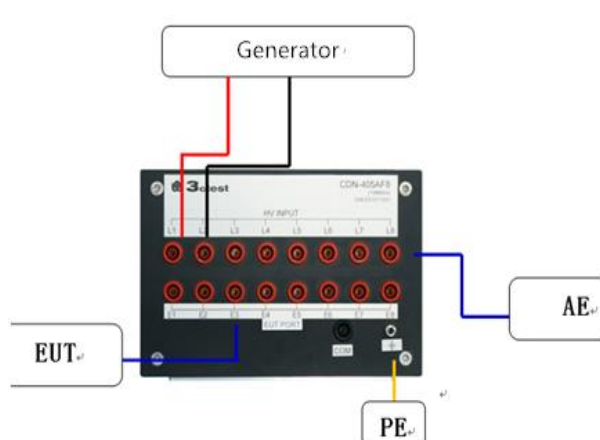


Figure 1. For Line-Line Tests

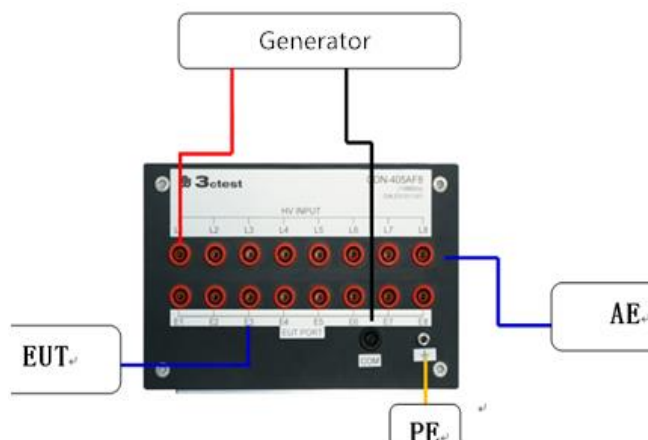
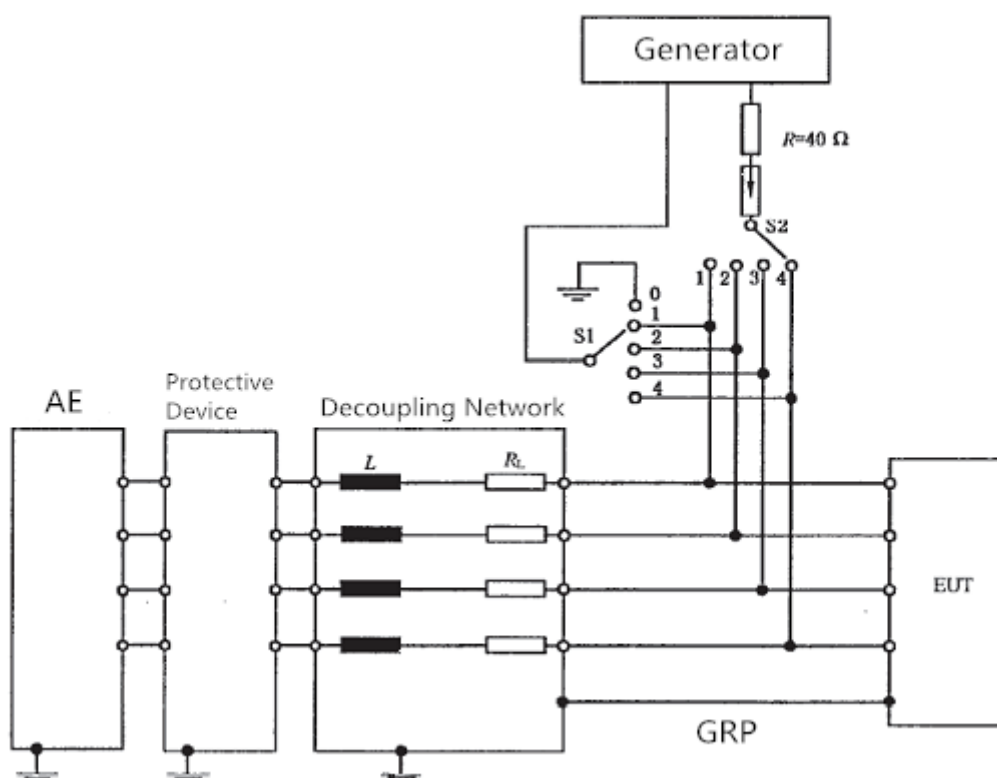


Figure 2. For Line-PE Tests

Design Schematic Circuit



As per Figure 9 in IEC 61000-4-5:2017



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