

CPU Guard



Description

The CPU Guard module is an overvoltage protection module for the AmsCPU/AmsCPU-IO module.

It is used where the AmsCPU standard protection level (EN61000-6-2, industrial immunity) is not sufficient.

The CPU Guard is designed specifically for the AmsCPU, making this module able to withstand surge pulses up to ± 6 kV and burst pulses up to ± 3 kV. The module has a built-in thermal protection that protects the internal circuits from overheating due to severe conditions.

The CPU Guard is designed to be installed on a DIN-rail next to the AmsCPU.



Functionality

Topic	Comments
Surge protection level	± 6 kV according to EN61000-4-5
Burst protection level	± 3 kV according to EN61000-4-4

Connections

I/O	Comments
Input	The CPU Guard is placed close to the AmsCPU that is to be protected. The AmsCPU is powered by one, two or three phases + neutral through the CPU Guard. Nominal voltage: 230 V AC Nominal frequency: 50/60 Hz Pin 4 (230 V AC analog input) is an extra phase which the AmsCPU uses for, e.g. cabinet door monitoring.
Output	Connect the CPU Guard outputs to the equivalent AmsCPU main power connection inputs. See the AmsCPU data sheet.

Reliability & Maintainability

Topic	Comments
Fault protection	The module is protected against internal faults by thermal fuses that disconnect input from output permanently. Subsequent module replacement is required.

Technical Specifications

Operational specifications

Storage temp.	-40°C to +85°C
Operating temp.	-20°C to +65°C
Max humidity	90% (non-condensing)
IP grade	IP20
Input voltage	190 to 253 V AC
Output current	Max 95 mA
Voltage drop (normal operation)	Max 3.8 V AC
Power consumption (normal operation)	Max 0.4 W

Standards and approvals

2006/95/EC, Low Voltage Directive (LVD)
2004/108/EC, EMC Directive
2002/95/EC, RoHS Directive



CPU Guard

Data Sheet

Installation Guide

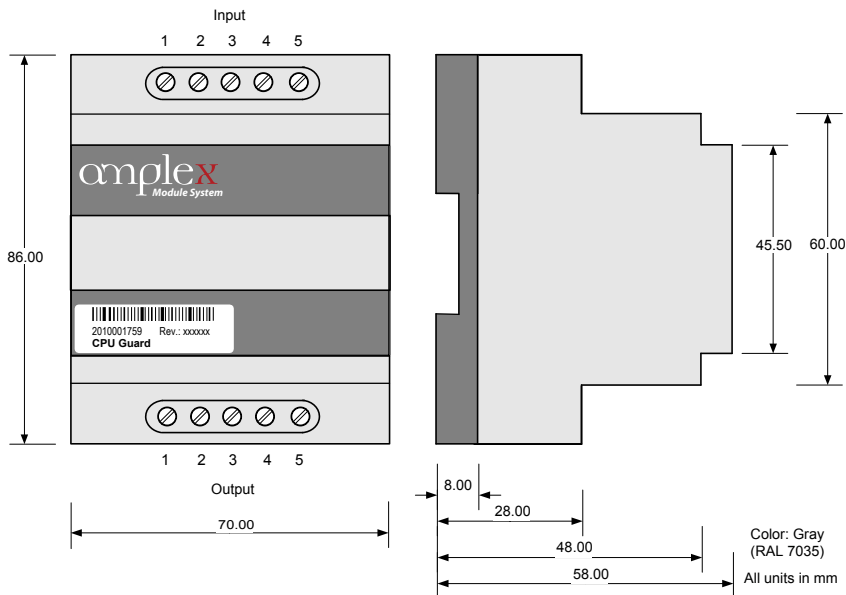
The CPU Guard module must be connected to an AmsCPU/AmsCPU-IO module.

Topic	Comments
Output cable length	< 1 m
Enclosure	The CPU Guard module must be installed in an enclosure of protection degree IP65 or installed at a location that provides the module with the same level of protection.

Physical Specifications

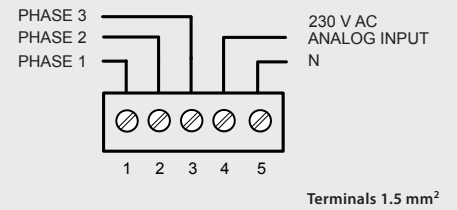
Weight	120 g
Top part	Gray (RAL 7035) Lexan 940
Base part	Black (RAL 7021) Noryl VO 1550
Coating	Conformal coated
Power connector	0.14 - 1.5 mm ² (AWG 26-16)
Mounting	DIN-rail (EN50022)

Drawing

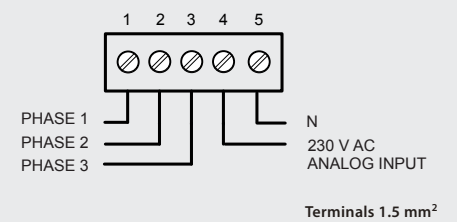


I/O Schematic

Input connection (MAINS)



Output connection (CPU)



Ordering Information

Product	Order number
CPU Guard	100-40-008