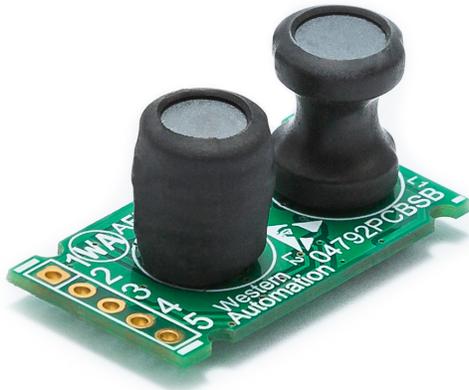


Circuit Protection & Interrupter Subassemblies

AFD-01 Series

AC Arc Fault Detector



Description

The AFD-01 is a compact, low-power sensor designed for detecting arc fault currents in 230 V ac, 50 Hz installations, compliant with IEC 62606. It also provides programmable overvoltage protection via external resistors, meeting EN 50550 standards.

Engineered for integration into 18 mm-wide circuit breakers, the AFD-01 operates from a 5 V regulated dc supply and supports load currents up to 40 A. It features a fault signal output that activates a PMR or SCR, along with an LED indicator for visual fault confirmation. The sensor includes a continuous automatic self-test to ensure reliable operation, and a manual test function is available via the Vin/Test pin for additional diagnostics.

Features & Benefits

FEATURES	BENEFITS
Arc Fault Detection	Fast response per IEC 62606 for enhanced safety
Overvoltage Protection	Programmable via external resistors; compliant with EN 50550
Compact Footprint	Designed for integration into 18 mm-wide circuit breakers

Applications

- Switchgear
- Motor Control Centres

Ordering Information

CATALOG #	DESCRIPTION
90165	AFD-01 AC Arc Fault Current Detector

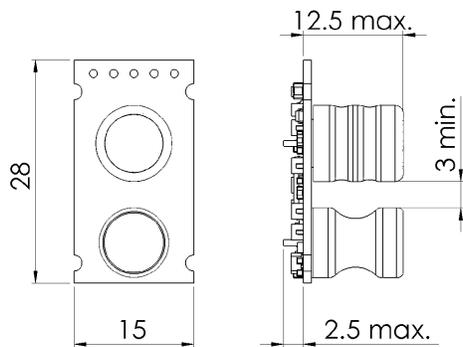
Circuit Protection & Interrupter Subassemblies

AFD-01 Series

Specifications

Relevant Product Standard	IEC 62606
Minimum Series Arc Fault Detection Level	2.5 A
DC Regulated Supply Voltage	5V ± 1%
Current consumption	< 10 mA
Rated Load Current	Up to 40 A
Fault Signal Output	Pulse (I _{max} = 5 mA) to trip PMR or SCR
Environmental Operating Conditions	-25 °C to +85 °C
Size (Width x Length x Height)	15 mm x 28 mm x 15 mm
Sensor Board Weight	< 6 g

Dimensions (Millimeters)



Handling Instructions

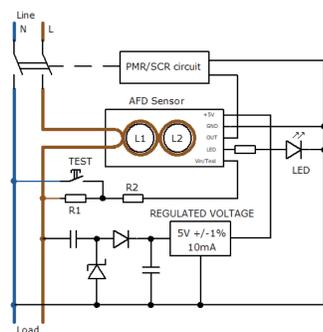
Care should be taken to ensure the correct connection of the AFD-01. Miswiring the product may cause permanent damage.

ESD Caution

PCBA contains ESD (electrostatic discharge) sensitive devices. Damage may occur on devices subjected to high-energy ESD. Therefore, proper ESD precautions should be taken to avoid performance degradation or loss of functionality

Wiring Diagram

AFD-01 SYSTEM CONNECTION



PIN NO.	NAME	DESCRIPTION
5	+5 V DC	Regulated Power Supply
4	GND	Ground
3	OUT	Trip Output Voltage
2	LED	"Fault" LED Output
1	Vin/Test	Mains Input (via divider) / Test Button

Circuit Protection & Interrupter Subassemblies

AFD-01 Series

Standards Conformity & Certifications

Product Safety Certifications

Products tested, compliant and certified to the following standards that states the requirements for electrical products to ensure they are safe for consumers to use.

CERTIFICATION BODY MARK	CERTIFICATION BODY NAME	CERTIFICATION DESCRIPTION	STANDARDS COVERED BY THE CERTIFICATION
	IEC	Conformity with the international standard for arc fault detection devices (AFDDs) for household and similar uses, intended to be used in ac circuits for rated voltages not exceeding 440 V ac with rated frequencies of 50 Hz, 60 Hz, or 50/60 Hz and rated currents not exceeding 63 A.	IEC 62606

Related Products

RCM20-01: 6 mA dc Detection to IEC 62955, Mode 3, 20 mm CT Aperture

RCM14-01 System: 6 mA dc Detection to IEC 62955, Mode 3, 14 mm CT Aperture

Type B System 4P 30mA: Type B 4-Pole Sensor Board + Current Transformer (IEC 62423 (EN62423))

Type EV System 4P 6mA: Type EV 4-Pole Sensor Board + Current Transformer (IEC 62955)

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