

Visible Light Flame Detector AFD100

Overview

The AFD100 visible light flame detector detects oil burner flame.

This product is available in two types, top view and side view, in order to meet application needs.

This product can be combined only with a protectorelay designed for use with the AFD100.



Specifications

Model No.	Light source direction	Type	Compatible protectorelay
AFD100A0700	In front	Top-view type	Model BC-R15
AFD100B0700	From the side	Side-view type	Model BC-R35
Illuminance-current characteristics (when $V_R = 5\text{ V}$, at 25 °C)	30 μA or more for illuminance of 10 Lx (color temperature 2856 K) (Measurement conditions: power 5 V, load resistance 20 k Ω , normal temperature, normal humidity)		
Complete darkness characteristics	24 μA or less in complete darkness (0 Lx) (Measurement conditions: power 5 V, load resistance 20 k Ω , normal temperature, normal humidity)		
Withstand voltage	No abnormalities when 500 V AC at a commercial frequency is applied for one minute (Between the lead wire and the flange, at normal temperature and normal humidity)		
Insulation resistance	50 M Ω min. when measured using a 500 V DC megger (Between the lead wire and the flange, at normal temperature and normal humidity)		
Allowable ambient temperature	-20 to +60 °C		
Storage temperature	-20 to +70 °C		
Allowable ambient humidity	40 °C, 90 % RH or less (without condensation)		
Vibration resistance	4.9 m/s ² double amplitude, 10 to 55 Hz, two hours each in the X, Y, and Z directions		
Cable	Heat-resistant PVC insulated cable, flat, 0.75 mm ² Black (terminal F), white (terminal G)		
Material	Main unit and flange: Nylon 6 (blue)		
Installation	Flange		
Weight	Approximately 25 g		

■ When replacing a CdS flame detector (conventional product) with the AFD100 flame detector

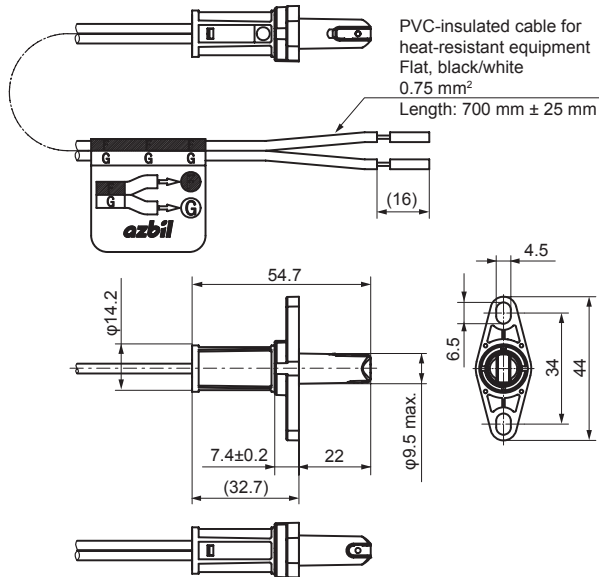
For replacement of a CdS flame detector with the AFD100, the following adapter (sold separately) is required.

It must be purchased in addition to the AFD100 series product.

Additionally, when replacing a CdS flame detector with the AFD100, it is necessary to replace the protectorelay with a product compatible with the AFD100.

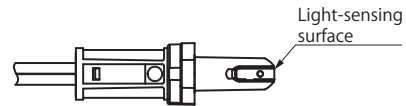
Conventional CdS Model No.	AFD100 series		Adapter for conversion (sold separately)
C554A1299-1	AFD100A0700 or AFD100B0700	+	81447108-001
C554A06S1-1	AFD100A0700 or AFD100B0700	+	81447108-002
CN120A100	AFD100A0700 or AFD100B0700	+	81424790-001

External dimensions

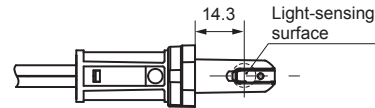


(Unit: mm)

• AFD100A0700 (top-view type)



• AFD100B0700 (side-view type)



Handling precautions

- (1) Do not install this product in a location where it will be exposed to the following.
 - Certain chemicals or their vapor (ammonia, sulfur, chlorine, ethylene compounds, acids, and other corrosive gases)
 - Vibrations for an extended period of time
- (2) When the product is used in an environment where there is visible light other than that of the flame, take care so that no visible light will be detected other than that emitted by the burner.
- (3) Wiring work must be done with the power disconnected. Otherwise, if the wrong terminal is inadvertently touched, damage, malfunction, or electric shock may occur.
- (4) The flame sensor has polarity. Connect them to the correct terminals (P and G) as shown on the product. Taking the supplied cables as an example, connect the black lead wire to terminal F, and the white lead wire to terminal G.
- (5) Use the signal cable of the flame detector independently. Do not bundle it with other signal wires or power wires.
- (6) Securely connect the high voltage cables of the ignition transformer to prevent poor contact. Poor contact may cause high frequency radio waves, which may cause malfunction. Also, make sure that the igniter is directly connected to a metal grounding part that is electrically connected to the ignition transformer housing.

Please read "Terms and Conditions" from the following URL before ordering and use.

<https://www.azbil.com/products/factory/order.html>

Specifications are subject to change without notice.

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