DOYO

TECHNOLOGY

Creative Leader in FLAME DETECTORS

History

2015
- 11 – Establishment of corporation(Capital KRW 700million)
- 12 – Disaster prevention test site construction

2016
- 01 – Factory establishment and registration
- 06 – Quality management system authentication (ISO 9001:2008)
  - – Environmental management system certification (ISO 14001:2004)
- 11 – Producer liability insurance (P/L insurance)
  - – Academic-Industry Cooperation Agreement on Fire Prevention (Seoyoung University)

2017
- 04 – Selected as Promising Enterprise & ITEM (CCTV Flame Detector) 2017 Fire EXPO
- 05 – Registered as Nara Marketplace by Public Procurement Service
  (goods, construction business)
  - – Certified as a Venture Company (Technology Guarantee Fund)
  - – Certified as an Excellent Technology Evaluation Company (NICE Information Service)
- 06 – Traditional Market Pilot Project – (CCTV type) flame detector installation
  (Yeongdeungpo Market)
- 08 – Relocated factory and headquarters:
  Factory: 4F, Doyogong Building
  Headquarters: 3F, Doyogong Building
  - – Development of firefighting video control and recording equipment; built in-house server
- 11 – CCTV integrated flame detector installation
  (Seoul Chung-Ang University Hospital), (Yeosu Dokkaebi Traditional Market)
- 12 – CCTV integrated flame detector installation and supplier registration (Iljin Global)

2018
- 01 – CCTV integrated flame detector installation & partner registration – Iljin Co., Ltd
  - – Explosion-proof certification acquired (DY-50-EX), Ex d IIC T4 (IP67)
    Korea Gas Safety Corporation
- 03 – Registered as a partner for establishing a disaster prevention system for traditional
  temples of the ancient sect.
- 05 – Broadcasting & communication equipment conformity registration
    National Radio Research Agency
- 06 – CCTV integrated flame detector installation & partner registration – Binggeul Co.
- 11 – Patent No. 10-1924854 obtained (Multi-function fire detection receiver)

2019
- 01 – Smart CAM-type flame detector installation & partner registration – Bearion Art Co.
- 02 – Patent No. 10-1953878 granted (Analog + digital sensor-hybrid IR flame detector)
- 04 – Patent No. 10-1975861 granted (Luminance sensor equipped flame detector)
- 06 – Explosion-proof certification (DY-50-EX), Ex d IIC T4 (IP67) – Korea Gas Safety Corporation
  - – Explosion-proof certification (DY-50-EX), Ex tD A21 IP67 T85°C – Korea Gas Safety Corporation
  - – Patent No. 10-1993658 granted (Flame detector featuring a multi-axis rotation structure)
  - – Patent No. 10-1993660 granted (Fire detection & fire-situation monitoring system)
- 11 – Smart CAM-type flame detector installation & partner registration – Iljin Bearing Co.

History

2020

- **01** – Explosion-proof certification (DYFD–EX1CV5), Ex d IIC T6 (IP67) Korea Gas Safety Corporation
  - Explosion-proof certification (DYFD–EX1CV5), Ex tD A21 IP67 T85℃ Korea Gas Safety Corporation
  - Explosion-proof certification (DYFD–EX2CV5), Ex d IIC T6 (IP67) Korea Gas Safety Corporation
  - Explosion-proof certification (DYFD–EX2CV5), Ex tD A21 IP67 T85℃ Korea Gas Safety Corporation
  - Explosion-proof certification (DYFD–EX1CV5), Ex tD A21 IP67 T85℃ Korea Gas Safety Corporation
- **02** – Smart CAM–rype flame detector installation and partnership (Coca–Cola Co., Gwangju Plant)
- **03** – Smart CAM–type flame detector installation partnership (Hyundai L&C)
- **08** – Explosion-proof certification (DYFD–EX1NV3), Ex d IIC T6 (IP67) Korea Gas Safety Corporation
  - Explosion-proof certification (DYFD–EX1NV3), Ex tD A21 IP67 T85℃ Korea Gas Safety Corporation
- **11** – Explosion-proof certification (DYFD–EX2NV3), Ex d IIC T6 (IP67) Korea Gas Safety Corporation
  - Explosion-proof certification (DYFD–EX2NV3), Ex tD A21 IP67 T85℃ Korea Gas Safety Corporation

2021

- **01** – Smart CAM–type flame detector installation POSCO (Pohang Steel Plant, Power Station 1)
- **02** – 2021 Firefighting Equipment Joint R&D Project Supported by Korea Fire Industry Technology Institute
- **06** – Explosion-proof certification acquired (DYFD–EX2CV5)
  - Smart CAM–type flame detector installation (Hyundai L&C, Sejong Site, entire factory area)
- **07** – Explosion-proof certification acquired (DYFD–EX1NV3_IR3)
  IR/CAM explosion-proof flame detector – Korea Fire Industry Technology Institute
- **08** – Winner of the 13th Fire Industry Awards (Industrial Technology Category)
  Smart CAM–type flame detector
  - Smart CAM–type flame detector installation (Coca–Cola Co., Yeoju Plant)
- **10** – Smart CAM–type flame detector installation KGS Incheon Office (Incheon Port)

2022

- **04** – Installation of Smart CAM–type flame detectors Ssangyong Cement (Yeongwol Plant)
- **06** – LG Chem business agreement & installation – Daesan Plant (Explosion-proof type)
- **07** – Smart CAM–type flame detector installation POSCO (Pohang Steel Plant, Power Station 1)
- **08** – Coupang business agreement & installation – Icheon 1 Center Logistics Warehouse (Standard type)
- **10** – Korea Hydro & Nuclear Power business agreement & installation – Ulsan Seosaeng
  (Explosion-proof type)
- **11** – Installation of Smart CAM–type flame detectors SK Shieldus

2023

- **05** – Obtained certification (DYM50–CAM–GIP) IR3/IP CAM–type flame detector – Korea Fire Institute
  - Obtained certification (DYM50–GE2) IR3 general–type flame detector – Korea Fire Institute
- **06** – Installation of Smart CAM–type flame detectors POSCO Gyeongju Plant (P&O)
- **09** – Headquarters office expansion relocation – Pangyo IT Center
  - Installation of Smart CAM–type flame detectors Kumho Petrochemical
  - Installation of flame detectors – POSCO Pohang Steelworks 200 units
    (including 2 reheating furnaces, etc.)
- **11** – Factory registration – additional registration to Pangyo IT Center
- **12** – Installation of Smart CAM–type flame detectors Samsung Electronics (Busan Plant)

History

2024
- **04** – Smart CAM-type flame detector installation POSCO (Pohang Steel Plant, Power Station 1)
- **05** – Hyundai Heavy Industries: Service agreement & installation –
  Ulsan Plant (Explosion-proof, General type)
  - Ecopro: Service agreement & installation – Ochang Plant (General type)
  - Smart CAM-type flame detector installation POSCO (Pohang Steel Plant, Power Station 1)
- **09** – Explosion-proof certification obtained (DYFD-EX2NV4), Ex db IIC T6 Gb (IP67)
  - Explosion-proof certification obtained (DYFD-EX2NV4), Ex tb III C T85°C Db (IP67)
- **11** – Lotte Chilsung Beverage: Service agreement & installation – Gangneung Plant (General type)
  - SK On: Service agreement & installation – Seosan Plant (General type)
- **12** – Ssangyong Cement: Service agreement & installation – Donghae Plant (General type)
  - Type approval obtained (DYFD-EX2NV4), UV/IR 50M explosion-proof flame detector –
    Korea Fire Industry Technology Institute

2025
- **01** – KCC: Service agreement & installation – Yeoju Plant (General type)
- **03** – Smart CAM-type flame detector: Installation (IP.TYPE) – LS Electric – Donghae Plant
- **06** – Global Motors: Service agreement & installation – Gwangju Plant (Explosion-proof type)

Certification

KFI Approval Certificate

| DYM50-CAM-GE IR3 CAM형 | DYM30-CAM-GE UV/IR CAM형 | DYM-50-GE IR3 | DYM-30-GE UV/IR | DY-50-EX IR3 방폭 | DYFD-EX1NV3 IR3 방폭 | DYFD-EX2NV3 UV/IR 방폭 | DYFD-EX1CV5 IR3/CAM 방폭 | DYFD-EX2CV5 UV/IR/CAM 방폭 |

KC Electromagnetic Compatibility Certificate

| DYM-30-GE UV/IR형 | DYM-50-GE IR3 형 | DYM30-CAM-GE UV/IR CAM형 | DYM50-CAM-GE IR3 CAM형 | DY-50-EX IR3(방폭) | DYFD-EX2CV5 UV/IR/CAM(방폭) | DYFD-EX1CV5 IR3/CAM(방폭) | DYFD-EX1NV3 IR3 (방폭) | DYFD-EX1NV3 UV/IR (방폭) |

KGS Explosion−Proof Safety Certificate

| DYFD-EX1NV3(IR3) Ex ⅡC T6 IP67 | DYFD-EX1NV3(IR3) Ex tD A21 IP67 85℃ | DYFD-EX2NV3(UV/IR) Ex ⅡC T6 IP67 | DYFD-EX2NV3(UV/IR) Ex tD A21 IP67 85℃ | DYFD-EX1CV5(IR3/CAM) Ex ⅡC T6 IP67 | DYFD-EX1CV5(IR3/CAM) Ex tD A21 IP67 85℃ | DYFD-EX2CV5(UV/IR/CAM) Ex ⅡC T6 IP67 Ex tD A21 IP67 85℃ | DYFD-EX2CV5(UV/IR/CAM) Ex ⅡC T6 IP67 Ex tD A21 IP67 85℃ |

Certifications & Compliance Documents

| ISO9001-2015 인증서 | ISO14001-2015 인증서 | 기술평가 우수기업 인증서 | 벤처기업 인증서 | 조달청 (나라장터) 물품, 공사 등록증 | 태고종 방재 협약서 | 중소기업 확인증 |

Issued Patent Certificate

| 특허 (제10-1924854호) | 특허 (제10-1953878호) | 특허 (제10-1975861호) | 특허 (제10-1993658호) | 특허 (제10-1993660호) | 특허출원 (제20-2016-0002136) |

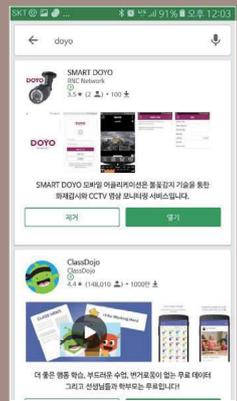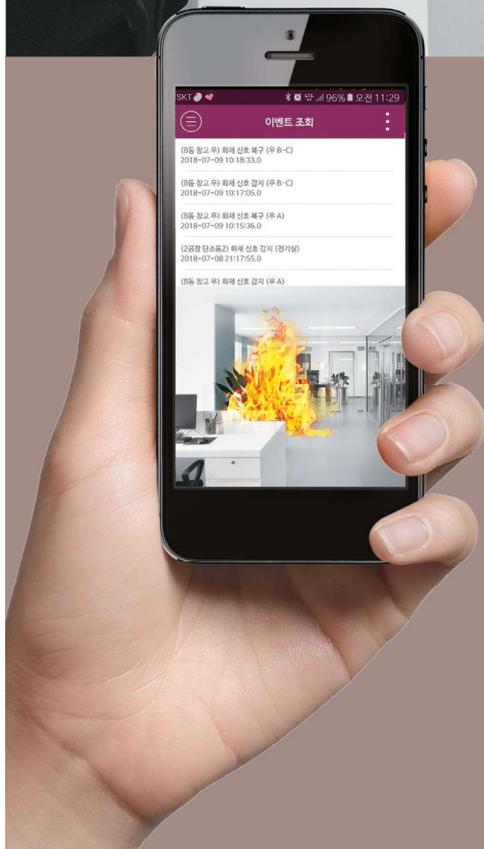# Presidential Commendation for the Fire Industry Technology Award

Korea's First!
Implementation of mobile application

Integrated CCTV and flame detection technology

Immediate alarm notifications to your phone!

Check CCTV live feeds through your phone.
Easily locate starting point of the fire and respond rapidly

Insert mobile application

Check live CCTV footage

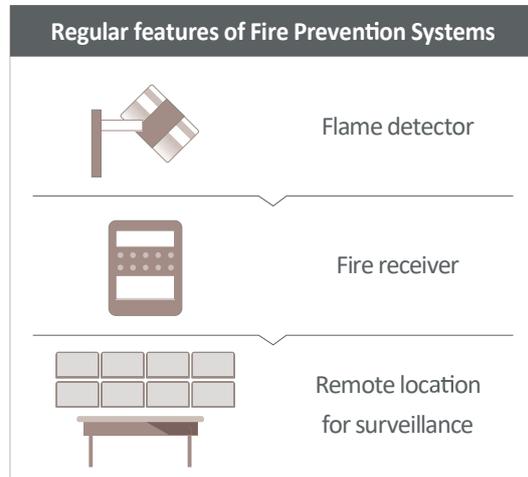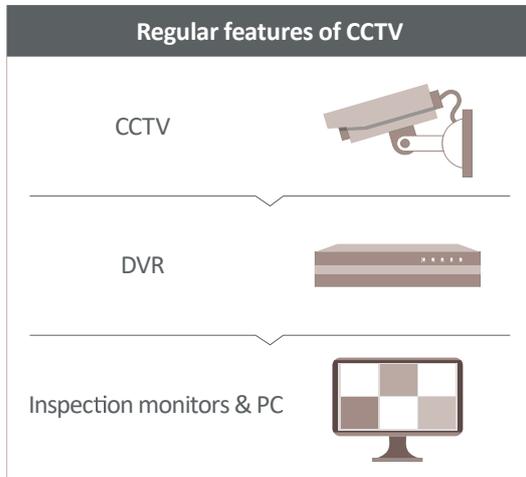Receive alarms immediately in times of fire

Integration of CCTV and Flame detection!

| Full HD footage 2 mega pixels | 100 degrees point of view Inspect 30M/50M | CMS Multi Monitoring | Record before and after the fire |

Regular features of CCTV

CCTV

DVR

Inspection monitors & PC

Regular features of Fire Prevention Systems

Flame detector

Fire receiver

Remote location for surveillance

Rids of the discomfort of installing separate CCTV and flame detection system

Install CCTV and flame detection system, at the same time!

Integrated CCTV and flame detection technology

Fire detection DVR

Check from PCs all over the country

Check CCTV and alarms 24/7

Receive alarm notifications and site footage through email

* Applicable Models
- Standard Type : DYM50－CAM－GE(Standard Type IR3),DYM30－CAM－GE(Standard Type UV/IR)
  DYM50－CAM－GIP(Standard Type IR3),DYM30－CAM－GIP(Standard Type UV/IR)
- Ex Type : DYFD－EX1CV5(Ex Type IR3),DYFD－EX2CV5(EX Type UV/IR)
  DYFD－EX1CV6 (Explosion－proof IR3 type), DYFD－EX2CV6 (Explosion－proof UV/IR type)

Experience the reasonably priced, integration of CCTV and flame detector

24 ' check CCTV footage from all over the world

0 ' monthly fee

1 ' installation process, easy and simple

DOYO CMS with 24/7 Real-Time Monitoring

Up to 144 Units Viewable Per Screen
With Unlimited Additional Screens Supported!

Complete technological differentiation achieved through independent development and proprietary server operation, delivering solutions unmatched by off-the-shelf DVR-compatible CCTV integrated flame detectors.
Recognized leadership in the CCTV-integrated flame detection field, supported by superior detection performance and advanced engineering capability.

CCTV integrated innovative solution function

DOYO dedicated application development	DOYO dedicated server operation (Not a rental server)	Developed CMS solution for DOYO	Detector position setting function (Not a simple channel display function)	Firmware upgrade remote support automatic installation function

Large corporation that installed CCTV integrated flame detector

SAMSUNG 삼성전기 Samsung Electro-Mechanics	POSCO	HYUNDAI L&C	Coca-Cola
CAU 중앙대학교병원 CHUNG-ANG UNIVERSITY HOSPITAL	여수시 Yeosu Goblin Traditional Market	영등포구 YEONGDEUNGPO-GU Yeongdeungpo Traditional Market	빙그레 Binggrae
ILJIN GLOBAL	ILJIN Corp	ILJIN BEARING	농협 하나로마트 Nonghyup Hanaro Mart

IoT-Based LTE Wireless CAM-Type Flame Detection System

The IoT-based LTE Wireless CAM-Type Flame Detection System uses commercial LTE networks to ensure reliable connectivity wherever mobile service is available. It provides 2-megapixel Full HD video and precise flame and fire detection signals, enabling rapid incident response and safeguarding both personnel and assets.
Real-time video monitoring delivers continuous visibility of on-site activities, supporting early detection of unsafe conditions and enhancing workplace safety.
The system is available in IR3 IP CAM (50M) and UV/IR IP CAM (30M) models, offering flexible configuration options for varied operational needs.
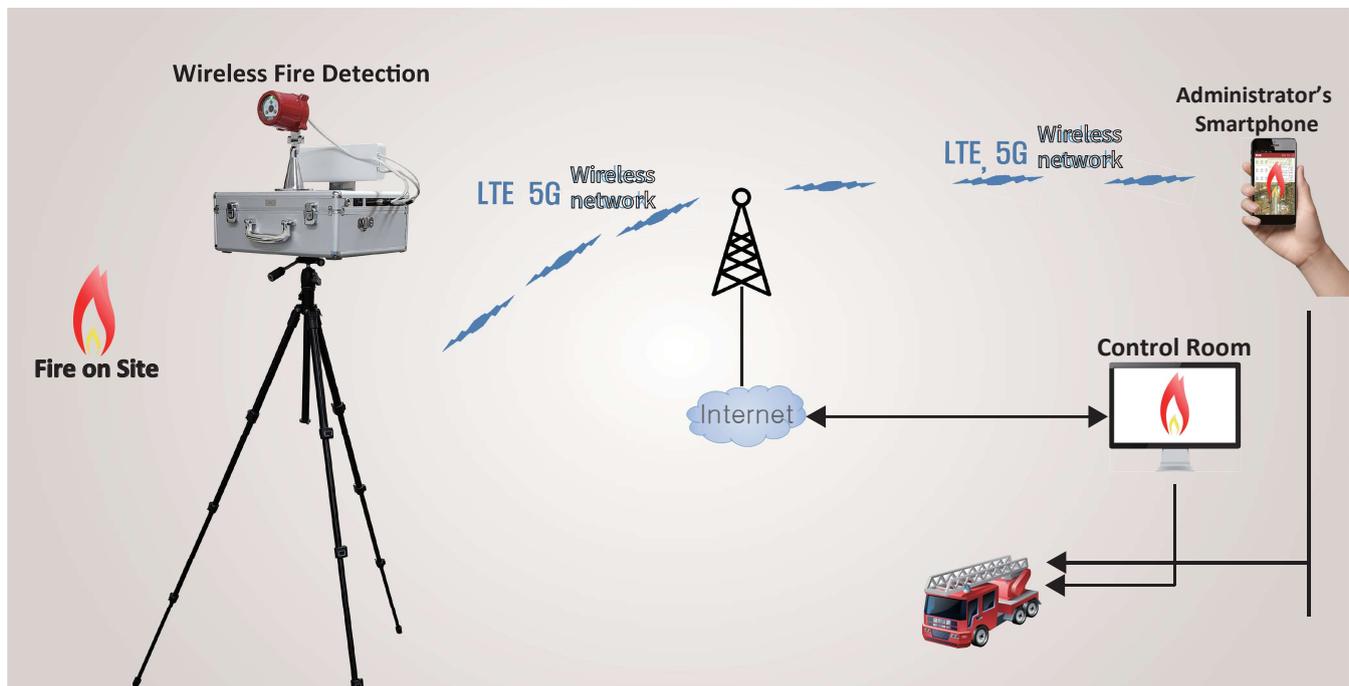

DY-WS-3C

Product Features

- IoT-based wireless communication system utilizing advanced 1:1 5G Wi-Fi and LTE network technology
- Overcomes the limitations of conventional fire detection infrastructure, enhancing security in blind spots and restricted areas
- Achieves broader coverage through a fully wireless network architecture
- Battery-powered, enabling portable operation without mobility constraints
- Supports 1920 × 1080 (Full HD) video for high-quality monitoring of on-site conditions
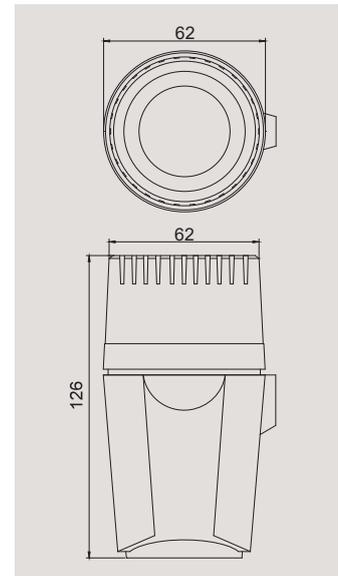
Product Specification

Model Type	IoT-Based LTE / 5G Wi-Fi Wireless Fire Detection System
External Power Source	AC 220V (60Hz) (Charger Output: 12.6V)
Internal Power Source	Lithium-Polymer Battery DC 12V (7A)
Resolution	1920 × 1080 (Full HD), 2 Megapixels
Operating Temperature	−20°C to +70°C

| UV/IR TYPE | Flame Detector

DYM30-GE

Analyzes ultraviolet and infrared wavelength bands generated at the point of fire ignition to determine the presence of flames, while filtering out non-fire interference sources such as sunlight, halogen lighting, and welding sparks. Provides excellent reliability and stability as a high-performance flame detector.

(Patent No. 10-1993658)
Flame detector featuring a multi-axis rotation structure
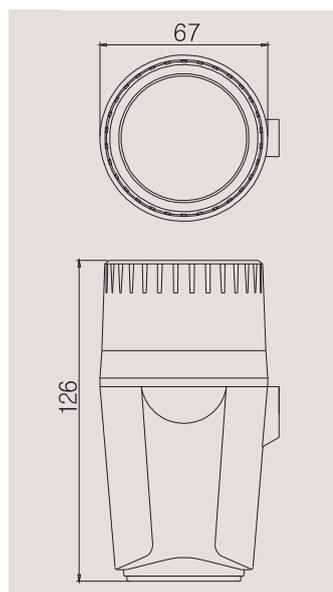
Product Features

- Designed with a Dual-Core MCU for faster and more accurate flame wavelength analysis, enabling precise and rapid fire alarm signal output by simultaneously processing communication and power output

- Incorporates advanced flame-analysis algorithms to minimize false alarms caused by environmental factors, ensuring enhanced stability and reliability

- Integrated bracket allows eight installation angles, making installation simple at any desired position

- FAULT System detects any flaws in the system

- Venture Certification Product:
  Product Identification No. (23232524)

Product Specification

Specification	Reusable type, Indoor/Outdoor use, Water-Proof type, Infraed/Ultraviolet type
Sensor Distance	30M
Field of View (Angle)	100˚
Arc Welding Separation	3M or more
Power	DC 24V±20%
Current	Standby: -20mA Active : 25mA
Temperature	-20℃ ~ 80℃
Size	62mm × 62mm × 126mm
LED COLOR	GreenLED: Ready/ RedLED: Fire/ Green,Red Blink: FAULT
Output Signal	Relay Signal(COM, NO, NC), 4~20mA

DYM50-GE

The IR3 flame detector monitors infrared wavelength bands generated at the point of fire ignition, enabling rapid and accurate flame analysis while effectively suppressing false alarms caused by non-fire sources such as sunlight, halogen lighting, and welding sparks.

(Patent No. 10−1993658)
Flame detector featuring a multi−axis rotation structure
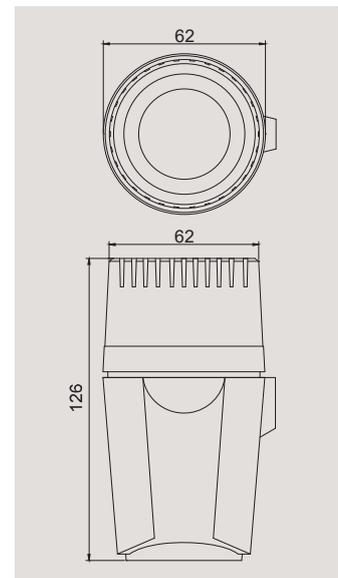
Product Features

- Designed with a Dual−Core MCU for faster and more accurate flame wavelength analysis, enabling precise and rapid fire alarm signal output by simultaneously processing communication and power output

- Incorporates advanced flame−analysis algorithms to minimize false alarms caused by environmental factors, ensuring enhanced stability and reliability

- Integrated bracket allows eight installation angles, making installation simple at any desired position

- FAULT System detects any flaws in the system

- Venture Company Certification –
  Product Identification Number (23235302)

Product Specification

Specification	Reusable type, Indoor/Outdoor use, Water−Proof type, Infraed type
Sensor Distance	50M
Field of View (Angle)	100도
Arc Welding Separation	3M 이상
Power	DC 24V±20%
Current	Standby : −20mA Active : −30mA
Temperature	−20℃ ~ 80℃
Size	67mm × 67mm × 126mm
LED COLOR	GreenLED: Ready/ RedLED: Fire/ Green,Red Blink: FAULT
Output Signal	Relay Signal(COM, NO)

DYM50-GE2

The IR3 flame detector monitors infrared wavelength bands generated at the point of fire ignition. It performs fast and accurate flame analysis while suppressing non−fire interference sources such as sunlight, halogen lighting, and welding sparks. This ensures high reliability and stable detection performance in demanding environments.

(Patent No. 10−1993658)
Flame detector featuring a multi−axis rotation structure

Product features

- Designed with a Dual−Core MCU for faster and more accurate flame wavelength analysis, enabling precise and rapid fire alarm signal output by simultaneously processing communication and power output

- Incorporates advanced flame−analysis algorithms to minimize false alarms caused by environmental factors

- Field of View increased from 90 degrees to 100degrees to open field of view

- Able to change the angle of the camera wvith the ease with 8 different adjustable angles

- FAULT System detects any flaws in the system

- Venture Certification Product: Product Identification No. (25431727)

Product Specification

Specification	Reusable type, Indoor and Outdoor use, Water−Proof type, Infraed. Composite type
Sensor Distance	50M
Field of View (Angle)	90˚
Arc Welding Separation	3M or more
Power	DC 24V±20%
Current	Standby : −20mA Active : −30mA
Temperature	−20℃ ~ 80℃
Size	67mm × 67mm × 235mm
LED COLOR	GreenLED: Ready/ RedLED: Fire/ Green,Red Blink: FAULT
Output Signal	Relay Signal(COM, NO)

DY-30-EX1

Model Name : DYFD-EX2NV3
Explosion-Proof Rating: Flameproof: Ex d Ⅱ C T6(IP67)
Dustproof: Ex tD A21 T85℃(IP67)

Flame detector equipped with ultraviolet and infrared sensors,
designed to ignore common false-alarm sources such as sunlight,
halogen lighting, and welding sparks, ensuring safe and reliable fire detection

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92.5
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Product Features

- Designed with a Dual-Core MCU for faster and
  more accurate flame wavelength analysis,
  enabling precise and rapid fire alarm signal output
  by simultaneously processing communication
  and power output
- Incorporates advanced flame-analysis algorithms
  to minimize false alarms caused by environmental
  factors, ensuring enhanced stability and reliability

- FAULT System detects any flaws in the system

- Standard bracket included

- Patent No. 10-1975861
  (Luminance Sensor Equipped Flame Detector)

- Venture Certification Product:
  Product Identification No. (25039469)

Product Specification

Specification	Explosion-Proof, Reusable, Indoor and Outdoor, Waterproof, Infrared
Sensor Distance	30M
Field of View (Angle)	100˚
Arc Welding Separation	1M or more
Power	DC 24V±20%
Current	Standby : -20mA Active : -30mA
Temperature	-20℃ ~ 80℃
Size	93mm × 93mm × 92.5mm
LED COLOR	GreenLED: Ready/ RedLED: Fire/ Green,Red Blink: FAULT
Output Signal (Fire)	Relay Signal(COM, NO, NC), 4~20mA
Output Signal (Fault)	Relay Signal(COM, NO, NC), 0mA

DY-U50-EX

Model Name: DYFD-EX2NV4

Explosion-Proof Rating : Ex db ⅡC T6 Gb (IP67)
Ex tb Ⅲ C T85℃ Db (IP67)

Flame detector analyzes the ultraviolet and infrared wavelength bands generated during a fire to accurately determine flame presence, while filtering out non-fire sources such as sunlight, halogen lighting, and welding activity. By minimizing false alarms, the system provides outstanding reliability and ensures a high level of operational safety.

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Product Features

- Designed with a Dual-Core MCU for faster and more accurate flame wavelength analysis, enabling precise and rapid fire alarm signal output by simultaneously processing communication and power output

- Incorporates advanced flame-analysis algorithms to minimize false alarms caused by environmental factors, ensuring enhanced stability and reliability

- FAULT System detects any flaws in the system

- Standard mounting bracket included
  Patent No. 10-1975861
  (Luminance Sensor Equipped Flame Detector)

- Venture Company Certification –
  Product Identification Number: 25872828

Product Specification

Specification	Explosion-Proof, Reusable, Indoor and Outdoor, Waterproof, Infrared
Sensor Distance	50M
Field of View (Angle)	90°
Arc Welding Separation	1M or more
Power	DC 24V±20%
Current	Standby : 20mA Active : 30mA
Temperature	-20℃ ~ 80℃
Size	93mm × 93mm × 92.5mm
LED COLOR	GreenLED: Ready/ RedLED: Fire/ Green,Red Blink: FAULT
Output Signal (Fire)	Relay Signal(COM, NO, NC), 4~20mA
Output Signal (Fault)	Relay Signal(COM, NO, NC), 0mA

DY-50-EX1

Model Name: DYFD-EX1NV3
Explosion-Proof Rating: Flameproof: Ex d ⅡC T6(IP67)
Dustproof: Ex tD A21 T85℃(IP67)

The IR3 flame detector monitors infrared wavelength bands generated at the point of fire ignition. It performs fast and accurate flame analysis while suppressing non-fire interference sources such as sunlight, halogen lighting, and welding sparks. This ensures high reliability and stable detection performance in demanding environments.

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Product Features

- Designed with a Dual-Core MCU for faster and more accurate flame wavelength analysis, enabling precise and rapid fire alarm signal output by simultaneously processing communication and power output

- Incorporates advanced flame-analysis algorithms to minimize false alarms caused by environmental factors, ensuring enhanced stability and reliability

- Combined use of analog and digital sensors for enhanced detection performance, reducing false alarms under various environmental conditions
  Patent No. 10-1975861
  (Luminance Sensor Equipped Flame Detector)

- FAULT System detects any flaws in the system

- Bracket included

- Venture Certification Registered Product: Item Identification Number (25039468)

Product Specification

Specification	Industrial / Indoor / Outdoor / Waterproof / Explosion-proof / Infrared Type
Sensor Distance	50M
Field of View (Angle)	90˚
Arc Welding Separation	1M or more
Power	DC 24V±20%
Current	Standby : 20mA Active : 25mA
Temperature	−20℃ ~ 80℃
Size	93mm × 93mm × 92.5mm
LED COLOR	GreenLED: Ready/ RedLED: Fire/ Green,Red Blink: FAULT
Output Signal (Fire)	Relay Signal(COM, NO, NC), 4~20mA
Output Signal (Fault)	Relay contact (COM, NO, NC), 0 mA

DYM30-CAM-GE

The UV/IR flame detector monitors ultraviolet and infrared wavelengths generated at the point of fire ignition. Equipped with an HD−grade 2−megapixel camera module, it provides pre− and post−fire recording as well as real−time surveillance of hazardous areas. This model is a UV/IR−based integrated flame detector designed for use with CCTV camera systems.

(Patent No. 10−1993658)
Flame detector featuring a multi−axis rotation structure
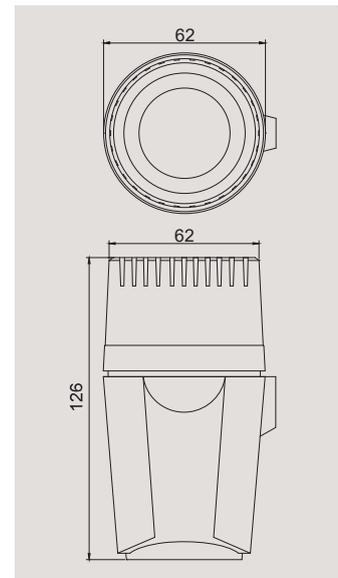
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Product Features

- Full HD−quality CCTV applied for real−time monitoring in hazardous areas, enabling an effective fire−prevention system

- UV and IR sensors used to minimize false alarms caused by non−fire sources

- Pre− and post−event recording enables accurate identification, analysis, and diagnosis of fire origin and fire behavior

- Supports multi−channel monitoring through a CMS−based system

- Integrated bracket structure with eight adjustable installation angles for easy setup in any preferred direction

- Real−time video verification and instant fire alerts via mobile devices, enabling rapid fire−source analysis and immediate response

- FAULT System detects any flaws in the system

- Venture Company Certification − Product Identification Number (23232523)

Product Specification

Specification	Reusable, Standard, Indoor/Outdoor, Waterproof, Explosion−Proof, UV/IR Infrared Type, CCTV Type
Sensor Distance	30M
Field of View (Angle)	100˚
Arc Welding Separation	3M or more
Power	DC 24V
Camera Resolution	Full HD, 2 megapixels ₩
Temperature	−20℃ ~ 80℃
Size	67 mm × 67 mm × 235 mm (including bracket)
LED COLOR	GreenLED: Ready/ RedLED: Fire/ Green,Red Blink: FAULT
Output Signal	Relay Signal(COM, NO)

DYM50-CAM-GE

The IR3 flame detector monitors three infrared wavelength bands generated at the point of fire ignition. Equipped with an HD-grade 2-megapixel camera module, it supports pre- and post-fire recording as well as real-time monitoring of hazardous areas. This model is an IR3-based integrated flame detector designed for use with CCTV camera systems.

(Patent No. 10−1993658)
Flame detector featuring a multi−axis rotation structure

Product features

- Full HD–quality CCTV applied for real-time monitoring in hazardous areas, enabling an effective fire-prevention system
- IR3 triple-infrared sensor applied to improve detection reliability and operational safety
- Pre- and post-event recording enables accurate identification, analysis, and diagnosis of fire origin and fire behavior
- Supports multi-channel monitoring through a CMS-based system
- Integrated bracket structure with eight adjustable installation angles for easy setup in any desired direction
- Real-time video verification and immediate fire-alarm notification via mobile devices
- FAULT System detects any flaws in the system
- Venture Company Certification – Product Identification Number (232325286)

Product Specification

Specification	Reuseable, Indoor/Outdoor, Waterproof, Explosion−Proof, IR3 Infrared Type, CAM Type
Sensor Distance	50M
Field of View (Angle)	100˚
Arc Welding Separation	3M or more
Power	DC 24V±20%
Camera Quality	Full HD, 2 megapixels (Coaxial cable digital output)
Temperature	−20℃ ～ 80℃
Size	67mm × 67mm × 235mm
LED COLOR	GreenLED: Ready/ RedLED: Fire/ Green,Red Blink: FAULT
Output Signal	Relay Signal(COM, NO)

DYM30-CAM-GIP

The UV/IR flame detector monitors ultraviolet and infrared wavelengths generated at the point of fire ignition. Equipped with an HD-grade 2-megapixel IP camera module, it provides pre- and post-fire recording as well as real-time monitoring of hazardous areas. This model is a UV/IR-based integrated flame detector designed for use with IP-CCTV systems

Product Features

- Full HD IP-CCTV applied for real-time monitoring in hazardous areas, enabling an effective fire-prevention system

- UV/IR sensor technology enhances detection reliability by minimizing false alarms caused by non-fire sources

- Pre- and post-event recording enables accurate identification, analysis, and diagnosis of fire origin and fire behavior

- Supports multi-channel monitoring through a CMS-based system

- Integrated bracket structure with eight adjustable installation angles for easy setup in any desired direction

- Real-time video verification and immediate fire-alert notification via mobile devices

- FAULT System detects any flaws in the system

- Venture Company Certification – Product Identification Number (25431725)

Product Specification

Specification	Reusable, Indoor and Outdoor, Waterproof, Ultraviolet/Infrared
Sensor Distance	30M
Field of View (Angle)	100°
Arc Welding Separation	5M or more
Power	DC 24V±20%
Camera Quality	Full HD, 2 megapixels (IP LAN output)
Temperature	−20℃ ~ 80℃
Size	76mm × 76mm × 95mm
LED COLOR	GreenLED: Ready/ RedLED: Fire/ Green,Red Blink: FAULT
Output Signal	Relay Signal(COM, NO, NC),

DYM50-CAM-GIP

Flame Detector equipped with both IR sensors for flame detection. At the same time, fused with Full-HD 2MG IP CAM which records before, during and after the fire for more thorough fire safety.

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Product Features

- Full HD IP-CCTV applied for real-time monitoring in hazardous areas, enabling an effective fire-prevention system

- IR3 triple-infrared sensing technology enhances detection reliability and operational safety

- Pre- and post-event recording enables accurate identification, analysis, and diagnosis of fire origin and fire behavior

- Supports multi-channel monitoring through a CMS-based system

- Real-time video verification and immediate fire-alert notification via mobile devices

- FAULT System detects any flaws in the system

- Venture Company Certification – Product Identification Number (25431726)

Product Specification

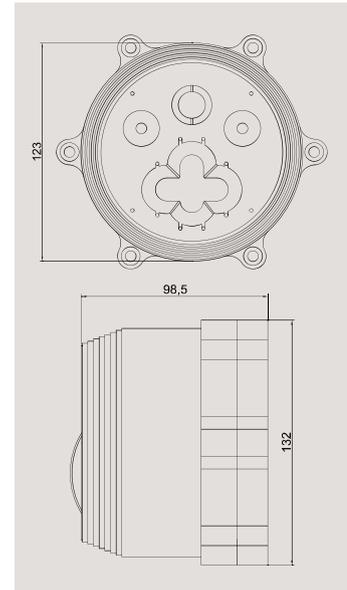| Specification	Reusable, Indoor and Outdoor, Waterproof, Ultraviolet/Infrared
Sensor Distance	50M
Field of View (Angle)	90°
Arc Welding Separation	10M or more
Power	DC 24V±20%
Camera Resolution	Full HD, 2 megapixels
Temperature	−20℃ ~ 80℃
Size	67mm × 67mm × 235mm
LED COLOR	GreenLED: Ready/ RedLED: Fire/ Green,Red Blink: FAULT
Output Signal	Relay Signal(COM, NO, NC),

DY30-CAM-EX

Model Name : DYFD-EX2CV5
Explosion-Proof Rating: Flameproof: Ex d ⅡC T6(IP67)
Dustproof: Ex tD A21 T85℃(IP67)

The UV/IR flame detector monitors ultraviolet and infrared wavelengths generated at the point of fire ignition. Equipped with an HD-grade 2-megapixel camera module, it provides pre- and post-fire recording as well as real-time monitoring of hazardous areas. This model is a UV/IR-based integrated flame detector designed for use with CCTV camera systems

Patent Number: 10-1975861
(Luminance Sensor equipped Flame Detector)

Product Features

- Full HD-quality CCTV applied for real-time monitoring in hazardous areas, enabling an effective fire-prevention system

- UV and IR sensor technology enhances detection reliability and operational stability

- Pre- and post-event recording enables accurate identification, analysis, and diagnosis of fire origin and fire behavior

- Supports multi-channel monitoring through a CMS-based system

- Real-time video verification and immediate fire-alert notification via mobile devices

- FAULT System detects any flaws in the system

- Venture Company Certification –
  Product Identification Number (25437505)

Product Specification

Specification	Explosion-Proof, Reusable, Indoor and Outdoor, Waterproof, Ultraviolet/Infrared
Sensor Distance	30M
Field of View (Angle)	100˚
Arc Welding Separation	5M or more
Power	DC 24V±20%
Camera Resolution	Full HD, 2 megapixels (coaxial digital output)
Temperature	−20℃ ~ 80℃
Size	123mm × 123mm × 98.5mm
LED COLOR	GreenLED: Ready/ RedLED: Fire/ Green,Red Blink: FAULT
Output Signal (Fire)	Relay Signal(COM, NO, NC), 4~20mA
Output Signal (Fault)	Relay Signal(COM, NC), 0mA

DY50-CAM-EX

Model Name : DYFD-EX1CV5
Explosion-Proof Rating: Flameproof: Ex d ⅡC T6(IP67)
Dustproof: Ex tD A21 T85℃(IP67)

The IR3 flame detector monitors three infrared wavelength bands generated at the point of fire ignition. Equipped with an HD-grade 2-megapixel camera module, it provides pre- and post-fire recording as well as real-time monitoring of hazardous areas. IR3 integrated flame detector designed for use with CCTV camera systems.

Patent Number: 10-1975861
(Luminance Sensor equipped Flame Detector)

Product Features

- Full HD IP-CCTV applied for real-time monitoring in hazardous areas, enabling an effective fire-prevention system

- IR3 triple-infrared sensor technology enhances detection reliability and operational stability

- Pre- and post-event recording enables accurate identification, analysis, and diagnosis of fire origin and fire behavior

- Supports multi-channel monitoring through a CMS-based system

- Real-time video verification and immediate fire-alert notification via mobile devices

- FAULT System detects any flaws in the system

Product Specification

Specification	Explosion-Proof, Reusable, Indoor and Outdoor, Waterproof, Infrared/
Sensor Distance	50M
Field of View (Angle)	90°
Arc Welding Separation	5M or more
Power	DC 24V±20%
Camera Resolution	Full HD, 2 megapixels (coaxial digital output)
Temperature	−20℃ ~ 80℃
Size	123mm × 123mm × 98.5mm
LED COLOR	GreenLED: Ready/ RedLED: Fire/ Green,Red Blink: FAULT
Output Signal (Fire)	Relay Signal(COM, NO, NC), 4~20mA
Output Signal (Fault)	Relay Signal(COM, NC), 0mA

DY-U50-IP CAM-EX

Model Name : DYFD-EX2CV6
Explosion-Proof Rating: Flameproof: Ex db ⅡC T6 Gb (IP67)
Dustproof: Ex ⅢC T85℃ Db (IP67)

Flame detector integrates a UV/IR sensing module that monitors ultraviolet and infrared radiation generated during a fire, combined with an HD-grade 2-megapixel IP camera. It supports pre- and post-event recording as well as real-time monitoring of fire-risk areas, providing a UV/IR IP CAM-type flame detection solution

Patent Number: 10-1975861
(Luminance Sensor equipped Flame Detector)

Product Features

- Full HD IP-CCTV applied for real-time monitoring in hazardous areas, enabling an effective fire-prevention system

- UV and IR sensor technology enhances detection reliability and operational stability

- Pre- and post-event recording enables accurate identification, analysis, and diagnosis of fire origin and fire behavior

- Supports multi-channel monitoring through a CMS-based system

- Real-time video verification and immediate fire-alert notification via mobile devices

- FAULT System detects any flaws in the system

Product Specification

Specification	Explosion-Proof, Reusable, Indoor/Outdoor, Waterproof, UV/IR infrared type, IP-CAM type
Sensor Distance	50M
Field of View (Angle)	90도
Arc Welding Separation	5M 이상
Power	DC 24V
Camera Resolution	Full HD, 2 megapixels
Temperature	-20℃ ~ 80℃
Size	123mm × 123mm × 98.5mm
LED COLOR	GreenLED: Ready/ RedLED: Fire/ Green,Red Blink: FAULT
Output Signals	Fire: Relay contact (COM, N/O, N/C), current output: 4mA-20mA Fault: Relay contact (COM, N/O, N/C), current output: 0mAT

DY50-IP CAM-EX

Model Name : DYFD-EX1CV6
Explosion-Proof Rating: Flameproof: Ex db ⅡC T6 Gb (IP67)
Dustproof: Ex ⅢC T85℃ Db (IP67)

IR3 flame detector that monitors infrared wavelengths generated at the point of fire ignition, equipped with an HD-grade 2-megapixel IP camera module for pre- and post-fire video recording and real-time monitoring of hazardous areas. Integrated with an IP CCTV camera for enhanced fire detection and surveillance.

Patent Number: 10-1975861
(Luminance Sensor equipped Flame Detector)

Product Features

- Full HD IP-CCTV applied for real-time monitoring in hazardous areas, enabling an effective fire-prevention system

- IR3 triple-infrared sensor technology enhances detection reliability and operational stability

- Pre- and post-event recording enables accurate identification, analysis, and diagnosis of fire origin and fire behavior

- Supports multi-channel monitoring through a CMS-based system

- Real-time video verification and immediate fire-alert notification via mobile devices

- FAULT System detects any flaws in the system

Product Specification

Specification	Explosion-Proof, Reusable, Indoor/Outdoor, Waterproof, UV/IR infrared type, IP-CAM type
Sensor Distance	50M
Field of View (Angle)	90 degree
Arc Welding Separation	5M or more
Power	DC 24V
Camera Resolution	Full HD, 2 megapixels (coaxial digital output)
Temperature	-20℃ ~ 80℃
Size	123mm × 123mm × 98.5mm
LED COLOR	GreenLED: Ready/ RedLED: Fire/ Yellow: FAULT
Output Signal	Fire: Relay contact (COM, N/O, N/C), 4mA-20mA Fault: Relay contact (COM, N/O, N/C), 0mA

DVR
(4CH, 16CH)

The integrated CCTV-type flame detector collects information at the point of ignition and stores it as video data. Using IoT technology, the system can transmit fire-related images and alerts to the user's mobile phone via video, text message, or email through a connected DVR.

(Patent No. 10-1993660)
Fire Detection and Fire Monitoring System

Product Features

- Automatic recognition of HD cameras (1080P, 720P, 960H, TVI~3M/4M camera support)
- Supports 4K Ultra HD video output (3840×2160) with 8ch / 16ch configuration
- Full HD real-time recording and playback
- H.264 high-profile video encoding
- Supports video output through 4/16-channel BNC cables, Spot Out, HD Output, and VGA
- Recording modes: manual, schedule, motion detection, and event mode
- SATA-supported storage with USB3.0/2.0 high-speed backup capability
- RS-485 communication for PTZ camera control
- Compatible with various software platforms (Mobile / Push notifications)
- Supports UTC function
- Dual streaming capability
- Supports 2×, 4×, and 8× playback speeds
- Channel-specific ON/OFF control (initial video routing)

Product Specification

Size/Channel	1U, 4CH / 16CH
Decoder	TVI+AHD+960H+CVI
Recording/ Playback Speed@1080P	240/200fps
Recording/ Playback Speed@720P	240/200fps
Video Input Terminal	8EA / 16EA
SATA INTERFACE	1EA / 4EA
USB	2.0 X 1, 3.0 X 1
HDMI, VGA	YES
RS-485	2EA (PTZ, Keyboard Controller)

NVR
(16CH, 32CH)

The integrated CCTV-type flame detector collects fire-scene information at the point of ignition and stores it as video data. Using IoT technology, the NVR transmits fire-related images and alerts to the user's mobile device via video, text message, or email.

(Patent No. 10-1993660)
Fire Detection and Fire Monitoring System

Product Features

- Supports up to 128 remote network connections

- Network protocol support: TCP/IP, DHCP, IPv4, IPv6, DNS, DDNS, NTP, RTSP, SADP, SMTP, SNMP, NFS, iSCSI, ISUP, UPnP™, HTTP, HTTPS

- Network interfaces:
  2 × RJ-45 10/100/1000 Mbps self-adaptive Ethernet ports

- Supports H.265+, H.265, H.264+, and H.264 codecs

- Supports maximum recording of:
  1 channel @ 32 MP | 2 channels @ 12 MP | 16 channels @ 1080p

Product Specification

IP Video Input	Up to 12 MP resolution
HDMI Output	1920×1080/60Hz, 1280×1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz
VGA Output	1920×1080/60Hz, 1280×1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz
Video Codec	H.265+/H.265/H.264+/H.264/MPEG4
Recording Resolution	32 MP/24 MP/12 MP/8 MP/6 MP/5 MP/4 MP/3 MP/1080p/UXGA/720p/VGA /4CIF/DCIF/2CIF/CIF/QCIF
Serial Port	1 RS-485 (half-duplex), 1 RS-232
SATA	4 SATA interfaces
eSATA (Optional)	1 eSATA interfaces
Max Storage Capacity	Supports up to 10 TB HDD

FLAME DETECTOR TEST DEVICE

Dedicated flame detector test device designed for environments where real flame cannot be used during testing. It enables testing of UV/IR and IR3-type flame detectors. Depending on the model, detectors from other manufacturers may not respond to the test.

Available Output :

- – Eight selectable flicker modes
- – Compatible with UV/IR and IR3 flame detectors
- – Includes a built-in laser pointer for alignment

FLAME DETECTOR POWER

The power supply unit provides regulated DC output specifically for flame detectors, ensuring stable and reliable fire detection performance

Smaller Site Type
3A, 5A

Production Site Type
3A,5A,10A

Rack Mount Type
10A, 20A

DOYO
TECHNOLOGY