

Explosion proof type Infrared Multiple-constituents Analyzer Model IRMU series



The IRMU series is an on-line multi IR wavelength analyzer utilizing the infrared absorption technology for measuring product constituent and/or thickness. Signal processing capabilities are built into the compact all-in-one detector unit for easy installation and operation. The IRMU series can be used in a hazardous atmosphere (Explosion proof area).

The detector can be used by itself or connected to a PC/plant control system, as both analog and digital outputs are provided.

FEATURES

- Designed to be installed in a hazardous area
- Up to 10 wavelengths, capable of measuring 4 constituents such as; moisture, film-thickness, organism, and coating-thickness in real time simultaneously.
- Connectivity to multiple interfaces, RS485 (MODBUS), Ethernet (LAN)
- High-speed & High-repeatability (28ms)
- Self-diagnostic function, easy maintenance
- Conforms to CE standards and IP-65 equivalent



Setting display unit

MODELS

IRMU

Model type classification

- 1000 series
 -Moisture meter (Mirror type)
 - 11 : General-purpose type
 - 12 : High moisture type
 - 13 : Very-low moisture type
- 5000 series
 -Multiple-constituents meter (Mirror type)
 - 51 : Multi-constituents (NIR)
 - 52 : Multi-constituents (Thin-film, Infrared)
- 7000 series
 -Thickness/coating-thickness meter (Mirror type)
 - 71 : Thickness/coating-thickness
 - 72 : Thin-film/coating-thickness

Number of wavelength and Number of constituent

- 00 : Except for the 00:5000series
- : Only 5000 series
 - Wavelength: 2 to 0 (Designate 2 to 10)
 - Constituent: 1 to 4 (Designate 1 to 4)

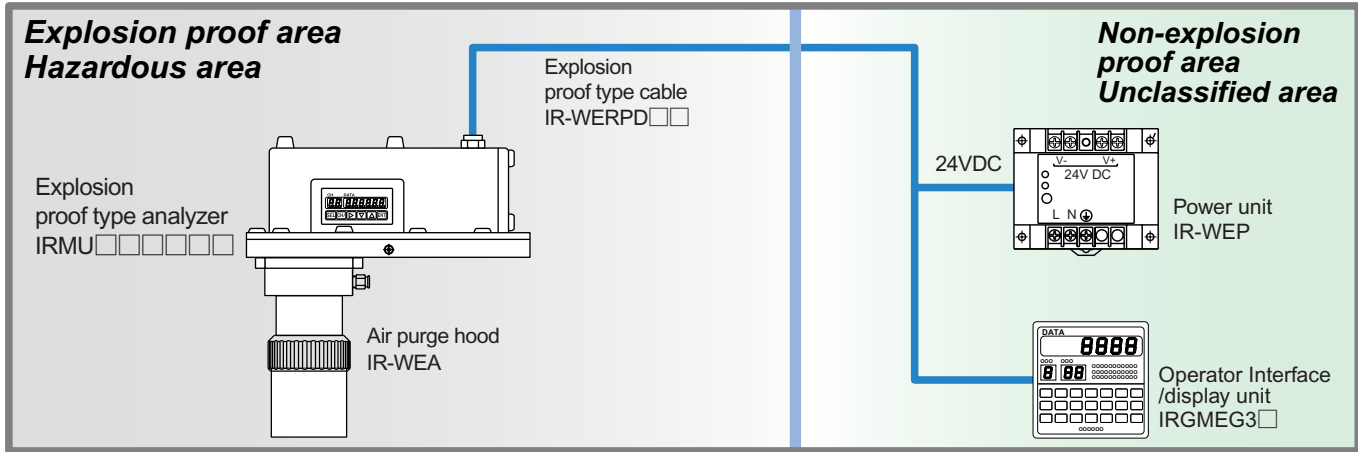
Communication interface

- S: RS-485 (standard)
- L: LAN (option)
- To be specified. In case of connecting to IRGMEG (IM series Infrared multiple-constituent analyzer operator interface/Display unit) it is RS-485 communications.

Special specifications

- Blank: Standard
- 1 : For small diameter
- 2 : Dust laying
- 3 : Special gain
- 4 : Polarized light

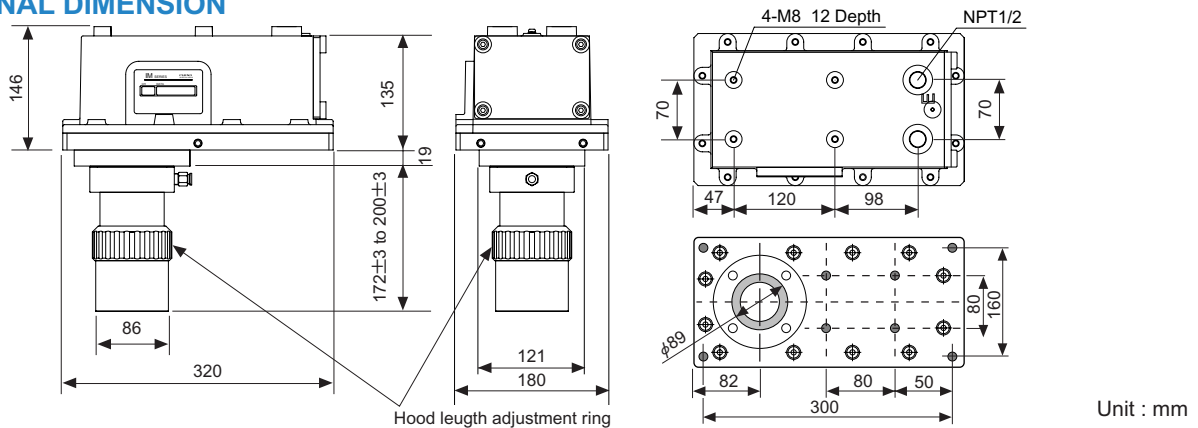
CONFIGURATION



GENERAL SPECIFICATION

- | | | | |
|---------------------------------------|--------------------------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name: | Explosion proof type infrared multiple constituents analyzer | Computing: | Parameters are set up by IRGMEG3
2 or 3-color ratio calculation
Multiple regression calculation |
| Measuring system: | Infrared multi wave length mirror type | No. of calibration curve: | Up to 99 curves |
| Measuring wavelength: | Up to 10 wavelengths | Calibration curve: | Linear, quadratic, cubic & multiple regression line |
| Measuring component: | Up to 4 constituents | Calibration curve correction: | Linear & quadratic correction |
| Hazardous locations class and groups: | Class I, Groups C/D
Class II, Groups E,F,G | Smoothing (delay): | 0 to 99 seconds |
| UL: | UL/cUL Listed(E320854) | Calibration: | By checking plate |
| Light source: | Tungsten lamp | Detector No. setup: | When multiple detector operation, detector No. is set up by IRGMEG3 |
| Case: | Aluminum alloy | Channel No. setup: | Calibration curve No. is set up by IRGMEG3 |
| Case color: | Metallic silver | Self-diagnostic: | Outputs contact signal and communications when abnormal conditions |
| Operating temperature code: | T6 (Maximum Surface Temperature : 85°C) | Correction input: | Compensate measured value by external 4 to 20mA DC (sample temperature, etc.) |
| Maximum ambient temperature rating: | 0 to 50°C | External Di/o: | Di(contact input) --- Perform either one of preset, data-hold or real/smoothing
Do(contact output) --- Selects self diagnostic(1b) or high/low alarm(1a) |
| Conduit opening size: | NPT1/2 | Power rating: | DC24V ±10%, 32W |
| Cable acceptance detail: | φ7.5mm to φ11.9mm | Connection: | Terminal connection |
| Setting altitude: | 2,000m or less | Mounting: | Bolt suspension method with 4 pieces of M8 bolts |
| Measuring distance: | 200 to 400mm | | |
| Analog output: | 4 to 20mADC, ±0.2% of full scale (Load resistance: less than 500Ω) | | |
| Communications: | RS485 MODBUS | | |
| Output renewal cycle: | 28ms | | |
| Display & setup: | Displays data & setup parameter | | |

EXTERNAL DIMENSION



Specifications subject to change without notice. Printed in Japan (I) 2014. 6

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