# General Specifications

YFGW610
Field Wireless Media Converter

GS 01W02D02-01EN

## ■ GENERAL

*This General Specification describes the hardware specification for Field Wireless Media Converter.*

*Combining this with Field Wireless Management Station (YFGW410) and Field Wireless Access Point (YFGW510, YFGW520) composes the field wireless system.*

*For outline of a field wireless system, and details of each product, see related products General Specifications.*

## ■ FEATURES

**●Special Design for Field Wireless System**

Supporting low latency, high quality broadband network traffic, the media converter can also be configured to provide high precision time synchronization for the network as specified in the ISA100.11a standard.

**●High tolerance to harsh environment**

Wide range of operating temperature along with surge protection ensures safety and high reliability of Field Wireless System.

**●Reduction of Installation Cost**

Installation can be simplified by plug-and-replay functionality, which is unnecessary to configure itself.

## ■ HARDWARE SPECIFICATIONS

### ■ COMMUNICATION INTERFACE

| ITEM | | Field Wireless Backbone Specifications | Optical Network Specifications | |
|---|---|---|---|---|
| Communication Interface | Standard | 100BASE-TX *1 | 100BASE-FX *2 | |
| | Transmission Speed | 100Mbps | 100Mbps | |
| | Connector | RJ-45 | SC connector [1pole x 2] | |
| | Cable Type | Category 5 | Multimode Fiber *3 | Single mode Fiber *4 |
| | Wavelength | – | 1300nm | |
| | Maximum Length | 100 m | 2000 m | 5000 m |
| | Number of Ports | 4 ports | 4 ports | |
| | Port Name | B1, B2, B3, B4 | 1, 2, 3, 4 | |
| | Protection | Surge | – | |
| | Port Connection | B1-1, B2-2, B3-3, B4-4 (fixed) | | |

*1: Connected to YFGW410.
*2: Connect to YFGW510/YFGW520. In outdoor wiring, it is recommended to use optical fiber cables with a nonmetallic tension member.
*3: Core diameter / cladding diameter 50/125 µm core or 62.5 / 125 µm can be used.
*4: ITU-T G.652 compliant products can be used.

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## ■ Installation Environment

**Temperature Range:**
Operating: -40 to +65°C (altitude : up to 3000 m)
Storage: -40 to +85°C

**Humidity Range:**
Operating: 5 to 95 %RH (non-condensation)
Storage: 5 to 95 %RH (non-condensation)

**Temperature gradient:**
Operating: ±10°C/h or less
Storage: ±20°C/h or less

**Power Supply:**
Rated voltage : 24 V DC
Voltage Range *1 : 10.8 to 26.4 V DC
*1: The equipment shall not be operated outside the range.
Momentary Power Failure : Instant Disconnection
DC Power Supply Ripple Ratio : 1%p-p or less

**Power Dissipation:**
Max. 10 W

**Degrees of Protection:**
IP20

**Vibration resistance:**
0.15 mm P-P (5~58 Hz), 1 G (58~150 Hz)

**Shock resistance:**
15 G 11 ms (de-energized, with half-sine wave pulse in three directions)

**Noise resistance:**
Electric field : 3 V/m or less (80MHz~1 GHz)
Electrostatic discharges: 4 kV or less (contact discharge), 8 kV or less (aerial discharge)

**Grounding:**
Class D grounding with the grounding resistance of 100 Ω or less is necessary. (no sharing ground with others)

**Cooling:**
Natural Air Cooling

## ■ Regulatory Compliance Statements

**CE Conformity:**
- EMC Directive: EN 61326-1 Class A Table 2, EN 55011 Class A Group 1, EN 61000-6-2
- RoHS Directive: EN IEC 63000
- Other Normative Standards: EN 61010-1 (Indoor use only)
  EN 60825-1 *1

*1: This standard is only applied to the product whose suffix of Output signal is -C.

**Safety Requirements:**
CSA-C22.2 No. 61010-1 (Indoor use only)

## ■ Physical Specifications

**Housing Material:**
Aluminum alloy plate with polyester, mint-green paint (Munsell 5.6BG 3.3/2.9 or its equivalent)

**External Dimension:**
150 x 60 x 140 mm (not include projection)

**Weight:**
Approx. 1.0 kg

**Mounting:**
DIN RAIL Mounting

# ■ MODEL AND SUFFIX CODES

| Model | Suffix Code | | Descriptions |
|---|---|---|---|
| **YFGW610** | ····· | | Field Wireless Media Converter |
| General Specifications | Output signal | **-B** ····· | 100BASE-FX(Multimode Fiber) |
| | | **-C** ····· | 100BASE-FX(Single mode Fiber) *1 |
| | Manual Language | **0** ····· | Japanese |
| | | **1** ····· | English |
| | Mounting Bracket | **D** ····· | DIN RAIL Mounting |
| | — | **A** ····· | Always A |
| | — | **A** ····· | Always A |
| Option Codes | /☐ Optional Specifications | | |

*1: Only applicable for connection with YFGW520.

# ■ OPTIONAL SPECIFICATIONS (For Explosion Protected Types)

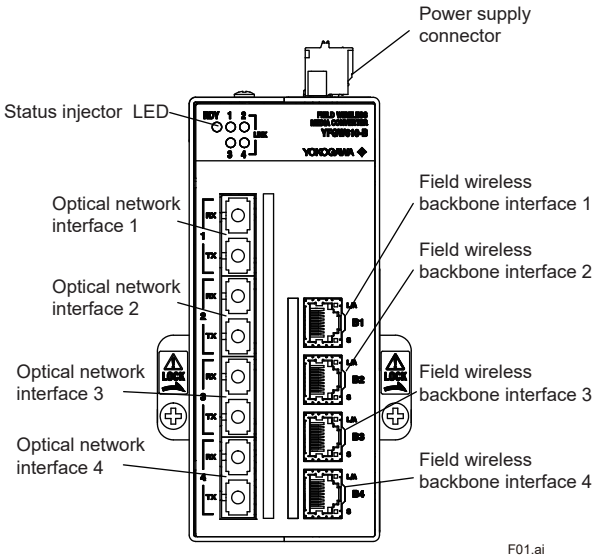
Please select appropriate equipment in accordance with the laws and regulations of the relevant country/region, when it is used in a location where explosive atmospheres may be present.

| Item | Specification | Code |
|---|---|---|
| Factory Mutual (FM) | Nonincendive Approval *1 | – |
| ATEX | Type n declaration *2<br>Applicable Standard: EN IEC 60079-0, EN 60079-15<br>II 3 G Ex nA IIC T4 Gc X<br>Amb. Temp.(Tamb): -40 to 65°C<br>Altitude: Up to 3000 m | **KN27** |
| Canadian Standards Association (CSA) | Nonincendive Approval *1 | – |
| IECEx | Type n Approval *2 | – |

*1: To be compliant with these standards, the YFGW610 hardware needs to be installed in a lockable metal cabinet.
*2: To be compliant with these standards, the YFGW610 hardware needs to be installed in a lockable metal cabinet of IP54 or higher protection rating.

# ■ APPEARANCES

## ■ Front view

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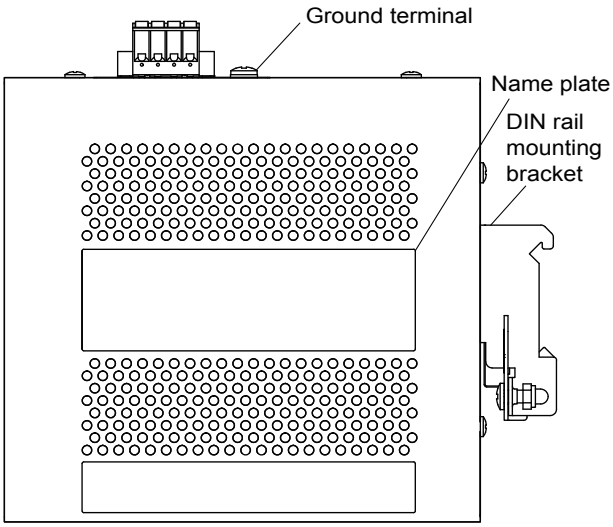
## ■ Right side

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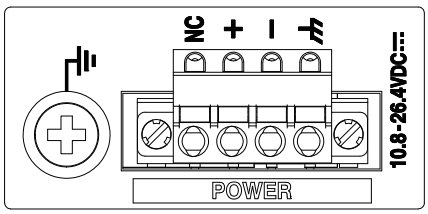
# ■ TERMINAL CONFIGURATION

## ■ Power supply

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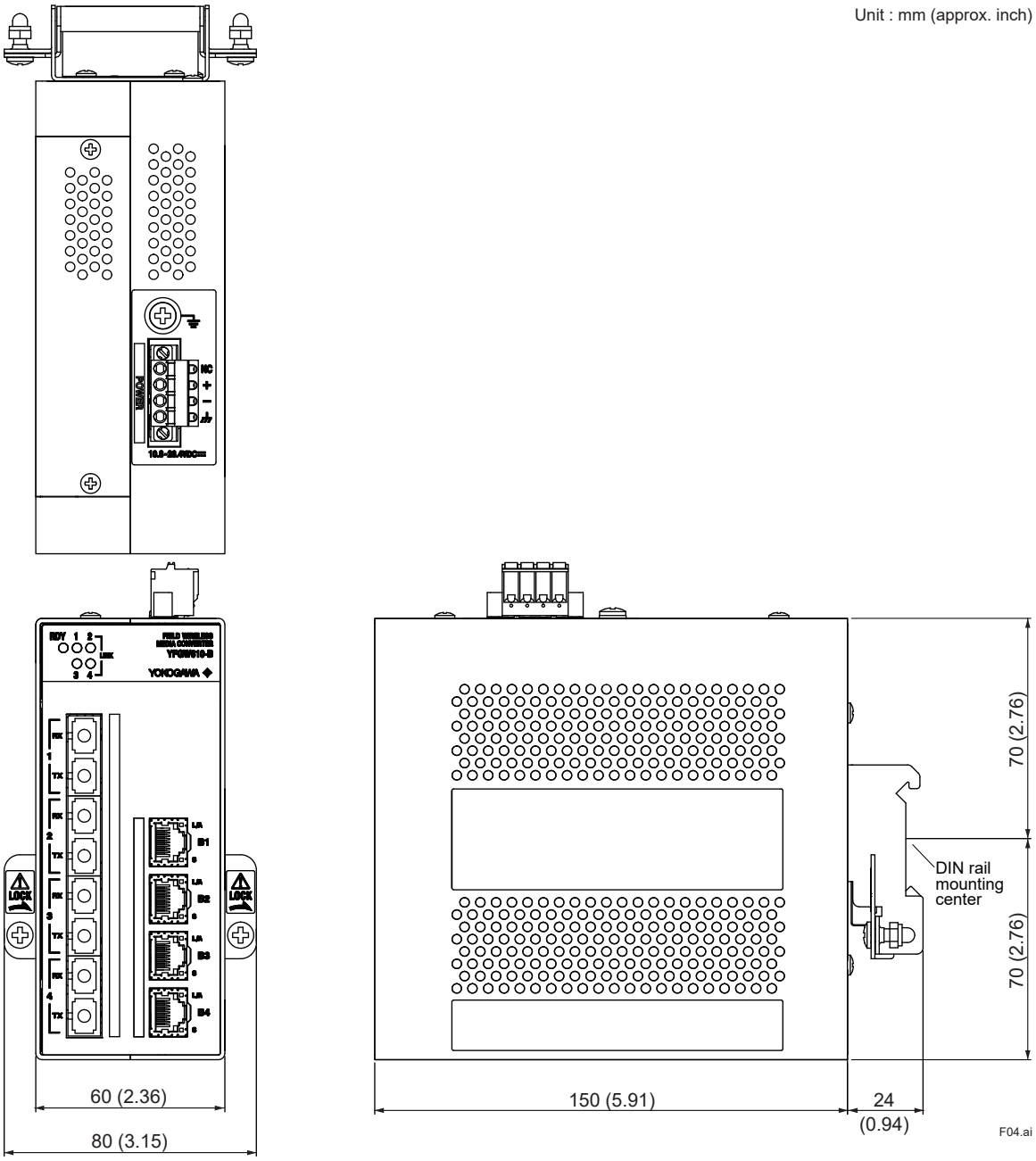
| Terminal | Signal |
|---|---|
| NC | No Connection |
| + | 24 V DC Hot |
| – | 24 V DC Neutral |
| ⏚ | Frame Ground |

## ■ EXTERNAL DIMENSIONS

Unit : mm (approx. inch)



## ■ ORDERING INFORMATION

When ordering, specify the model, suffix codes, and option codes.

## ■ RELATED PRODUCTS GENERAL SPECIFICATIONS

Field Wireless System Overview:
Refer to GS 01W01A01-01EN
Field Wireless Management Station YFGW410:
Refer to GS 01W02D01-01EN
Field Wireless Access Point YFGW510:
Refer to GS 01W02E01-01EN
Field Wireless Access Point YFGW520:
Refer to GS 01W02E02-01EN

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## ■ INFORMATION ON WEEE DIRECTIVE

EU WEEE (Waste Electrical and Electronic Equipment) Directive is only valid in the EU.
This instrument is intended to be sold and used only as a part of equipment which is excluded from WEEE Directive, such as large-scale stationary industrial tools, a large-scale fixed installation and so on, and, therefore, subjected to the exclusion from the scope of the WEEE Directive. The instrument should be disposed of in accordance with local and national legislation/regulations.