# FL WLAN 1021 - Wireless module

2702993

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WLAN client, soft AP, Wi-Fi 6, for USA and Canada, with 2 external antenna connections, IP20, -30°C … +60°C, WLAN 802.11a/n/ac/ax, frequency: 2.4 GHz, 5 GHz, 6 GHz (client mode), connection data: 9 V DC ... 32 V DC, RJ45: http(s), REST API

## Your advantages

- Wi-Fi 6E (6 GHz client mode)
- Wi-Fi 6 (2,4/5 GHz)
- Gross data rate up to 2400 Mbps
- Fast roaming in cellular applications
- Controllable via REST API
- Highest safety WPA 2/3
- RJ45 with 10/100/1000 Mbps

## Commercial data

| | |
|---|---|
| Item number | 2702993 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | DN26 |
| Customs tariff number | 85176200 |
| Country of origin | DE |

# Technical data

## Notes

Note on application

| | |
|---|---|
| Note on application | Only for industrial use |

Trade restriction

| | |
|---|---|
| CE note | The products are offered exclusively for export outside the EU and the European Economic Area. |

## Product properties

| | |
|---|---|
| Product type | Wireless module |
| Type | Stand-alone |

Insulation characteristics

| | |
|---|---|
| Protection class | III (VDE 0106, IEC 60536) (for indoors only) |
| Overvoltage category | II (IEC 61010-1) |
| Pollution degree | 2 |

Wireless card

| | |
|---|---|
| Type | IEEE 802.11 a/b/g/n/ac/ax 2,4 GHz, 5 GHz > 600 MBit/s |
| Assembly note | Permanently installed |

## Electrical properties

| | |
|---|---|
| Maximum power dissipation for nominal condition | 4.3 W |
| Test section | 24 V supply / functional ground 500 V DC 1 min |
| | Ethernet interface/all other potentials 2.25 kV DC 1 min |
| | 24 V supply/internal communications 500 V DC 1 min |

Supply: Module electronics

| | |
|---|---|
| Connection technology | COMBICON |
| Connection method | Push-in spring connection |
| Note on the connection method | Recommended conductor cross-section: 0.75 mm² |
| | Recommended ferrule: connection length 10 mm |
| | Recommended crimping pliers: trapezoidal or square |
| Designation | 1128752 FMC 1,5/ 3-ST-3,5-RF GY35BD1-3 |
| Number of positions | 3 |
| Cross section range AWG | 24 ... 16 (Copper cables classified for 85°C (UL)) |
| Supply voltage | 24 V DC (SELV) |
| Supply voltage range | 9 V DC ... 32 V DC (PELV/SELV) |
| Supply current | typ. 180 mA (at Unom/ 20°C/ max. data throughput) |
| Current consumption | max. 800 mA (At Umin/Tmax/max. data throughput) |

## Connection data

1128752 FMC 1,5/ 3-ST-3,5-RF GY35BD1-3

| | |
|---|---|
| Connection method | Push-in spring connection |
| pluggable | yes |
| Conductor cross-section, rigid | 0.2 mm² ... 1.5 mm² |
| Conductor cross-section, flexible | 0.2 mm² ... 1.5 mm² |
| Conductor cross-section AWG | 24 ... 16 |
| Stripping length | 10 mm |

## Interfaces

### Antenna

| | |
|---|---|
| Number | 2 |
| Note on the connection method | MIMO |

### Functions

| | |
|---|---|
| Configuration | Web-based management, automated CLI, REST API |
| Quality of service (QoS) | Yes |
| Wireless licenses | USA, Canada |

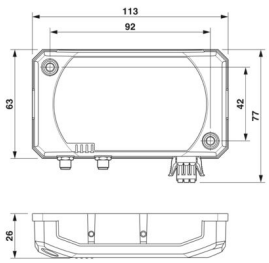
### Ethernet (RJ45)

| | |
|---|---|
| Number of interfaces | 1 |
| Connection method | RJ45 |
| Note on the connection method | Auto negotiation and autocrossing |
| Transmission speed | 10/100/1000 Mbps |
| Transmission physics | Copper |
| Transmission length | 100 m (per segment) |
| No. of channels | 1 (RJ45 ports) |

### Wireless

| | |
|---|---|
| Designation | Wireless LAN |
| Antenna connection method | RSMA (female) |
| Frequency band | 2.4 GHz |
| | 5 GHz |
| | 6 GHz (Client mode only) |
| Wireless standard | WLAN |
| | IEEE 802.11 |
| | a |
| | b |
| | g |
| | n |
| | ac |
| | ax |
| | Wi-Fi 6 |
| Transmission power | max. 19.5 dBm (with two antennas) |
| Number of wireless interfaces | 1 IEEE 802.11 a/b/g/n/ac/ax |
| Wireless modules that can be connected | 20 (10 per virtual interface in AP mode) |

## Dimensions

| | |
|---|---|
| Dimensional drawing |  |
| Width | 63 mm |
| Height | 26 mm |
| Depth | 113 mm |
| Note on dimensions | Installed dimensions without connector |

## Material specifications

| | |
|---|---|
| Color (Housing) | black (RAL 9005) |
| Material base plate | Die-cast zinc, nickel-plated |
| Housing material | PC |

## Environmental and real-life conditions

### Ambient conditions

| | |
|---|---|
| Ambient temperature (operation) | -30 °C ... 60 °C |
| Degree of protection | IP20 (not UL-tested) |
| Air pressure (operation) | 800 hPa ... 1080 hPa (up to 2000 m above sea level) |
| Air pressure (storage/transport) | 660 hPa ... 1080 hPa (up to 3500 m above sea level) |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Permissible humidity (operation) | 5 % ... 95 % (non-condensing) |
| Permissible humidity (storage/transport) | 5 % ... 95 % (non-condensing) |

### Mechanical test

| | |
|---|---|
| Shock in accordance with EN 60068-2-27/IEC 60068-2-27 | 30g, 11 ms half-sine shock pulse |
| Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6 | 5g, 10 ... 150 Hz |
| Continuous shock in accordance with EN 60068-2-27/IEC 60068-2-27 | 10g, 16 ms, 6000 shocks |
| Broadband noise in accordance with EN 60068-2-64 | Category 1, Class A |

## EMC data

### Electrostatic discharge

| | |
|---|---|
| Standards/regulations | EN 61000-4-2 |

### Electrostatic discharge

| | |
|---|---|
| Contact discharge | ± 6 kV |
| Discharge in air | ± 8 kV |

| | |
|---|---|
| Indirect discharge | ± 6 kV |

Electromagnetic HF field

| | |
|---|---|
| Standards/regulations | EN 61000-4-3 |

Electromagnetic HF field

| | |
|---|---|
| Frequency range | 80 MHz ... 1000 MHz |
| Test field strength | 10 V/m |
| Frequency range | 1000 MHz ... 6000 MHz |
| Test field strength | 3 V/m |

Fast transients (burst)

| | |
|---|---|
| Standards/regulations | EN 61000-4-4 |

Fast transients (burst)

| | |
|---|---|
| Comments | ±2.2 kV |

Surge current load (surge)

| | |
|---|---|
| Standards/regulations | EN 61000-4-5 |

Surge current load (surge)

| | |
|---|---|
| Signal | ± 0.5 kV (symmetrical) |
| | ± 1 kV (asymmetrical) |

Conducted interference

| | |
|---|---|
| Standards/regulations | EN 61000-4-6 |

Conducted interference

| | |
|---|---|
| Frequency range | 0.15 MHz ... 80 MHz |
| Voltage | 10 V |

Emitted interference

| | |
|---|---|
| Standards/regulations | FCC/CFR 47, Part 15.107 |
| Test result | Class B |

Emitted interference

| | |
|---|---|
| Standards/regulations | FCC/CFR 47, Part 15.109 |
| Test result | Class A |

Emitted interference

| | |
|---|---|
| Standards/regulations | ICES-003 Issue 6 section 6.1 |
| Test result | Class B |

Emitted interference

| | |
|---|---|
| Standards/regulations | ICES-003 Issue 6 section 6.2 |
| Test result | Class A |

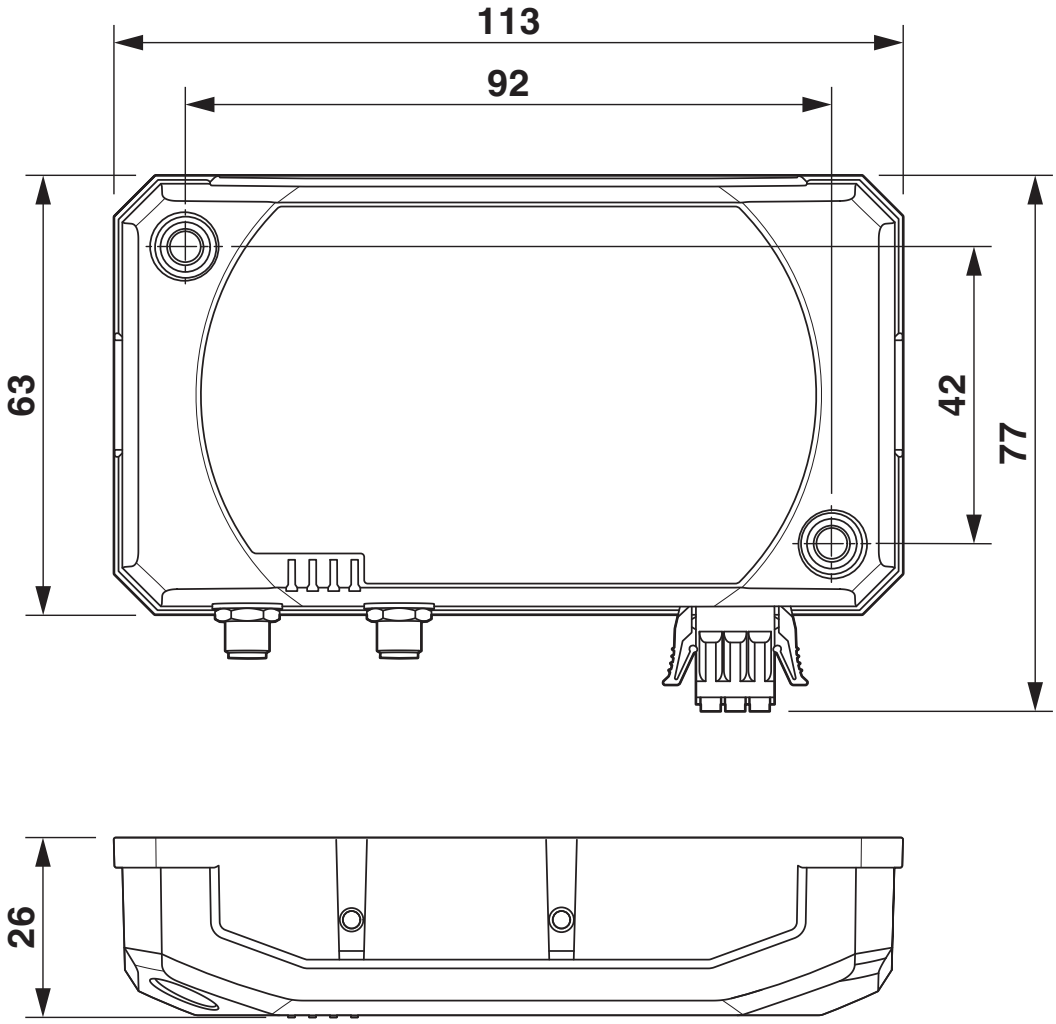
## Mounting

| | |
|---|---|
| Mounting type | Panel mounting |
| | DIN rail mounting |

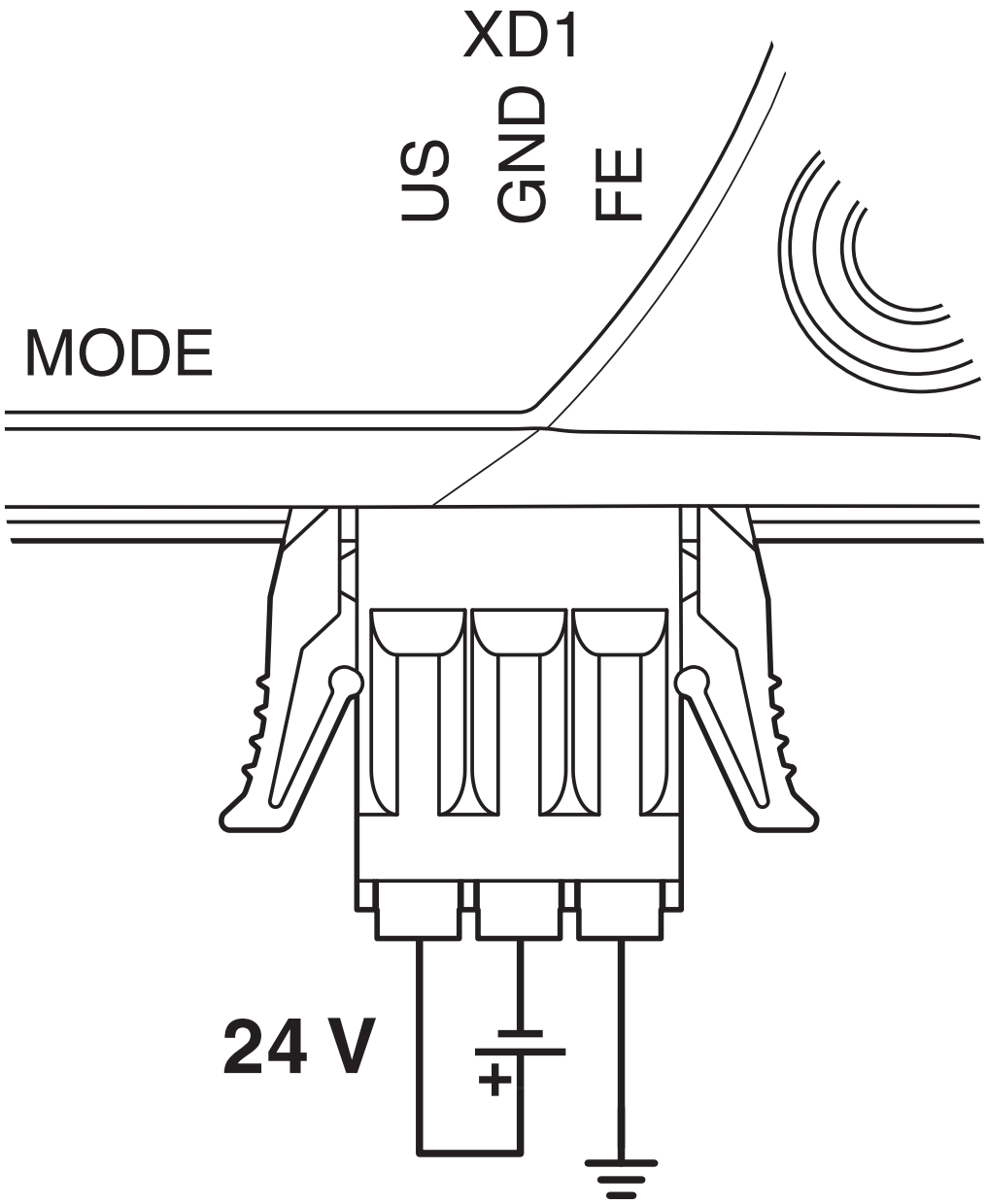
| | |
|---|---|
| Assembly note | Antennas not included in scope of supply |

## Drawings

Dimensional drawing



Connection diagram



## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 19170501 |
| ECLASS-15.0 | 19170501 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC000816 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 43223108 |

## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Not applicable, Not qualified for the European market |

EU REACH SVHC

| | |
|---|---|
| REACH candidate substance (CAS No.) | Diboron trioxide(CAS: 1303-86-2) |
| | 4,4'-isopropylidenediphenol(CAS: 80-05-7) |
| | Lead(CAS: 7439-92-1) |
| | 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol(CAS: 119-47-1) |
| | 2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)(CAS: 3147-75-9) |


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