VEGA1 Series

Automatic Number Plate Reader

Original Instructions for Installation

Document number: RMM_00053 Rev. 02

Tattile srl - Via Gaetano Donizetti, 1 - 25030 Mairano (BS) Italy - Tel. +39 030 97000 - Fax. +39 030 97001 - info@tattile.com

Contact:

Tattile S.r.l.
Via Donizetti 1
25030 Mairano– Brescia, Italy
Ph. +39 030 97 000
Fax +39 030 97 001
http://www.tattile.com
infotraffic@tattile.com

http://www.tattile.com

Table of Contents

Table of Figures

1 About this Document

1.1 Scope of this Document

This document shows the user how to correctly install and set up the automatic number plate reader VEGA1 Series.

1.2 Who this Document is for

Table 1 summarizes the groups this document is aimed at, with a brief description of the type of information the manual must supply to help them understand the product.

Readership group	Description	Aim
Installer	Technician responsible for product installation in the traffic application.	Supply all information on: • Mechanical installation • Electrical installation • Product maintenance
System integrator	IT administrator responsible for product integration, configuration and software development.	Supply all information on: • Product characteristics • Product usage

Table 1: Who this document is for

1.3 Typographic Conventions

Table 2 summarizes typographic conventions and/or styles used in this document so it can be read and understood more easily.

Convention	Meaning
✓ Prerequisite	Preceding condition required before an action.
▶ Action	Single action.
1. Step	One of a sequence of actions.
– Sub step	Additional steps of an action or a step.
Intermediate outcome	Result of a step.
➥ Outcome	Result of an action or a sequence of actions.
• List	List of elements.
– Sub list	Additional elements of a list.
Save	Buttons, windows, tabs; software modules.
[CTRL]	Keyboard strikes
True	Inserted or selected value.
"Finished OK"	Program messages.

Table 2: Typographic conventions

DANGER! Type and source of danger! (indicates an hazardous situation, that if not avoided, will result in death or serious injury)!

Possible consequences (optional).

▷ Preventive measure.

NOTICE! Type and source of danger! (used to address practices not related to physical injury)!

Possible consequences (optional).

▷ Preventive measure.

Useful suggestion or additional information.

▷ Preventive measure.

It is also recommended to fix the junction box at a lower height of the chamber to prevent water from pouring into the cable.

2 Precautions / Safety Instructions

2.1 Safety Instructions

- Read and understand this manual prior to use the product. Misuse of the product may result in damages. Tattile is not responsible for any damage due to negligence in reading this manual.
- Mount the device on a mechanically stable structure.
- The camera shall be reachable only by maintenance operator.
- ⚠ DANGER! Use a power supplier with SELV output.
- Always observe the polarities of the power supplies and the power requirements specified in this manual.
- Turn off all electrical power before making or breaking any electrical connections. Making or breaking connections when power is on can results in damage to the device.
- Do not place the power supply and signal cables parallel to cables carrying high-current switching voltages.
- ⚠ DANGER!
  High levels of artificial optical radiation can cause damage to both eyes and skin. Exposure limit values have been drawn up for such hazards. Every light system is placed within a Risk Group, which defines the level of risk when the light is used normally, higher level, higher risk group number, from 1 to 3. When the light emits less than the exposure limit values it is categorized as Exempt Group. Evaluation of risk group is made at 0.2 m distance, that is the minimum hazard distance considered. The hazard distance (HD) is the point furthest from the illuminator at which the Exempt Group exposure limit is exceeded.

Illuminator risk group and hazard distance evaluation

F01872 **IR illuminator lens 36° (peak wavelength 860 nm, ±15 nm spectral bandwidth @ 50% of max intensity)**					
Hazard	Ultraviolet hazard 200 - 400 nm (Es/Euva)	Retinal blue light hazard 300 - 400 nm (Lb)	Retinal blue light or thermal hazard 400 - 780 nm (Lr)	Cornea/lens infrared hazard 780 - 3000 nm (Eir)	Retinal thermal hazard, weak visual stimulus 780 - 1400 nm (Lir)
Risk Group	Exempt Group	Exempt Group	Exempt Group	Exempt Group	Exempt Group
HD	–	–	–	–	–
HD = Hazard distance The product is in Exempt Group, no labelling required.					

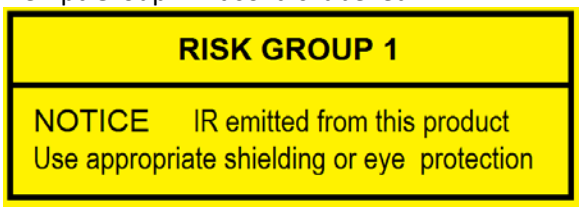
F01870 **IR illuminator lens 17° (peak wavelength 860 nm, ±15 nm spectral bandwidth @ 50% of max intensity)**					
Hazard	Ultraviolet hazard 200 - 400 nm (Es/Euva)	Retinal blue light hazard 300 - 400 nm (Lb)	Retinal blue light or thermal hazard 400 - 780 nm (Lr)	Cornea/lens infrared hazard 780 - 3000 nm (Eir)	Retinal thermal hazard, weak visual stimulus 780 - 1400 nm (Lir)
Risk Group	Exempt Group	Exempt Group	Exempt Group	Risk Group 1	Exempt Group
HD	–	–	–	0.29 m	–
HD = Hazard distance The product in excess of Exempt Group limit so it is labelled:  					

Table 3: IR illuminator Risk Group and Hazard Distance

For illuminator exceeding Exempt Group limit camera shall be installed as detailed in the figure below, at distance L>HD, there is no risk to the public.
Operator or maintenance staff working in front of the camera, facing the illuminator, at distance less HD must use appropriate shielding or eye protection, as written in the labelling.

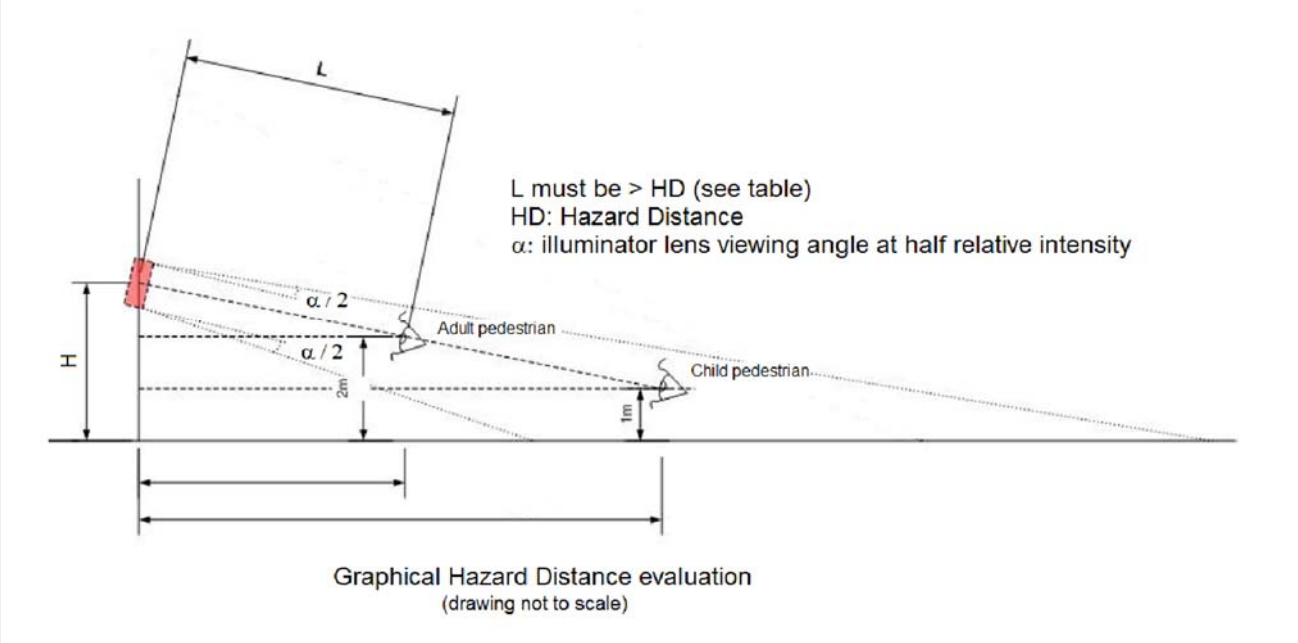


Figure 1: Hazard Distance evaluation

2.2 Intended Use of the Product

- The product is designed for automatic number plate recognition for the following applications:
  - Single lane road tracking.
  - Surveillance and access control.
  - Congestion charge.
  - Limited traffic areas, priority lanes.
  - Traffic monitoring.
  - Logistic and custom.

2.3 Known or Foreseeable Misuse of the Product

- All other uses not included in the intended use of the product are considered as an improper use of the product.

3 General Characteristics

3.1 Features

The VEGA1 is a dual channel camera built in a compact case.

It is mainly targeted to single lane vehicle tracking, traffic limited areas and priority lanes. Its high sensitivity image sensors are available for ANPR reading, video streaming even in extreme and low light conditions.

The camera allows an easy setup to minimize the installation and maintenance time. Thanks to its local storage it can operate stand-alone in case the connectivity is not available.

The VEGA1 is compact, easy to install and does not require an external IR lighting. The extra compact case reduces installation impact.

3.2 Dimensions

3.2.1 Product Dimensions

Figure 2 shows the overall view of the Tattile device, dimensions in millimeters.

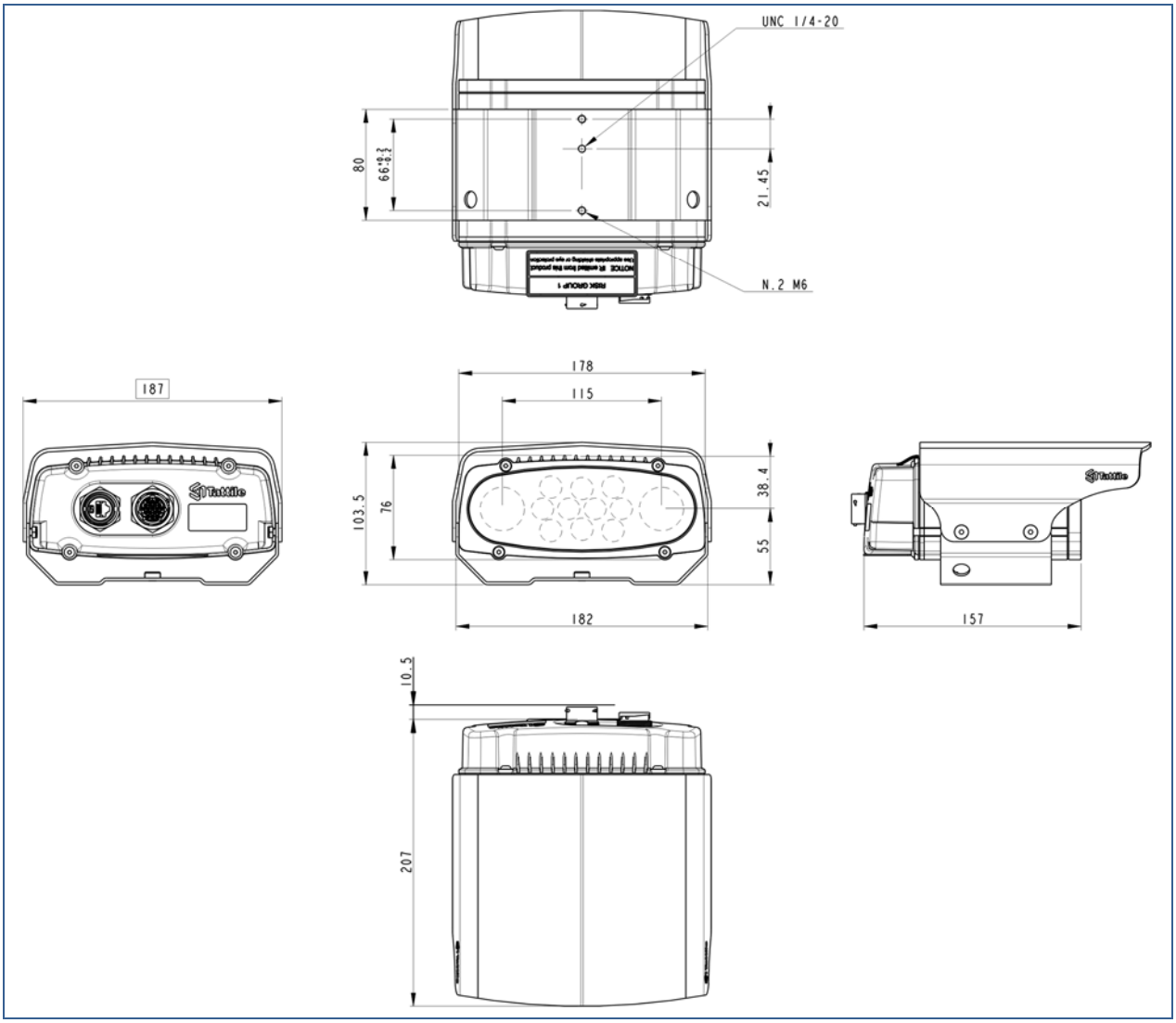


Figure 2: Tattile VEGA1 dimensions

3.2.2 Wall-Mount Bracket Dimensions

Figure 3 shows the overall view of the wall-mount bracket, dimensions in millimeters.

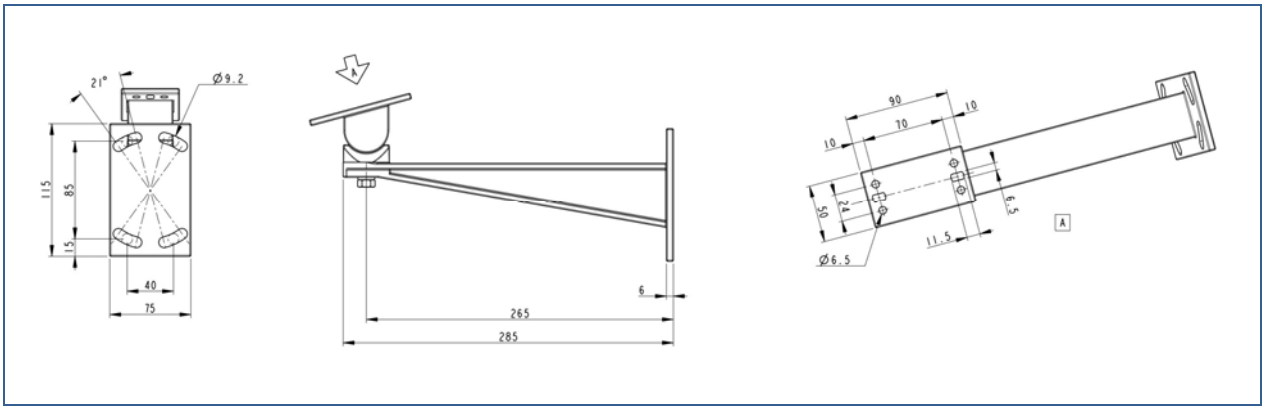


Figure 3: Wall-mount bracket dimensions

3.3 Physical Interface

3.3.1 Product Overview

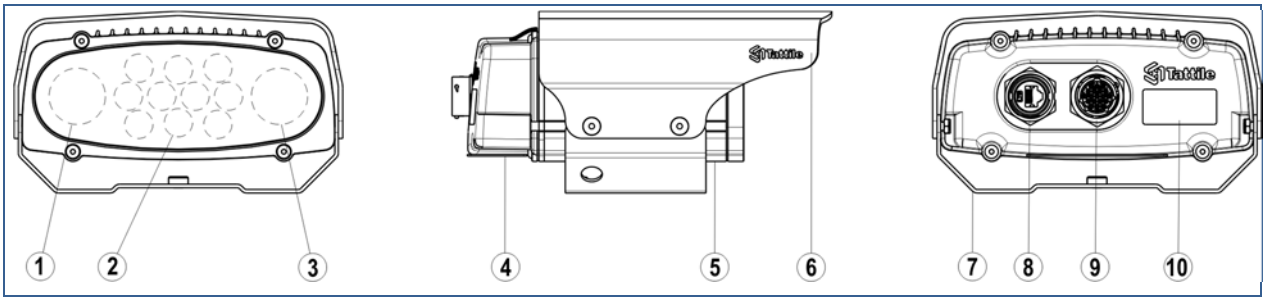


Figure 4: Product overview

Ref	Description
1	OCR camera (ANPR image)
2	Infrared illuminator
3	Context camera (Overview image)
4	Back cover
5	Camera housing
6	Lens hood (sun shield)
7	Mounting bracket
8	Gigabit Ethernet connector
9	Power Supply, Signal and I/O connector
10	Product identification label

3.3.2 Power Supply, Signal and I/O Connector

The type of the power supply connector is: **Jam nut Male 19-pin**.

▷ Mating part included in the package:

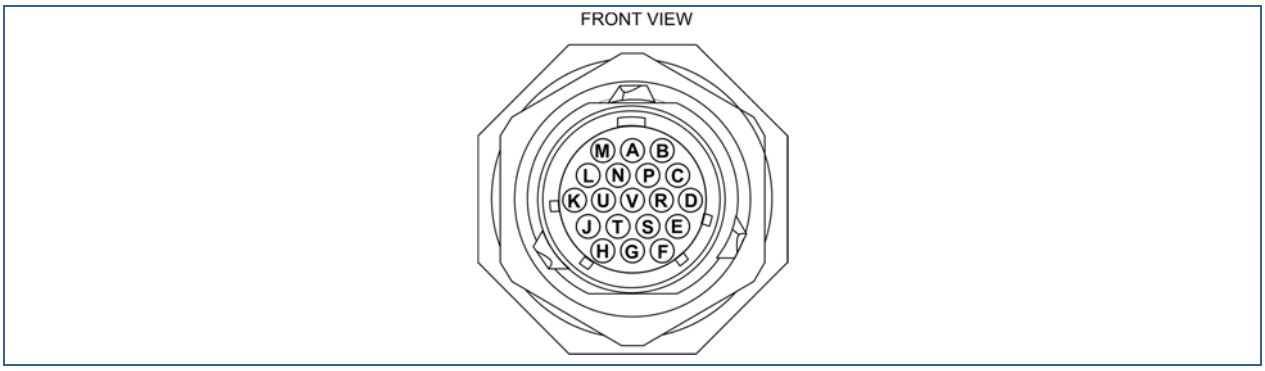


Figure 5: Power supply, signal and I/O connector

PIN	Signal name	Description
A	VIN-	Power input ground (GND)
B	VIN-	Power input ground (GND)
C	VIN+	Power input +24 Vdc
D	VIN+	Power input +24 Vdc
E	GNDS	RS422/485 serial port ground
F	IN0+	Digital input 0, positive (+)
G	IN0÷1-COM	Digital input 0÷1 Common negative (-)
H	OUT0-NO	Relay Output 0, NO contact
J	OUT0-COM	Relay Output 0, COM contact
K	STRB0_OUT	Strobe output 0
L	STRB_GND	Strobe output common ground
M	EARTH	Functional earth, device chassis
N	EARTH	Functional earth, device chassis
P	NC	Not connected
R	SER-A(+)	Serial port RS485 A(+)
S	SER-B(-)	Serial port RS485 B(-)
T	IN1+	Digital input 1, positive (+)
U	OUT1-NO	Relay Output 1, NO contact
V	OUT1-COM	Relay Output 1, COM contact

Table 4: Power supply, signal and I/O Interface

Digital Input

Feature	Description
Type	Optoisolated PNP
Channels	2 (Auxiliary Connector)
Voltage	24 Vdc

Table 5: Input Interface

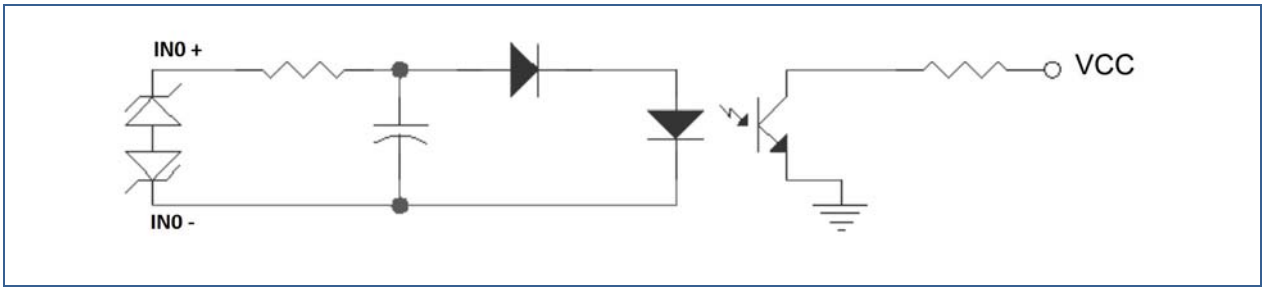


Figure 6: Input schematic section

Relay Output

Feature	Description
Type	Normally open
Channels	2 (Auxiliary Connector)
Max switching voltage	21 Vac / 30 Vdc
Max switching current	0.5 A

Table 6: Output Interface

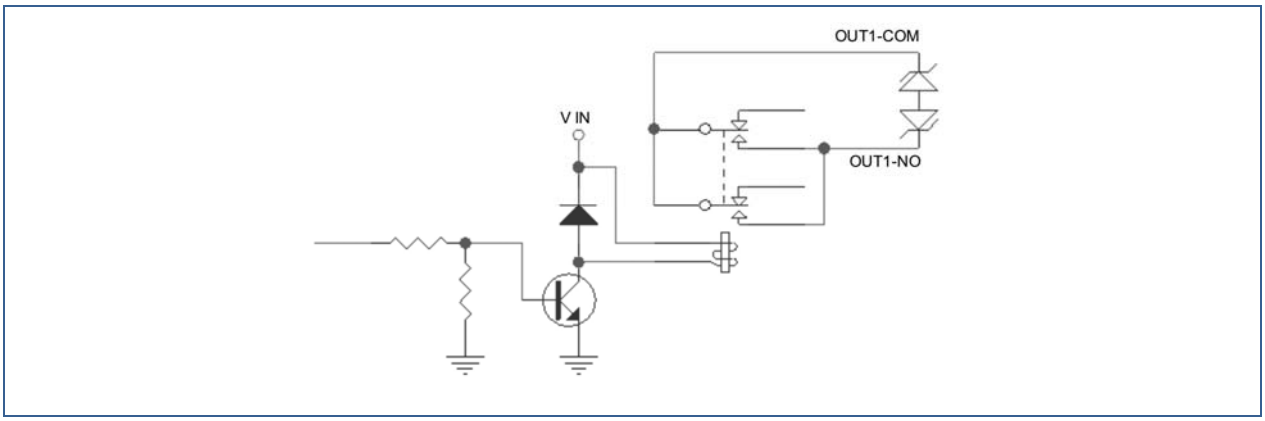


Figure 7: Output schematic section

Strobe Output

Feature	Description
Type	Optoisolated open collector
Channels	1
Max voltage	24 Vdc + 10%
Min voltage	3.3 Vdc - 10%
Max current	50 mA

Table 7: Strobe Interface

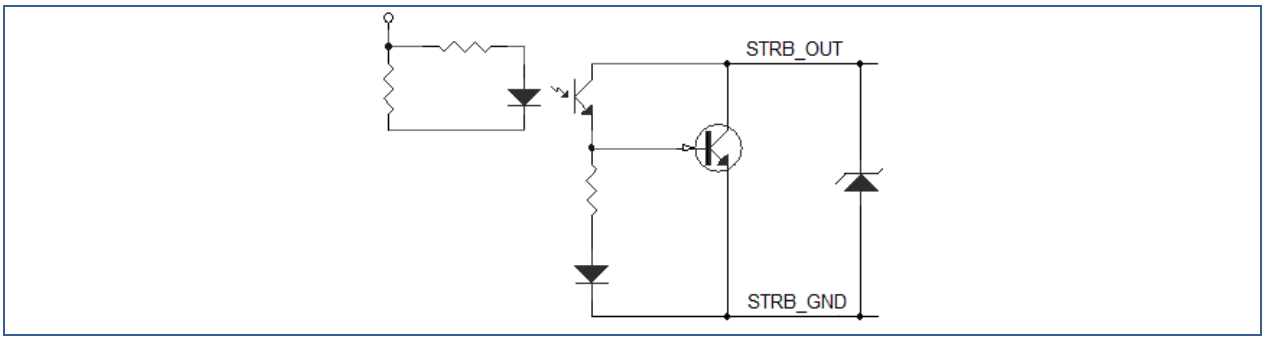


Figure 8: Strobe schematic section

3.3.3 Gigabit Ethernet Connector

The type of the Gigabit Ethernet connector is **Jam nut RJ-45 IP68**.

▷ Mating part included in the package:

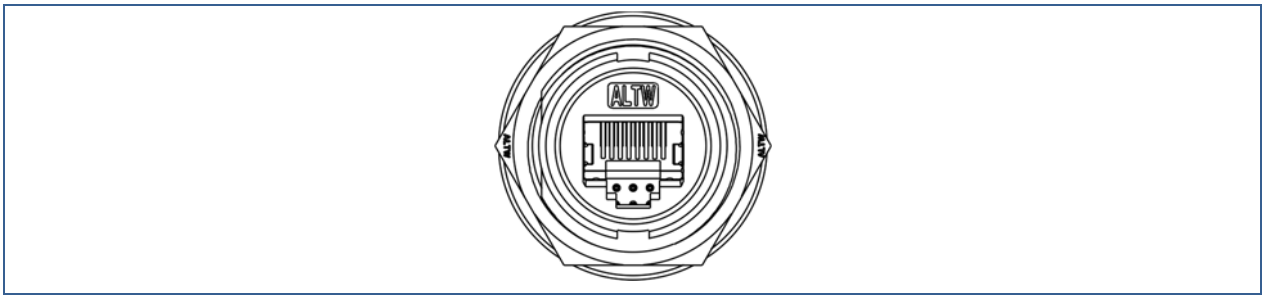


Figure 9: Gigabit Ethernet connector

PIN	10/100 mode (10base-T/100base-TX)	Gigabit mode (1000base-T)
1	TX+	MX0+
2	TX-	MX0-
3	RX+	MX1+
4		MX2+
5		MX2-
6	RX	MX1-
7		MX3+
8		MX3-

Table 8: Ethernet Interface

3.4 Technical Sheet / Specifications

General		
VEGA-1 Series	LONG	SHORT
Part Number	F01870	F01872
Flash Memory	microSD card up to 128 GB	
Relay Output	2	
Strobe Output	1	
Serial Port	Insulated RS485	
Digital Inputs	2	
LAN	Gigabit Ethernet 10/100/1000	
Operating System	Linux	
Range of action	Up to 25 m	Up to 8 m
Lane detected	1	
Others Sensor	Integrated Till-Roll sensor Integrated temperature and humidity sensor Power supply voltage and current monitoring sensor Real time clock	
GPS	**Optional**	
Wi-Fi	**Optional**	
Optional Features	Model Recognition Class Recognition Brand Recognition Color recognition	
OCR Image Sensor (ANPR)		
Type	1/1.8” CMOS Monochrome	
Resolution	up to 2048x1536 active pixels	
Frame Rate	Up to 60	
Lens	C-Mount, with pre selected focal length	
Context Image Sensor (Overview)		
Type	1/1.8” CMOS Color	
Resolution	up to 2048x1536 active pixels	
Frame Rate	Up to 60	
Lens	C-Mount, with pre selected focal length	
Illuminator		
Type	Infrared, Peak Wavelenght = 860 nm , Bandwidth 30 nm	
Illum. beam angle (@ half radial intensity)	17°	36°
Number of LEDs	10 high power	

Electrical	
Power Supply	24 Vdc ±10 %
Power Consumption	20 W (Max)
Starting current	3 A (Max)
PoE Supply (Power over Ethernet)	PoE+ 802.3at Type2 25 W
Mechanical	
Dimensions	216 mm x 187 mm x 103.5 mm (LxWxH)
Camera Weight	2.5 kg
Wall-mount support Weight	0.6 kg
Housing	Color Anodized Aluminum
Environmental	
Operating and Storage Temperature	-40 °C ÷ +60 °C
Operating and Storage Humidity	Up to 95%
Protection Class	IP66, IP67
SW features and Performance	
Max vehicle speed	200 km/h
Detection	99 %
Reading	> 95 %
OCR	ANPR on board engine
2nd Level OCR	optional
Capture rate	Up to 60 fps
AES256	Yes
SHA2	Yes
Compression	JPG
Configuration	
Web Server	Installation and configuration by on board Web Server
TCP/IP Server	Configuration and monitoring through TCP/IP protocol (SDK provided)
Date and Hour	Synchronization via NTP protocol, IEEE 1588, GPS
Software Update	Upgrading via Web Interface and SDK
Data transmission	
FTP	FTP Client to FTP Server mode for remote data transmission; Multiple IP server addressable
TCP/IP	Tattile TCP/IP open protocol (SDK provided)
Standard Protocols	XML; SNMP; NTCIP; DATEX2; UTMC; MODBUS

Table 9: Technical Sheet / Specifications

3.5 Identification of the Product

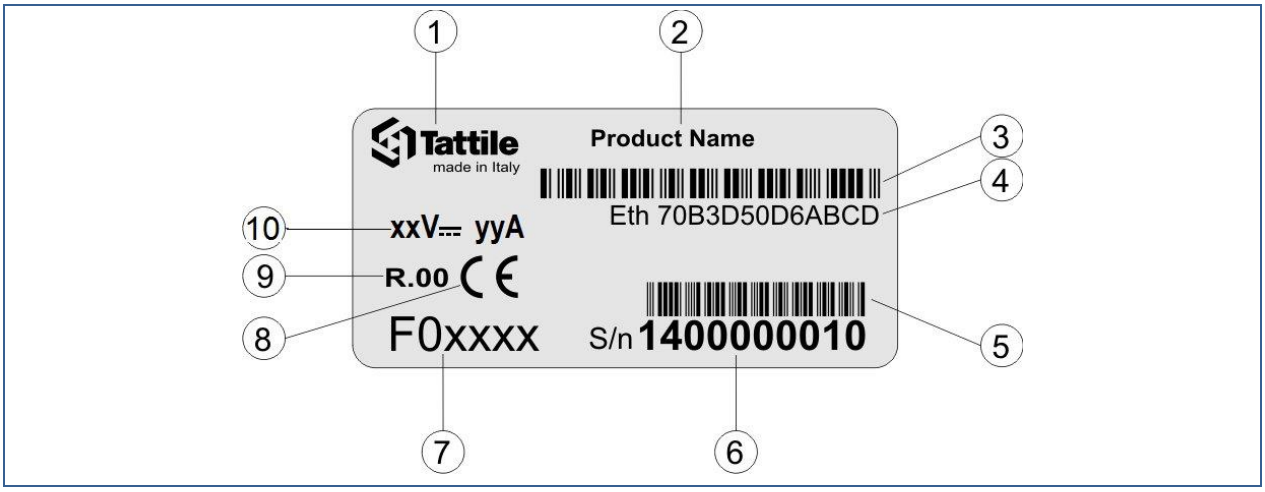


Figure 10: Product label

Part	Description
1	Company logo
2	Product name
3	Mac Address number barcode (code 128)
4	Mac Address number
5	Serial number barcode (code 128)
6	Product serial number
7	Product part number
8	CE mark
9	Revision
10	Rated voltage and current, symbol for nature of supply

Table 10: Product label

3.6 Conformity – Compliance

Tattile declares under sole responsibility that the products described in this manual are in conformity with the essential requirements of the following EU directives and standards:

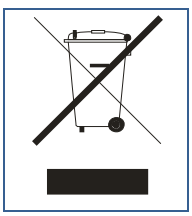
Compliance	Description
CE	• **2014/53/EU**, RED Directive ([1]) • **2011/65/EU**, RoHS Directive
RoHS	(1) The objectives and protection requirements of the Low Voltage Directive 2014/35/EU and EMC Directive 2014/30/EU are applied under Directive 2014/53/EU, Article 3.1.
	and that the standards and/or technical specifications reference below have been applied:
RED Art 3.1a Safety specifications	• **EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 +AC:2011 +A2:2013** (Safety IT equipment) • **EN 60950-22:2006 +A11:2008** Safety ITE, part 22: Equipment installed outdoors
RED Art 3.1b EMC specifications	• **EN 301 489-1 v2.2.0** ERM, EMC Common requirement • **EN 301 489-17 v3.2.0** ERM, EMC, Specific for Wideband 2.4GHz System • **EN 301 489-19 v2.1.1** ERM, EMC, Specific for Receive Only Mobile Earth Station 1.5GHz band • **EN 50293:2012** Road traffic signal system – EMC - EN55022, emission class B - EN61000-4-2, ESD 6 kV contact / 8 kV Air - EN61000-4-3, RF radiated 20 V/m AM 1 kHz 80% (80-1000 MHz), 20 V/m AM 1kHz 80% (1-6 GHz) 10 Veff/m PM 50% 200Hz (900 MHz, 1890 MHz) - EN61000-4-4, EFT Burst 2 kV DC power, 2 kV signal ports - EN61000-4-5, Surge DC power 1 kV Line to Line, 2 kV Line to Ground Signal ports 1 kV Line to Line, 2 kV Line to Ground - EN61000-4-6, RF conducted 20 V (0.15 ÷ 80 MHz) - EN61000-4-8, Pwr frequency magnetic field 100 A/m 50 Hz
RED Art 3.2 Spectrum (Radio spec.)	• **EN 300 328 v2.2.2** ERM, Spectrum for for Wideband 2.4GHz System • **EN 303 413 v1.1.1** ERM, Spectrum for Global Navigation Satellite System, 1.5GHz bands
RoHS Art. 4.1 Prevention	• **EN 50581:2012** Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances
Other standards	• **EN 62471:2008** Photobiological safety of lamps and lamps systems - F01870: Risk Group 1 (infrared eye hazard) - F01872: Exempt Group • **EN 62311:2008** Limit to EM Field for human exposure • **EN 60068-2-1** Environmental testing. Cold test (-40°C, 16h) • **EN 60068-2-2** Environmental testing. Dry Heat test (+60°C, 16h) • **EN 60068-2-30** Environmental testing. Damp Heat (+55°C RH 95%, 2x24h) • **EN 60529** Degrees of protection provided by enclosures (IP66, IP67)

Compliance	Description
FCC	Tattile herewith declares that this product is in compliance with the following US Federal Regulation: **FCC 47CFR** US Federal Regulations Part 15 Subpart B, emission limit Class B Part 15 Subpart C This device, when WiFi option is active, contains FCC ID: 2AULGT17950 ✓ *Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.* ✓ *This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.* ✓ *This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:* *— Reorient or relocate the receiving antenna.* *— Increase the separation between the equipment and receiver.* *— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.* *— Consult the dealer or an experienced radio/TV technician for help.* ✓ *This product complies with FCC radiation exposure limits set forth for an uncontrolled environment. The device should be installed and operated with minimum distance of 20 cm between the radiator and your body.*

Table 11: Conformity standards

3.7 Disposal

Packaging materials are recyclable. Do not dispose packaging into unsorted waste but recycle it.



At the end of their life cycle all the electronic products must be sent to a Waste Electrical and Electronic Equipment recycling center!

4 Preparation and Installation

4.1 Package Content

The following products are included in the package:

- VEGA-1 Series
- Mating parts kit, cod: T20447
- Wall-mount bracket, cod. T19648

For more information on the purchased device model refer to the Product Label.

4.2 Required Additional Accessories

In order to use the product the following accessories must be purchased separately:

- Power supply, cod. F01836
- Power supply cable, n x 0.5 mm^2 (minimum 5 x 0.5 mm^2).
- Ethernet cable, minimum UTP cat. 5e.
- The freeware software tool Tattile PathFinder.

4.3 Optional Accessories

In case of needs the following accessories may be used to expand device functionalities:

- Steel security cable, Ø 5 mm.
- AMPHENOL MFX-3958 crimping tool or welder tool.
- AMPHENOL QXRT20 extraction tool.
- Pole-mounting adaptor, cod. T19841.
- Horizontal pole adaptor kit, cod. T19943.

The pole-mounting bracket is only required when you need to install the product on a pole with dimensions between 65 mm and 110 mm.

4.4 Building the Connector Cables

NOTICE! Should PoE supply be used, remember to use components and cables suitable for PoE+ 802.3at Type2 standard

If the Device is powered through Ethernet cable with Poe system,
on the Power Connector mount the Dust Cap supplied in the Connection Kit.

4.4.1 Cabling the Power Supply

This chapter shows how to correctly build the cables for the power supply connector. This procedure is useful to cable the device to the power supply.

✓ The following instrumentation is required:

a) For Machined Contacts: Souriau **SHANDLES & S20RCM** Head Crimp Tooling or Welder tool.
b) For Stamped Contacts: Souriau **SHANDLES & S20SCM20** Head Crimp Tooling or Welder tool.
c) Souriau **RX20D44** Extraction Tools (in case of contacts removal).
d) A Multi-Conductor Cable n. x **0.5 mm^2 (AWG 20)**.
e) Power supply mating connector.

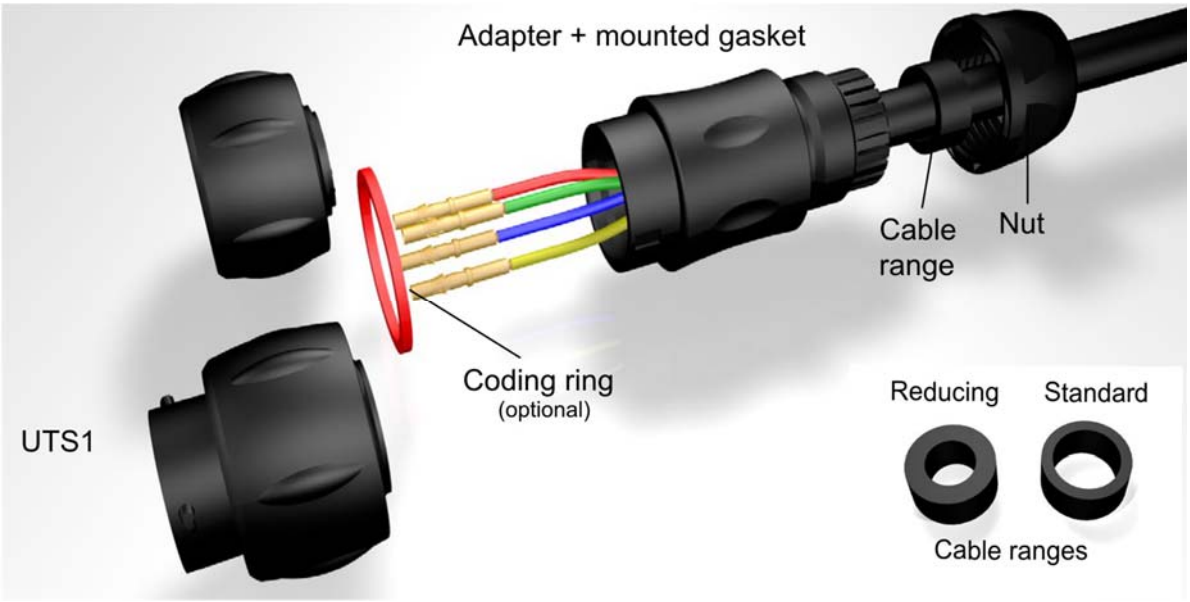


Figure 11: Scheme of Assembly Instructions

1. Cut the cable insulation at maximum 50 mm length and cut the insulation of each conductor at maximum 5 mm length.

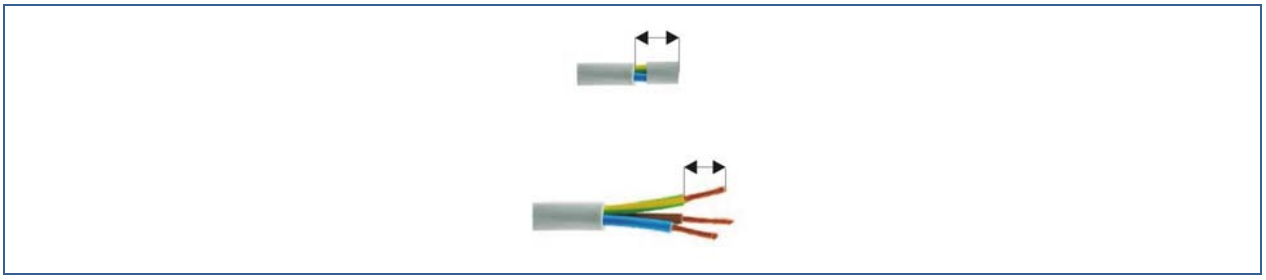


Figure 12: Cable and Conductor insulation removing

2. Crimp or solder the PIN on the bare copper of each conductor.

Be sure to correctly crimp the copper.

▷ Never leave bare copper.

3. Dismount the mating connector.
4. Insert cable into the Nut
5. Insert the appropriate Cable Range (see the table below for correct choose)

Shell size	Recommended jacket strip length (mm)		Adapter tightening torque (Nm)	Nut tightening torque (Nm)	Ø Cable range Standard seal	Ø Cable range Reducing seal	Ø Wire
	Male	Female					
10	21	29	1.5	1	2.5/8.0	1.5/5.0	From 1.7 mm to 3.0 mm
12	25	33	2	2.5	5.0/12.0	3.0/9.0	
14	29	36	3	2.5	7.0/14.0	5.0/12.0	
18	37	45	4	3.5	9.0/18.0	7.0/16.0	

Table 12: Cable Range Dimensions

Caution: only one of both delivered gasket should be used!

6. Pass the cable trought the adapter
7. Insert the PINs into the correct holes of the connector:
   - **A**: GND
   - **B**: GND
   - **C**: +24 Vdc
   - **D**: +24 Vdc
   - **M**: Earth/ground
8. Tighten adapter with plug UTS6 or receptacle UTS1
9. Tighten the nut to rear of either UTS1 or UTS6
   (recommended torque values to be applied according previous table)

NOTICE! Improper use!

Risk of loss IP protection degree and water infiltration.

- ▷ Insert only “one” cable in the Nut of the Connector.
- ▷ If multiple connections are required, use an external junction box, because **only one cable** must be inserted into the connector.

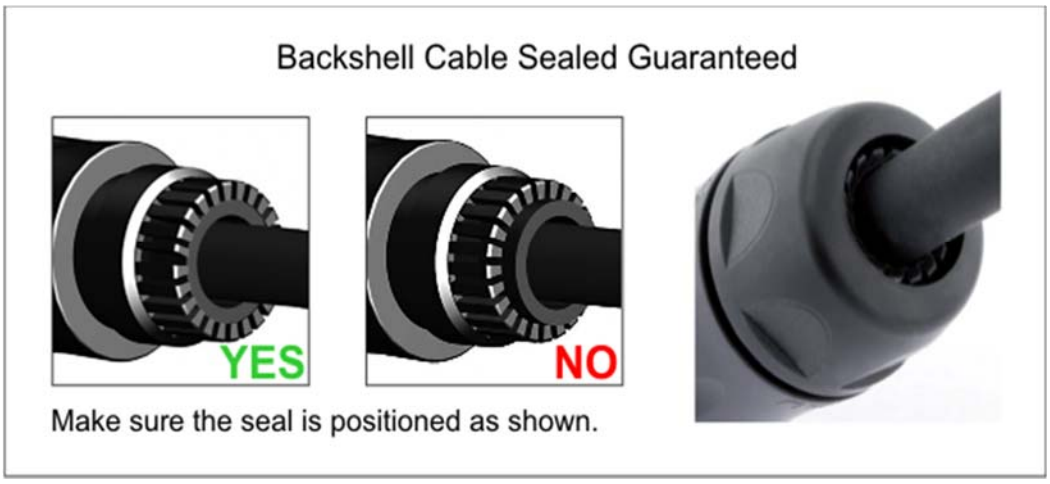


Figure 13: Correct Backshell Mounting

Important advices.

- ▷ The junction box and the cable that connects the remote camera must maintain the IP degree of protection that prevents the entry of water.
- ▷ It is also recommended to fix the junction box at a lower height of the Camera to prevent water from pouring into the cable.

➥ The connector cable is ready for use.

4.4.2 Removing a PIN Connection from the Power Supply Cable

This chapter shows how to easily remove a PIN connection from the power supply cable. The procedure is useful to modify the cabling in case of errors.

✓ The following instrumentation is required:
- **SOURIAU MW-RX20D44** extraction tool.

1. Dismount the mating connector.
2. Use the special tool **SOURIAU MW-RX20D44** to push out of the desired PIN the conductor.

Figure 14: Pin Contact Extraction

3. Take out the conductor.
4. Repeat the operation for the desired conductors.
5. If necessary, insert and crimp the correct pins

➥ The conductors are now available for use.

4.4.3 Cabling the Ethernet Connector

This procedure is useful to cable the device to the network.
This chapter shows how to connect the Plug connector to the Ethernet cable.

✓ The following equipment is required:
- A RJ-45 Connector Crimping Tool.
- Ethernet mating RJ-45 Plug Connector (included in the package).
- Ethernet cable.

1. Insert the Ethernet Cable into mating connector (nut + grommet seal + body).
2. Cut the Ethernet cable insulation at maximum 30 mm length

Figure 15: Cable stripping

3. Sort your wires in the proper pinout configuration and insert into the Plug Connector

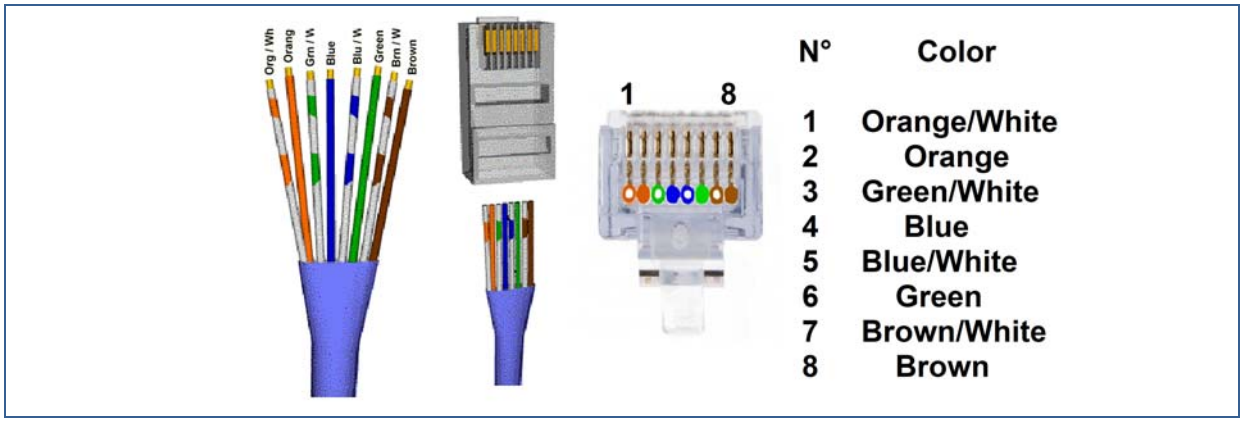


Figure 16: RJ-45 Connector wire arrangement

4. Crimp the Plug RJ-45 connector (A)
   Verify the gold contacts pushed in place to the bottom and the outer jacket of the cable secured to the connector by the jacket clamp (B).

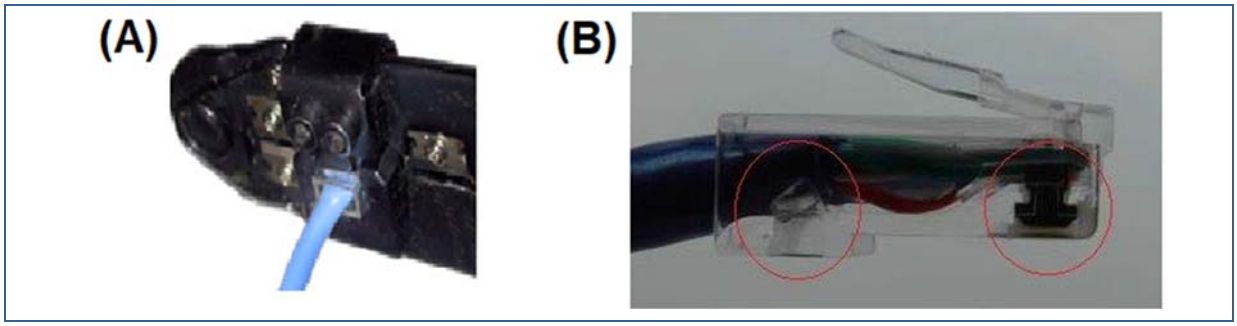


Figure 17: Crimping Plug RJ-45

5. Insert the Plug RJ-45 into mating Connector
6. Tighten the nut to rear of the Connector

   Important advices

   Tighten correctly the Nut Connector to prevent the risk of loss IP protection degree and water infiltration.

   (It may be advisable to test the cable, an inexpensive Ethernet cable tester can guarantee this)

➥ The connector cable is ready for use.

4.5 Mounting the Product

NOTICE! Electromagnetic interference (EMI) and Electrostatic discharge (ESD)

An installation environment with EMI and ESD can affect the quality of the data transmitted by the camera, or even cause the interruption of data transfer.

- ▷ Do not position cables parallel to wires carrying high-current, switching voltages (e.g., electrical devices that employ switching technology).
- ▷ Install the device and cables as far as possible from devices generating sparks.

Make sure:

- ✓ The device is correctly cabled.
- ✓ The IP address of the device is available.
- ✓ A PC for remote connection is available.

The device can either be fixed directly to a wall, mounted on a vertical pole using the pole mounting adaptor or mounted on an horizontal pole using the pole mounting adaptor + the horizontal pole mounting adapter.

4.5.1 Wall mounting

1. Fix the wall-mount bracket to the bottom of the device with 4 screws type M6 - included in the package - with a torque of 8 Nm.

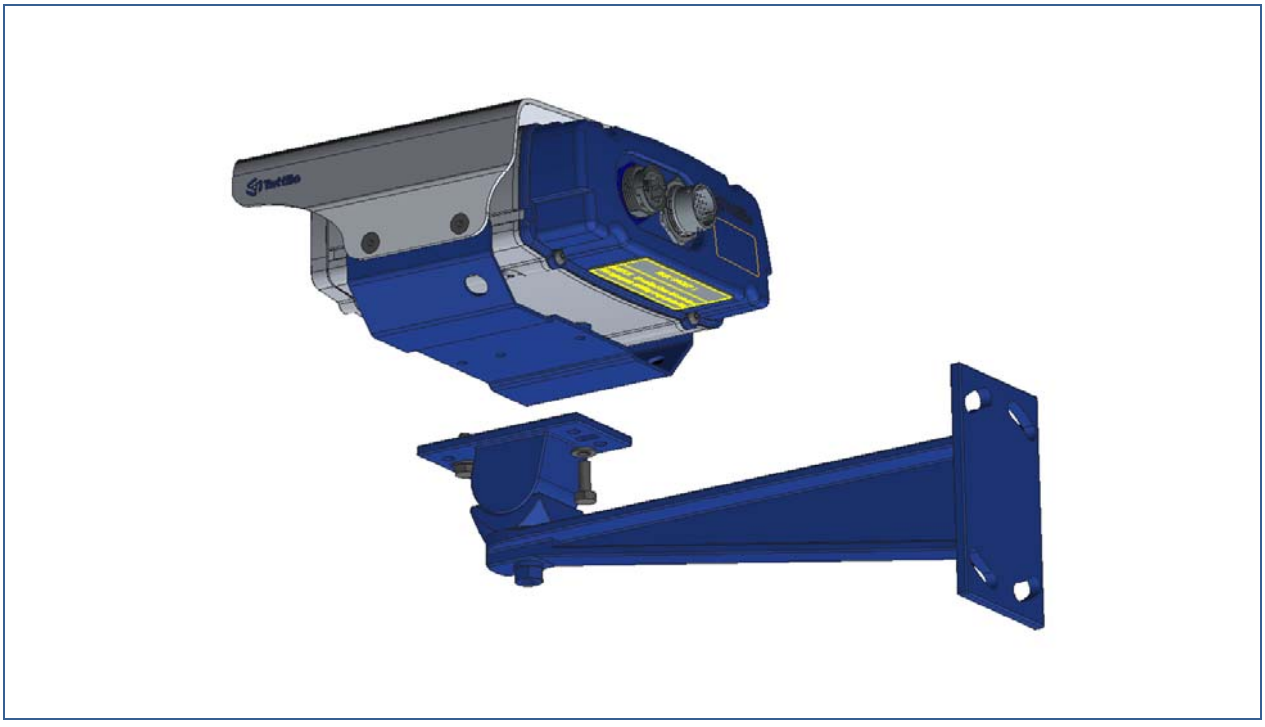


Figure 18: Wall mount fixing

4.5.2 Vertical pole mounting

1. Fix the wall-mount bracket to the bottom of the device with 4 screws type M6 - included in the package - with a torque of 8 Nm.
2. Fix the pole mounting adaptor to the pole using the threaded bar included in the package with a torque of 14 Nm
3. Fix the wall-mount bracket on the pole-mounting adaptor using the 4 screws type M8 (included in pole-mounting package) with a torque of 10 Nm.

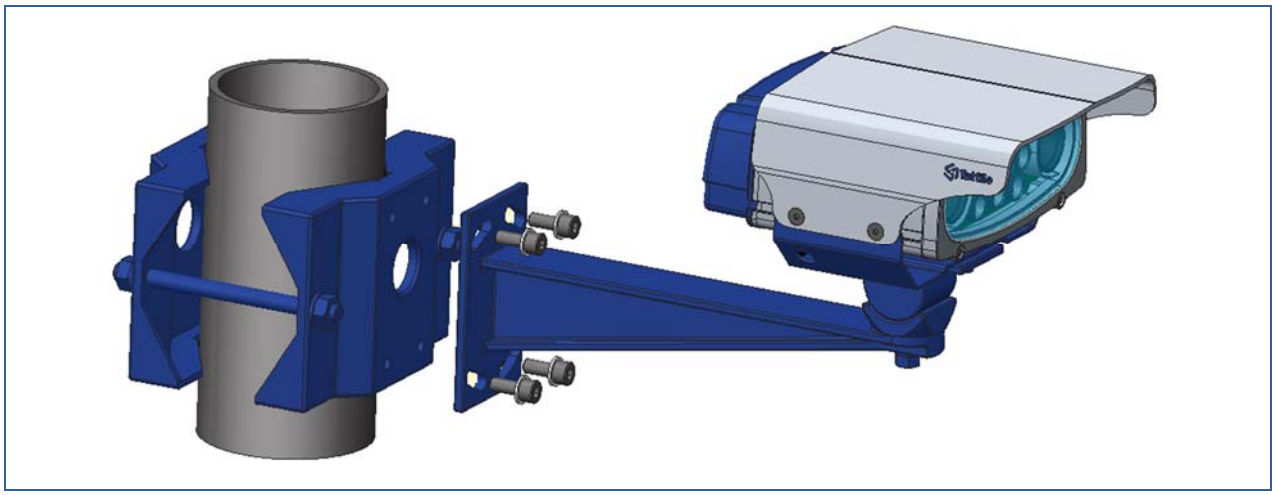


Figure 19: Vertical pole mounting

4.5.3 Horizontal pole mounting

1. Fix the wall-mount bracket to the bottom of the device with 4 screws type M6 - included in the package - with a torque of 8 Nm
2. Fix the pole mounting adaptor to the pole using the threaded bar included in the package with a torque of 14 Nm
3. Insert the horizontal pole adaptor between the pole-mounting adaptor and the wall mount fixing
4. Fix the 4 screws included in the package of the horizontal pole adaptor into the pole-mounting adaptor with a torque of 10 Nm
5. Fix the wall-mount bracket on the horizontal-pole-adaptor using the 4 screws type M8 (included in pole-mounting package) with a torque of 10 Nm.

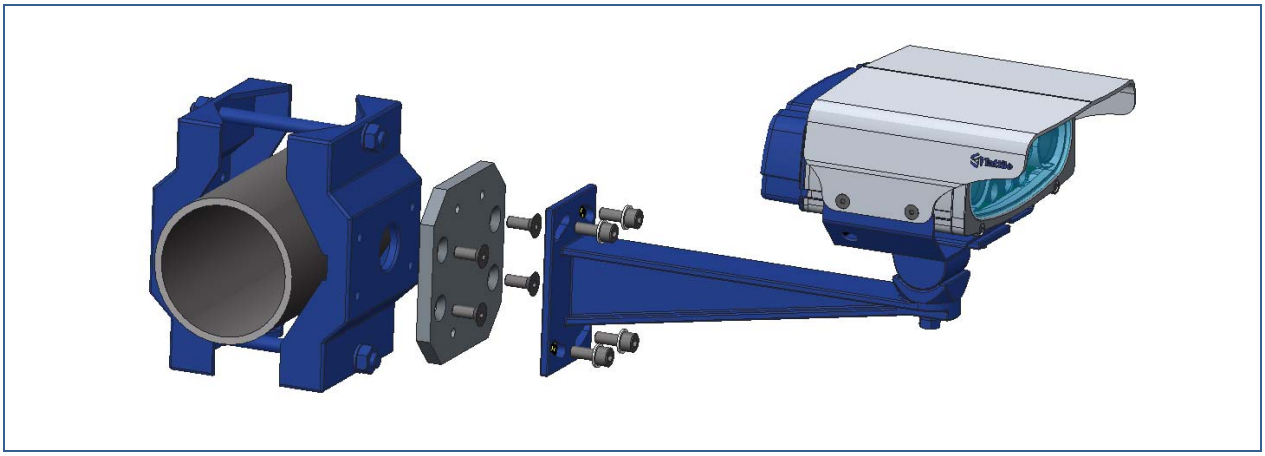


Figure 20: Insertion of the horizontal pole adaptor

4.5.4 Device check

Make sure the camera complies with the focus distance defined during the project configuration.
For more information:

- ▷ Login to the web interface.
- ▷ Open the **Device Information** section.
- ▷ Check the values specified for the **Channel n best focus** parameter.

6. Cable the device and connect the device to a PC.
7. Start up the device.
   After about 60 seconds the operating system is ready for use.
8. Search for the device using the specific command of the Tattile Pathfinder.
9. Open the live stream of the device to check for the correct framing.
10. If needed adjust the device orientation moving the wall-mount bracket.
11. Tighten the 4 screws of the wall-mount bracket on the pole-mounting adaptor with a torque of 10 Nm.

➥ The device is ready for use.

5 Use

5.1 Searching the Device

This function allows the user to search for a device connected to the network. Tattile recommends the use of the freeware software tool **Tattile Pathfinder** to correctly search for a device into a network.

The freeware software tool Tattile Pathfinder can be downloaded from Tattile website. For details, see chapter 5.2, p. 31.

This function is useful , for example, when the default IP address of the device has changed and the new IP address is no longer available.

The default IP address of the device is:

▷ 192.168.0.21

✓ Tattile Pathfinder software tool is correctly installed.

✓ The device is correctly cabled to the network.

1. Turn on the device.
   After about 60 seconds the operating system is ready for use.
2. Use the freeware software tool **Tattile Pathfinder** to search for a device.

➥ The device is now available for use.

For more information on the freeware software tool Tattile Pathfinder, read and follow the user manual of the product.

5.2 Downloading the Freeware Software Tool Tattile Pathfinder

The freeware software tool Tattile Pathfinder enables the user to search for a device into the network and to manage the device IP address.

✓ The user is already registered to the Tattile website.

1. Open the Tattile web page, www.tattile.it
2. Click the link **Downloads**.
3. From he first drop-down menu select **Traffic**.
4. From the second drop-down menu select **Traffic Common Area**.
5. Click the button **View the available files**.
   – A list of available files is displayed.
6. Click on the corresponding link to save the file into the desired directory.

➥ The freeware software tool Tattile Pathfinder is now ready for installation.

For more information on the freeware software tool Tattile Pathfinder, read and follow the user manual of the product.

5.3 Modifying the IP Address of the Device

This operation must be performed using the freeware software tool **Tattile Pathfinder**.

Tattile Pathfinder can be downloaded from Tattile web site. For details, see:

- ▷ www.tattile.com
- ▷ Read and follow the user manual of the product.

This function allows the user to modify the IP address of the device. The function is useful, for example, when the host address of the device differs from the host of the Net interface.

- ✓ Tattile Pathfinder software tool is correctly installed.
- ✓ The device is correctly cabled to the network.

1. Turn on the device.
   After about 60 seconds the operating system is ready for use.
2. Use the freeware software tool **Tattile Pathfinder** to search for the desired device.

The default IP address of the device is:

- ▷ 192.168.0.21

3. Modify the IP address of the device.

➥ The device is now available for use.

The device IP address must be configured by the user in the same subnet mask configured on the user PC.

5.4 Connecting to the Web Interface

The device web interface allows the user accessing all sections and parameters available to manage and customize the use of the device.

- ✓ The host IP address of the device is known.
- ✓ The device is correctly cabled to the network.

1. Turn on the device.
   After about 60 seconds the operating system is ready for use.
2. Open your web browser.

For a better visualization Tattile recommends the use of Google Chrome.

3. In the address text field type the IP address of your device.

The default IP address is:

- ▷ http://192.168.0.21

The web interface login page is displayed.

4. Login using the following credentials:
   – Username: **superuser**
   – Password: **superuser**

➥ It is now possible to manage the device.

5.5 What to Do When Starting the Device for the First Time

Tattile recommends a list of actions a new user can perform when using the device for the first time. This is useful, for example, to define a basic operating configuration that enables the user to start working correctly with the device.

✓ The host IP address of the device is known.
✓ The device is correctly cabled to the network.

1. Connect to the web interface.
2. Select the appropriate sections and edit the following parameters:
   – Modify the default login credentials of the web interface.
   – Modify the IP address of the device.
   – Check the device correct aiming.
   – Check that the device is able to read a car plate positioned on the framing.
   – Customize the car plate active reading region.
   – Define how the device manages the acquisition images.

➥ The device is now available for use.

5.6 Updating the Firmware

Before updating the firmware of your device, contact your sales representative.

A file system update of the firmware is a GPG file that updates all the smart cameras.

✓ The device is correctly cabled to the network.

1. Turn on the device.
   After about 60 seconds the operating system is ready for use.
2. To update the device firmware use either the web interface or the freeware software tool **Tattile Pathfinder**.

For details refer to the corresponding user manual.

6 Troubleshooting and Support

6.1 Troubleshooting

The freeware software tool Tattile Pathfinder cannot find the device

- *The device is not correctly powered*
  - ➢ Check the device is correctly cabled to the power supply
  - ➢ Check the power supply is 24 VDC and at least 5 A
  - ➢ Check the cable PIN OUT
- *The device network is not correctly cabled*
  - ➢ Check the Ethernet wiring
  - ➢ If necessary, cable a new connector

Cannot access the web interface

- *The device IP address does not belong to the same netmask of user's PC*
  - ➢ Modify the IP address of the device or of the PC
- *The PC is configured for DHCP IP assignment*
  - ➢ Define a static IP address to the PC belonging to the host address of the device

The web interface does not display the live stream of the device

- *The device is not responding*
  - ➢ Restart the device
  - ➢ If the problem persists, contact your sales representative

The device does not recognize a car plate

- *The position of the device does not comply with the configured distance*
  - ➢ Check the values specified for the Channel 0 best focus parameter in the Device info page of the web interface

6.2 Support

If you need advice or support, you can contact the Tattile technical support using the references located in the front pages of this manual.

7 Maintenance

DANGER! IR radiation damage!

The device emits invisible IR radiations.

▷ Never look directly into the infrared illuminator.

NOTICE! Product malfunction!

Never perform maintenance activity when the product is plugged to the power supply.

▷ Disconnect the product from the power supply.

NOTICE! Improper use!

Risk of damage to surfaces.

▷ Do not use abrasive or corrosive detergents on glass parts (e.g. powder products, stain removers and metallic sponges).

▷ Do not use rough or abrasive materials or sharp metal scrapers.

7.1 Cable Check

▶ Clean the wear of all cables every 12 months.

- In case of damages to cables, substitute cables with a new product.

7.2 Cleaning the Protection Glass

▶ Use a wet soft cloth or a microfiber cloth to clean the protection glass every 12 months or on case of low image quality.

- In case of damages, contact you sales representative.

7.3 Fastening System Check

▶ Check the presence of backlash every 12 months.

- Fasten the screws with the correct torque. For details, see chapter 4.5.

7.4 Water and Humidity Check

▶ Check the presence of humidity or water drops inside the protection glass of the device every 12 months.

- In case of humidity or water drops, contact you sales representative.

▶ Check the presence of humidity or water drops inside the connectors.

- In case of humidity or water drops, replace the seals.
- Clean the connectors.
- If necessary, build new connector cables.

8 Accessories

8.1 Pole-Mounting Adaptor

Order Code	Description
T19841	Pole-mounting adaptor for poles with diameter between 65 mm and 110 mm

4.

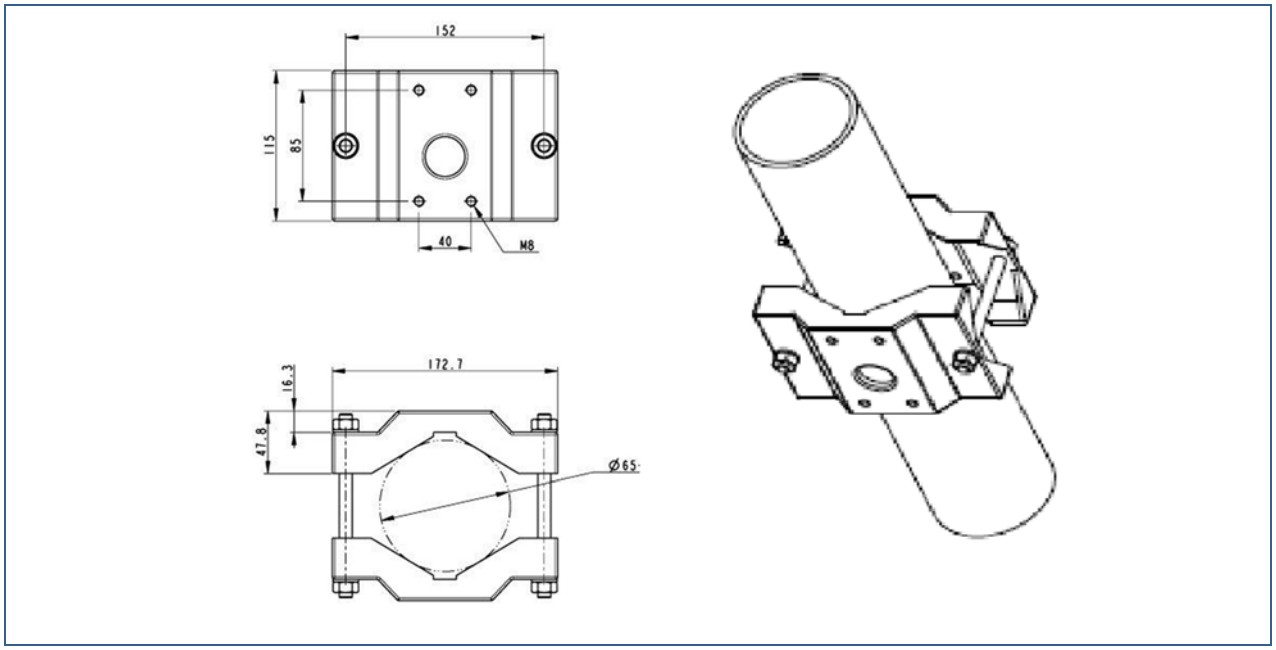


Figure 21: Vertical pole-mounting adaptor

8.2 Horizontal Pole Adaptor

Order Code	Description
T19943	Horizontal pole-mounting adaptor kit

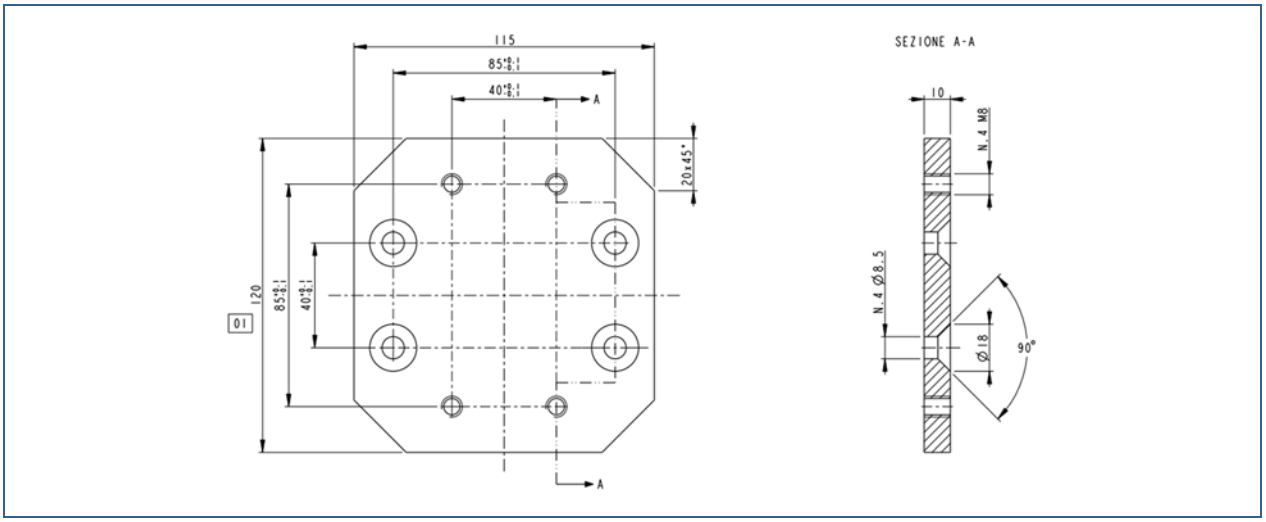


Figure 22: Horizontal pole adaptor

8.3 Power Supply

Order Code	Description
F01836	Power Supply (In 100-240Vac 50-60Hz - Out 24Vdc 5A)

8.4 Connectors Mating Parts Kit

Order Code	Description
T20447	Mating parts kit for Power-I/O, Ethernet Connector (included in the package)

9 Revision History

Rev.	Date	Description	Author	Approved by
00	2018-11-23	First Revision.	O. Romano	L. Bonisoli
01	2019-11-04	General revision Update Technical Sheet/Specifications Update with details and images Chap. 4 - Preparation & Installation Modification dimension of Base of Wall-mount bracket from 70 to 75mm	P. Verrone	L. Bonisoli
02	2020-01-10	Correct CE test level and added FCC info	A.Tonini	L. Bonisoli

Table 13: Revision history