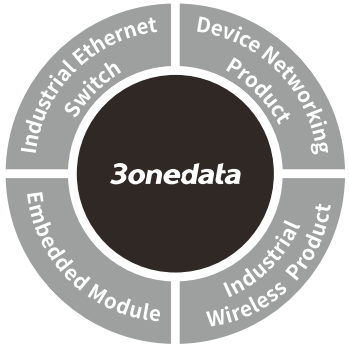
3onedata
Make network communication more reliable

IES6116 Series
Managed Industrial Ethernet Switch
Quick Installation Guide



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【Package Checklist】

Please check the integrity of package and accessories while first using the switch.

1. Industrial Ethernet switch
2. DIN-Rail mounting attachment
3. Power line (only for AC device)
4. Certification
5. Warranty card

If any of these items are damaged or lost, please contact our company or dealers, we will solve it ASAP.

【Product Overview】

This series product is 100M fiber/copper managed DIN-Rail industrial Ethernet switch. For convenience, the products of this series adopt the following number on the left in this guide, please confirm the number of your product:

Model I. IES6116-2LV (16 100M copper ports, 2 12/24/48VDC (9~60VDC) redundant power inputs)

Model II. IES6116-HV (16 100M copper ports, 1 220VAC (100~240VAC) or 110VDC (110~300VDC) power input)

Model III. IES6116-2F-2LV (14 100M copper ports + 2 100M fiber ports, 2 12/24/48VDC (9~60VDC) redundant power inputs)

Model IV. IES6116-2F-HV (14 100M copper ports + 1 100M fiber port, 1 220VAC (100~240VAC) or 110VDC (110~300VDC) power input)

Model V. IES6116-4F-2LV (12 100M copper ports + 4 100M fiber ports, 2 12/24/48VDC (9~60VDC) redundant power inputs)

Model VI. IES6116-4F-HV (12 100M copper ports + 4 100M fiber ports, 1 220VAC (100~240VAC) or 110VDC (110~300VDC) power input)

Model VII. IES6116-6F-2LV (10 100M copper ports + 6 100M fiber ports, 2 12/24/48VDC (9~60VDC) redundant power inputs)

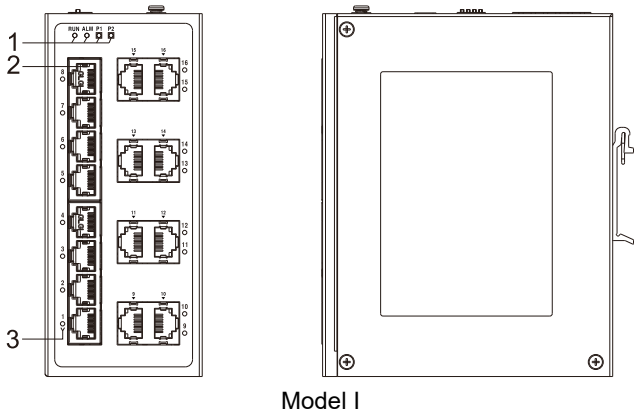
Model VIII. IES6116-6F-HV (10 100M copper ports + 6 100M fiber ports, 1 220VAC (100~240VAC) or 110VDC (110~300VDC) power input)

Model IX. IES6116-8F-2LV (8 100M copper ports + 8 100M fiber ports, 2 12/24/48VDC (9~60VDC) redundant power inputs)

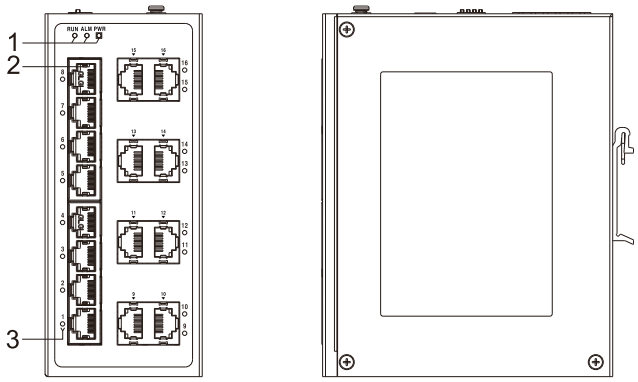
Model X. IES6116-8F-HV (8 100M copper ports + 8 100M fiber ports, 1 220VAC (100~240VAC) or 110VDC (110~300VDC) power input)

【Panel Design】

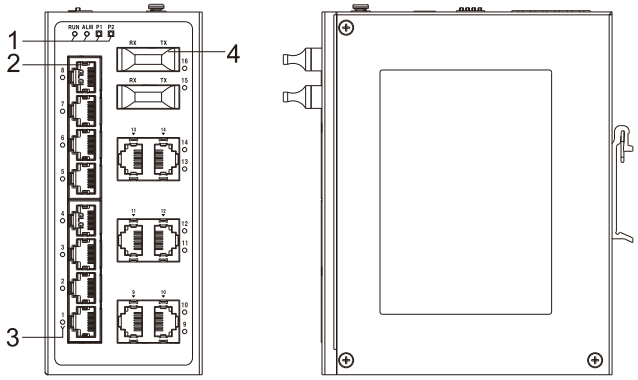
- **Front view and right view**



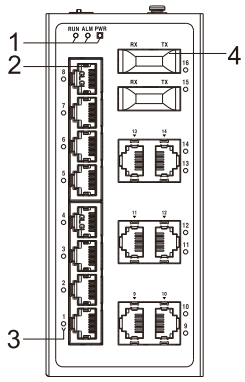
Model I

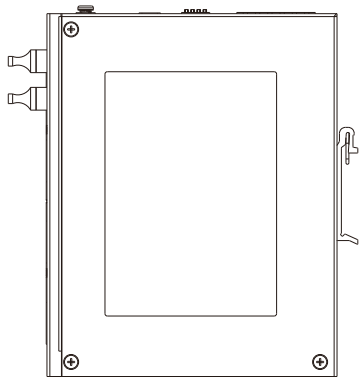


Model II

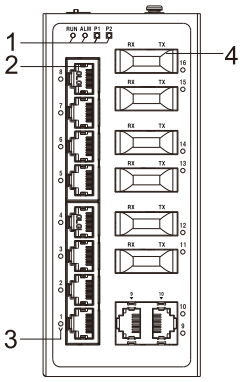


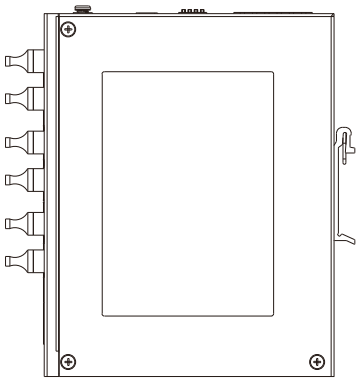
Model III



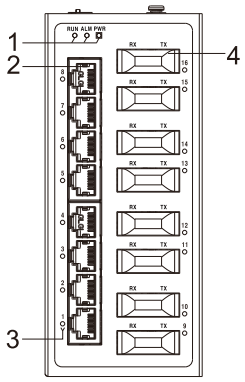


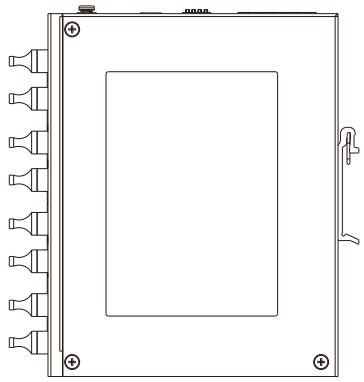
Model IV



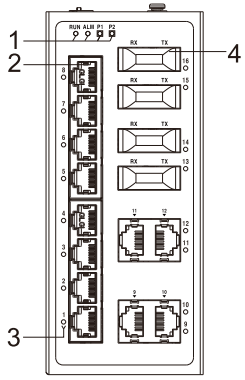


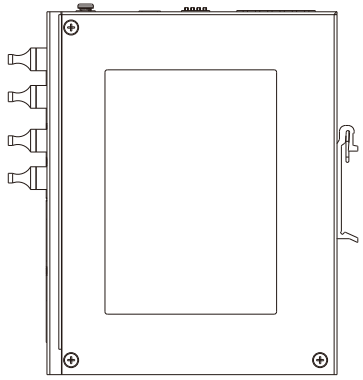
Model VII



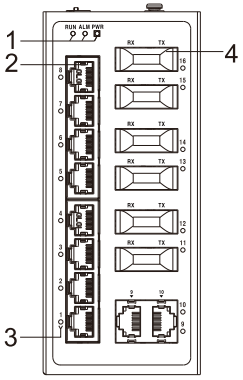


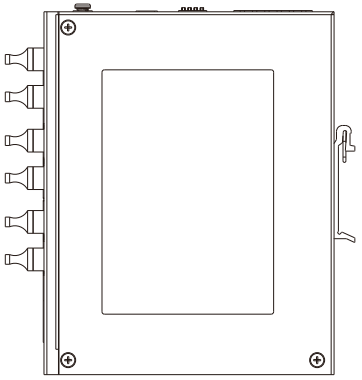
Model X





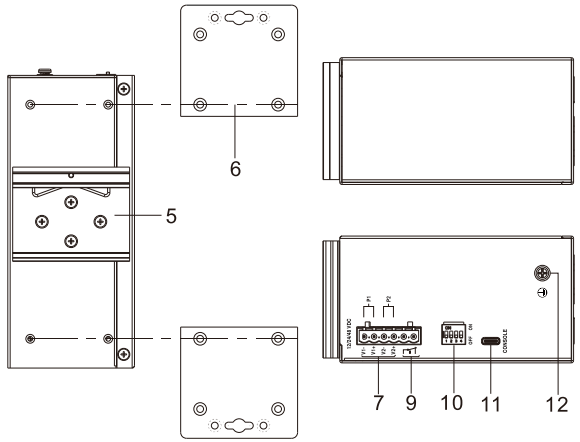
Model V



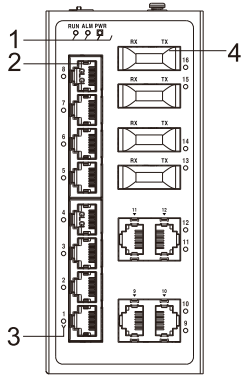


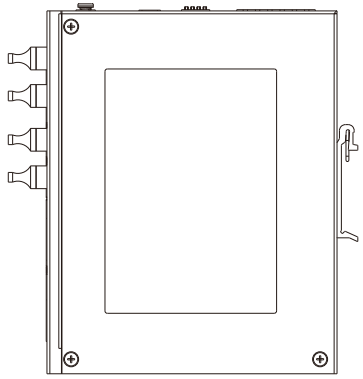
Model VIII

➢ **Rear view, bottom view and top view**

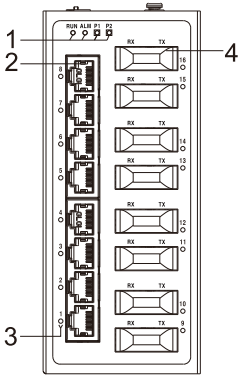


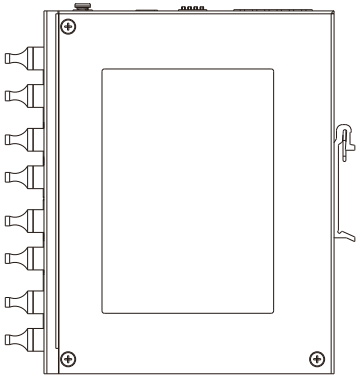
Model I, III, V, VII, IX



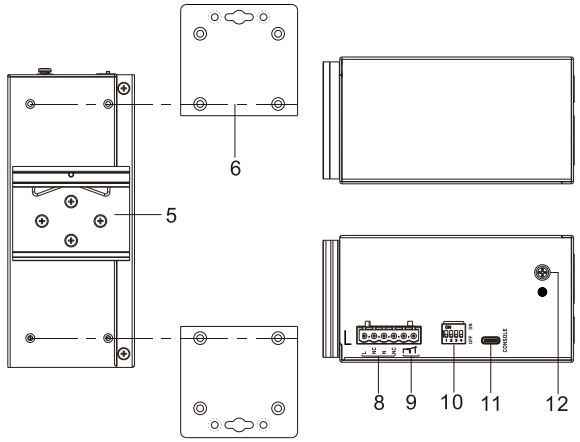


Model VI





Model IX



Model II, IV, VI, VIII, X

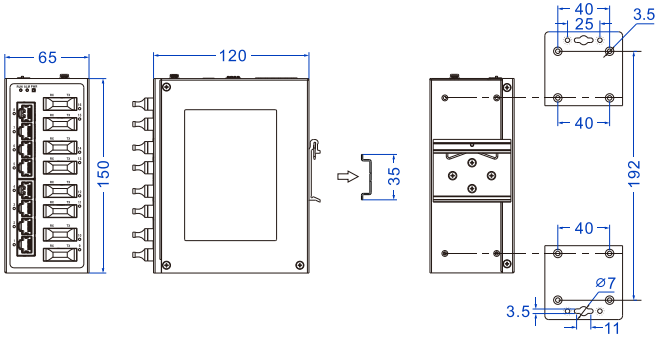
1. Device indicators, from left to right in turn they are:
   - Device running state indicator (RUN)
   - Relay alarm status indicator (ALM)
   - Power input status indicator (P1/P2/PWR)
2. 10/100Base-T(X) 100M Ethernet copper port (1-16/14/12/10/8)
3. 100M Ethernet interface indicator (1-16)
4. 100Base-FX 100M Ethernet fiber port (9/11/13/15-16)
5. DIN-Rail mounting kit
6. Wall mounting board (optional)
7. DC dual power input terminals (V1-, V1+, V2-, V2+)
8. Input terminal block of single AC power supply (L, N)
9. Relay alarm output terminal block
10. DIP switch (1-SW-4)
11. CONSOLE port (Type-C)
12. Grounding screw (M4)

【Mounting Dimension】

Unit: mm

Note:

- In the figure, the right-side hanging panel are non-factory standard and need additional purchase.
- The external dimensions of this series of products are the same.

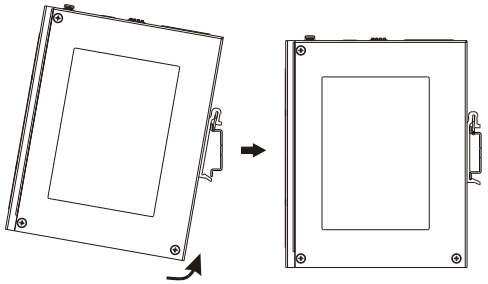


Notice Before Mounting:

- Don't place or install the device in area near water or moisture, keep the relative humidity of the device surrounding between 5%~95% without condensation.
- Before powering on the device, check the power specifications supported by the device to prevent device damage due to overvoltage.
- The device surface temperature is high after running; please don't directly contact to avoid scalding.

【DIN-Rail Mounting】

The product adopts 35mm standard DIN-Rail mounting which is suitable for most industrial scenes, mounting steps as follows:



Step 1 Check if the DIN-Rail mounting kit is installed firmly.

Step 2 Insert the bottom of DIN-Rail mounting kit (one side with spring support) into DIN-Rail, and then insert the top into DIN-Rail.

Tips:
Insert a little to the bottom, lift upward and then insert to the top.

Step 3 Check and confirm the product is firmly installed on DIN-Rail, then mounting ends.

【Disassembling DIN-Rail】

Step 1 Power off the device.

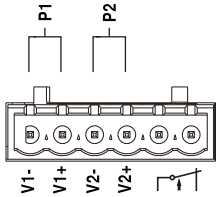
Step 2 After lifting the device upward slightly, first shift out the top of DIN-Rail mounting kit, and then shift out the bottom of DIN-Rail, disassembling ends.

Notice Before Powering on:

- Power ON operation: First insert the power supply terminal block into the device power supply interface, and then plug the power supply plug and power on.
- Power OFF operation: First, remove the power plug, then remove the wiring section of terminal block. Please pay attention to the above operation sequence.

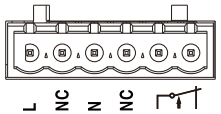
【Power Supply Connection】

➢ **DC dual power supply**



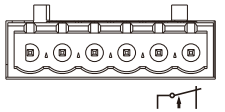
Model I, III, V, VII, IX support a dual DC power supply solution, utilizing a 6-pin 5.08mm pitch input terminal blocks (power supply occupies the left 4 pins) to provide two independent DC power supply systems (P1 and P2). The terminal blocks are defined as V1-, V1+, V2-, V2+. The power supply supports non-polarity connection, and the device can still work normally after reverse connection. The rated voltage is 12/24/48VDC, and the power supply range is 9~60VDC.

➢ **AC/DC single power supply**



Model II, IV, VI, VIII, and X support an AC/DC single power supply solution, providing 6-pin 5.08mm pitch input terminal blocks, of which power supply occupies the 1st and 3rd pins on the left, which are defined to L and N. The power supply supports non-polarity connection, and the equipment can still work normally after reverse connection. The rated voltage is 220VAC/VDC, and the power supply range is 100~240VAC or 110~300VDC.

【Relay Connection】

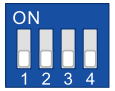


The series device supports 1 relay alarm information output. Provide 6-pin 5.08mm pitch terminal blocks, relay occupies the right 2 pins. The relay supports the output of DC power supply alarm or network abnormality alarm. It can be connected to alarm light or alarm buzzer or other switching value collecting devices, which can timely inform operators when the alarm occurs. The default

relay status is shown in the figure below.

Device Status	Relay Contacts	Alarm
Not powered on or powered off	Closed	Yes
Powered on, but not working properly	Closed	Yes
Powered on, and working properly without triggering any alarm	Disconnected	None
Powered on, and working properly, but it triggered alarms	Closed	Yes

【DIP Switch Settings】

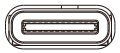


The series device provides 4-bits DIP switch for function setting, where "ON" is enable valid terminal. The device needs to be powered on again to change the status of DIP switch.

The definitions of DIP switch are as follows:

No.	Definition	Operation
1	Reserved	-
2	Restore Factory Settings	Set the DIP switch to ON, the device will restore to factory settings after rebooting, then turn off the DIP switch.
3	Upgrade	Set the DIP switch to ON, the device can be upgraded, then turn off the DIP switch when this upgrade completes.
4	Reserved	-

【Console Port Connection】



The series device provides 1 program debugging port based on Type-C interface which can conduct device CLI command management after connecting to PC.

Connect the CONSOLE port through software. The default configuration is as follows:

Serial Port Connection	Default
Baud rate	115200 bps
Data bit	8 bits
Parity bit	None
Stop bit	1 bit

【Checking LED Indicator】

Provide LED indicators to monitor its operating status, which has simplified the overall troubleshooting process. The function of each LED is described in the table below:

LED	Indicate	Description
PWR/P1/P2	ON	Power is connected and running normally
	OFF	Power supply is disconnected or running abnormally
ALM	ON	Power supply or port link has alarm
	OFF	Power supply, port link without alarm
RUN	ON	The device is powering on or the device is abnormal
	OFF	The device is powered off or the device is abnormal.
	Blinking	Blinking once per second, the device is running normally.
Link/Act (1-16)	ON	Ethernet port has established a valid network connection
	Blinking	Ethernet port is in an active network status
	OFF	Ethernet port has not established a valid network connection

【Logging in to WEB Interface】

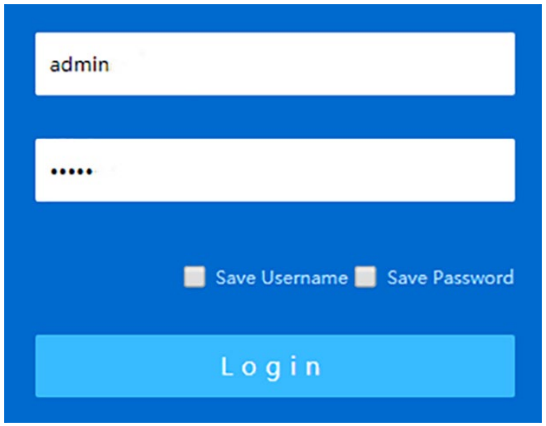
Support WEB management and configuration. Computer can access the device via Ethernet interface. The way of logging in to device's configuration interface via IE browser is shown as below:

Step 1 Configure the IP addresses of computer and the device to the same network segment, and the network between them can be mutually accessed.

Step 2 Enter device's IP address in the address bar of the computer browser.

http://192.168.1.254

Step 3 Enter device's username and password in the login window as shown below.



Step 4 Click "OK" button to login to the WEB interface of the device.

Note:

- The default IP address of the device is "192.168.1.254".
- The default user name and password of the device are "admin".
- If the username or password is lost, user can restore it to factory settings via device DIP switch or management software; all modified configurations will be cleared after restoring to factory settings, so please backup configuration file in advance.
- Please refer to user manual for specific configuration method of logging in to WEB interface and other configurations about network management function.

【Specification】

Panel	
100M copper port	10/100Base-T(X) self-adapting RJ45 port, half/full duplex self-adaption or forced working mode, support MDI/ MDI-X self-adaption
100M fiber port	100Base-FX, optional SC/ST/FC
Console port	CLI command management port (RS-232), Type-C
Alarm port	6-Pin 5.08mm pitch terminal blocks (relay occupies 2 pins), support 1 relay alarm information output, current loading capacity is 2A@30VDC or 2A@250VAC
Indicator	Power supply indicator, run indicator, interface indicator, alarm indicator
Switch Property	
Backplane bandwidth	12.8Gbps
Buffer size	4Mbit
MAC address table	16K
Power Supply	
DC power supply	2 12/24/48VDC (9~60VDC) redundant power inputs, support non-polarity
AC power supply	1 220VAC (100~240VAC) or 110VDC (110~300VDC) power input, support non-polarity
Access terminal block	6-pin 5.08mm pitch terminal blocks, power supply occupies 4 pins
Power Consumption	

Model I	– No-load at normal temperature 25℃: 4.26W@48VDC – Full-load at normal temperature 25℃: 5.71W@48VDC – No-load at high temperature 75℃: 4.46W@48VDC – Full-load at high temperature 75℃: 6.03W@48VDC
Model II	– No-load at normal temperature 25℃: 3.34W@220VAC – Full-load at normal temperature 25℃: 5.11W@220VAC – No-load at high temperature 75℃: 3.83W@220VAC – Full-load at high temperature 75℃: 5.33W@220VAC
Model III	– No-load at normal temperature 25℃: 5.59W@48VDC – Full-load at normal temperature 25℃: 6.92W@48VDC – No-load at high temperature 75℃: 6.10W@48VDC – Full-load at high temperature 75℃: 7.44W@48VDC
Model IV	– No-load at normal temperature 25℃: 5.06W@220VAC – Full-load at normal temperature 25℃: 6.47W@220VAC – No-load at high temperature 75℃: 5.46W@220VAC – Full-load at high temperature 75℃: 6.87W@220VAC

Model V	– No-load at normal temperature 25℃: 6.18W@48VDC – Full-load at normal temperature 25℃: 7.65W@48VDC – No-load at high temperature 75℃: 6.58W@48VDC – Full-load at high temperature 75℃: 8.05W@48VDC
Model VI	– No-load at normal temperature 25℃: 5.94W@220VAC – Full-load at normal temperature 25℃: 7.76W@220VAC – No-load at high temperature 75℃: 6.51W@220VAC – Full-load at high temperature 75℃: 8.60W@220VAC
Model VII	– No-load at normal temperature 25℃: 7.83W@48VDC – Full-load at normal temperature 25℃: 9.01W@48VDC – No-load at high temperature 75℃: 8.57W@48VDC – Full-load at high temperature 75℃: 9.76W@48VDC
Model VIII	– No-load at normal temperature 25℃: 7.24W@220VAC – Full-load at normal temperature 25℃: 8.67W@220VAC – No-load at high temperature 75℃: 7.86W@220VAC – Full-load at high temperature 75℃: 9.28W@220VAC

Model IX	– No-load at normal temperature 25℃: 9.49W@48VDC – Full-load at normal temperature 25℃: 10.54W@48VDC – No-load at high temperature 75℃: 10.24W@48VDC – Full-load at high temperature 75℃: 11.28W@48VDC
Model X	– No-load at normal temperature 25℃: 9.21W@220VAC – Full-load at normal temperature 25℃: 10.34W@220VAC – No-load at high temperature 75℃: 10.07W@220VAC – Full-load at high temperature 75℃: 11.07W@220VAC
Working Environment	
Working temperature	-40~75℃
Storage temperature	-40~85℃
Working humidity	5%~95% (no condensation)
Protection grade	IP40 (metal shell)

【Disposal of Waste Electrical and Electronic Equipment (WEEE 2012/19/EU)】

(Applicable in the EU-member states)



The crossed-out wheeled bin symbol on the equipment or its packaging indicates that the product, at the end of its service life, shall not be mixed with unsorted municipal waste but should be collected separately, in accordance with local laws and regulations.

A proper separate collection of end-of-life equipment for the subsequent recycling, treatment and environmentally compatible disposal, will help prevent potential damage to the environment and human health, facilitating the reuse, recycling and/or recovery of its component materials.

Private users should contact their vendor or municipal waste management service and ask for disposal information.

Professional users should contact their suppliers and check the terms of their selling agreement.

This product must not be disposed of with other commercial waste.

Users' cooperation in the correct disposal of this product will contribute to saving valuable resources and protecting the environment.