

1 Introduction

To ensure correct installation and operation of IFD9506, please read this chapter carefully before using your IFD9506.

IFD9506 is an Ethernet communication module for remote setting through Delta's DCISoft or remote setting and communication through WPLSoft.

IFD9506 has 3 digital input contacts on it. They will send out messages to designated E-Mail addresses once being triggered.

IFD9506 supports Modbus TCP protocol and can be used for remote monitoring with graphic control software or human machine interface.

IFD9506 can be Modbus TCP master, sending out Modbus TCP commands and controlling the peripheral equipment.

IFD9506 can be a slave as well, receiving Modbus commands sent out from another master and sending the command to another Modbus communication network through Ethernet. In addition, in MDI/MDI-X auto-detect, jump wire is not needed when you choose the network cable.

1.1 Features

- Auto-detects 10/100 Mbps transmission speed; MDI/MDI-X auto-detect.
- The monitor table temporarily stores the monitored data for you to fast save or acquire the data.
- Supports Modbus TCP protocol (both master and slave modes)
- Able to send out E-Mails when triggered.
- The station address, RS-485 communication format and baud rate can be set up externally.

1.2 Specifications

■ Ethernet interface

Interface	RJ-45 with Auto MDI/MDIX
Number of ports	1 port
Transmission method	IEEE802.3, IEEE802.3u
Transmission cable	Category 5e
Transmission speed	10/100 Mbps Auto-Defect
Communication protocol	ICMP, IP, TCP, UDP, DHCP, SMTP, Modbus TCP

■ COM1

Interface	Mini Dim
Number of ports	1 port
Transmission method	RS-232
Transmission cable	DVPACAB215 / DVPACAB230 / DVPACAB2A30
Transmission speed	110/150/300/600/1200/2,400/4,800/9,600/19,200/38,400/57,600/115,200
Communication protocol	Modbus, Delta Configuration, User Define

■ COM2

Interface	RJ-11
Number of ports	1 port
Transmission method	RS-485

Transmission speed	110/150/300/600/1,200/2,400/4,800/9,600/19,200/38,400/57,600/115,200
Communication protocol	Modbus, User Define

■ Terminal block

Interface	Feed-through terminal 10PIN
Transmission method	RS-485
Transmission distance	1,200m
Transmissioi speed	110/150/300/600/1,200/2,400/4,800/9,600/19,200/38,400/57,600/115,200
Communication protocol	Modbus, User Define
Max. number of stations	32

■ Environment

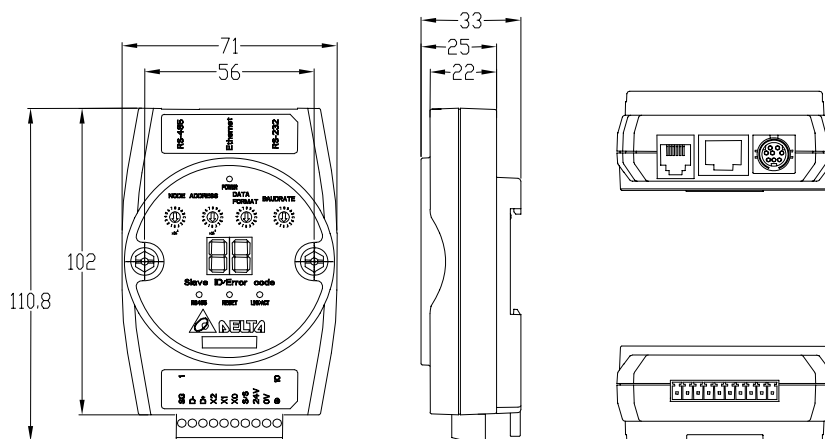
Noise immunity	ESD (IEC 61131-2, IEC 61000-4-2): 8KV Air Discharge EFT (IEC 61131-2, IEC 61000-4-4): Power Line:±2KV, Digital Input: ±2KV, Communication I/O: ±2KV RS (IEC 61131-2, IEC 61000-4-3): 80MHz~1GHz, 10V/m. 1.4GHz ~ 2.0GHz, 10V/m Conducted Susceptibility Test (EN61000-4-6, IEC61131-2 9.10): 150kHz ~ 80MHz, 3V/m Surge Test (Biwave IEC61132-2, IEC61000-4-5): Power line 0.5KV DM, Ethernet 0.5KV CM, RS-485 0.5KV CM
Operation	0°C ~ 55 °C (temperature), 50% ~ 95% (humidity), pollution degree 2
Storage	-25°C ~ 70°C (temperature), 5% ~ 95% (humidity)
Vibration/shock immunity	Standard: IEC 61131-2, IEC 68-2-6 (TEST Fc)/IEC61131-2 & IEC 68-2-27 (TEST Ea)
Certificates	IEC 61131-2, UL508

■ Electrical specification

Power supply voltage	24VDC (-15% ~ 20%) supplied by feed-through terminal
Power consumption	3W
Insulation voltage	500V
Weight	140g

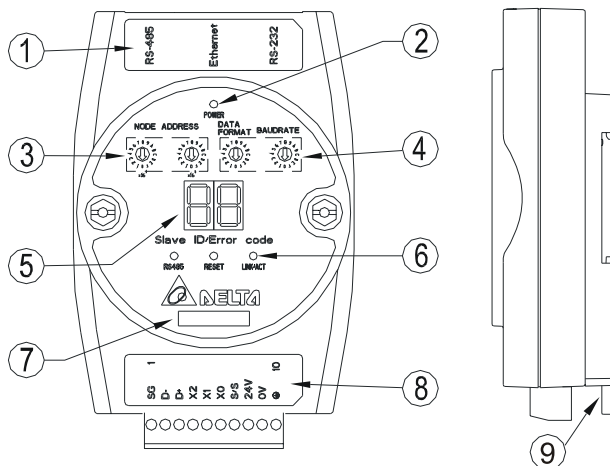
2 Product Profile & Outline

2.1 Dimension



Unit: mm

2.2 Product Profiles



① Communication ports: RS-485, Ethernet, RS-232	⑥ RS-485 LED, Reset button, Ethernet LED
② POWER LED	⑦ Module name
③ Address switch	⑧ RS-485 connector, digital input points, power supply points, earth point
④ Data format/ baud rate switch	⑨ DIN rail connector
⑤ Digital display	

2.3 LED Indicators

Name	Color	Function
POWER	Green	Power supply indication
RS-485	Green	Displaying the status of communication port
LINK/ACT	Green	Displaying the status of network

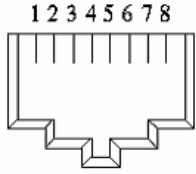
2.4 RJ-11 PIN Definition

RJ-11 sketch	PIN.	Signal	Definition
	1	--	N/C
	2	--	N/C
	3	D+	Positive pole for data
	4	D-	Negative pole for data
	5	GND	Ground
	6	--	N/C

2.5 RJ-11 PIN Definition

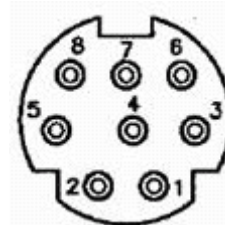
RJ-11 sketch	PIN.	Signal	Definition
	1	--	N/C
	2	--	N/C
	3	D+	Positive pole for data
	4	D-	Negative pole for data
	5	GND	Ground
	6	--	N/C

2.6 RJ-45 PIN Definition

RJ-45 sketch	PIN	Signal	Definition
	1	Tx+	Positive pole for data transmission
	2	Tx-	Negative pole for data transmission
	3	Rx+	Positive pole for data receiving
	4	--	N/C
	5	--	N/C
	6	Rx-	Negative pole for data receiving
	7	--	N/C
	8	--	N/C

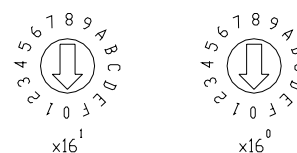
2.7 RS-232 PIN Definition

PIN	Signal	Definition
1	--	N/C
2	--	N/C
3	--	N/C
4	Rx	Reception data
5	Tx	Transmission
6	--	N/C
7	--	N/C
8	GND	Ground



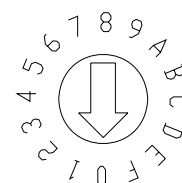
2.8 Address Switch

Switch setting	Content
01...F7	Valid node address setting



2.9 Data Format

Switch setting	Format	Switch setting	Format
0	7-N-1	8	7-N-2
1	8-N-1	9	8-N-2
2	7-O-1	A	7-O-2
3	8-O-1	B	8-O-2
6	7-E-1	E	7-E-2
7	8-E-1	F	8-E-2



2.10 Baud Rate for Modbus Communication

Switch setting	Baud rate	Switch setting	Baud rate
1	110	7	4,000
2	150	8	9,600
3	300	9	19,200
4	600	A	38,400

