PLC | Motion control | Servo drive | HMI | Dedicated system | Software

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COTRUST

Focus on Industrial Control,
Driving the Intelligent Future.

CTMC Motion control PLC

2023

COTRUST TECHNOLOGIES CO., LTD.

COTRUST Overview

COTRUST Technologies Co., Ltd. founded in 2003, is dedicated to R&D, manufacturing and sales of industrial automation control products.Relying on high quality, high performance automation control products and solutions to create maximum value for customers, determined to become the world's leading industrial automation solutions supplier.

As a high-tech enterprise, COTRUST provides a wide business coverage of intelligent equipment & robot, new energy vehicles, industrial Internet,smart factory. Main products include PLC, Motion control&servo drive, HMI, dedicated control system and automation software MagicWorks programming software (PLC/HMI/TUNER/OPC),the new launch MiCo remote solution, multi-robot cooperative control system widely used in customer solutions.

COTRUST built a long-term partnerships with customers. To achieve this, COTRUST offers more than just products: working with COTRUST gives customers access to leading integrated manufacturing and R&D facilities, as well as highly skilled engineering and industry specialists.

COTRUST invests 10% of revenues and 40% of employees in R&D, owned more than 30 trademark registration and 140 patents with certificates(including invention, utility models and appearance). Uses a uniquely rigorous engineering process that incorporates advanced design modelling,performance analysis and quality assurance techniques for improve production capacity continuously and promote sustainable development.

On the basis of owning industrial automation technologies with proprietary intellectual property rights, COTRUST perseveres in industry marketing and providing total solution to customers in segment market and achieves growth of both enterprise value and customer value.

Focus on Industrial Control
Driving the Intelligent Future

CONTENTS

CTMC motion control PLC

CTMC series is a small PLC developed by COTRUST for the motion control market that can meet the needs of OEM multi-axis motion control systems.
The CTMC series supports complex applications such as multi-axis interpolation linkage, continuous interpolation, electronic gear, electronic CAM, tracing shear, flying shear and encoder inspection.
High cost performance, strong motion control.
The CTMC series EtherCAT bus CPU supports 16 EtherCAT bus spines,Supports dual network ports and Profinet intelligent slave station functions.

40 point EtherCAT bus CPU

NEW

Multi-axis motion control

EtherCAT Bus type

EtherNET MQTT PLUSH Modbus CANopen EtherCAT PROFIBUS PROFINET

CTMC series 40 point motion control bus PLC(M226ES), to meet the needs of users for small and medium-sized OEM equipment, EtherCAT bus, multi-axis operation control, temperature control, communication networking and other scenarios. The body supports expansion card and module expansion, supports Profinet intelligent slave station function, accurately ADAPTS to various occasions and perfectly ADAPTS to specific needs.The M226ES locally integrates a variety of industrial network communication protocols, easily interconnects the data acquisition system and peripheral equipment, and easily accesses the MiCo platform through the CTMC series PLC, realizing remote monitoring and maintenance of the equipment. The CTMC series PLC uses the fully autonomous MagicWorks PLC programming software. Products can be widely used in logistics, packaging, printing, lithium, photovoltaic, 3C electronics, semiconductor and other industries, to provide customers with innovative motion control solutions for manufacturing.

Multi-axis motion control

EtherCAT

Supports 16 EtherCAT buses

High speed pulse

Support 10 axis 200KHz high-speed pulse output free choice direction, custom output point

High-speed counter

Supports 10 single-phase 200KHz high-speed counters or 10 AB phase 100KHz high-speed counters
Customize input points
Each HSC supports 100 sets of preset value comparisons

PLCopen

Support for standard axis instructions based on PLCopen

Single axis operation control

Support single-axis motion control functions
(location, speed, homing,etc.)

Interpolation function

Multi-axis and multi-channel linear/ circular interpolation
Supports continuous interpolation

Tracing shear and flying shear

Support electronic CAM,
tracing shear and flying shear function

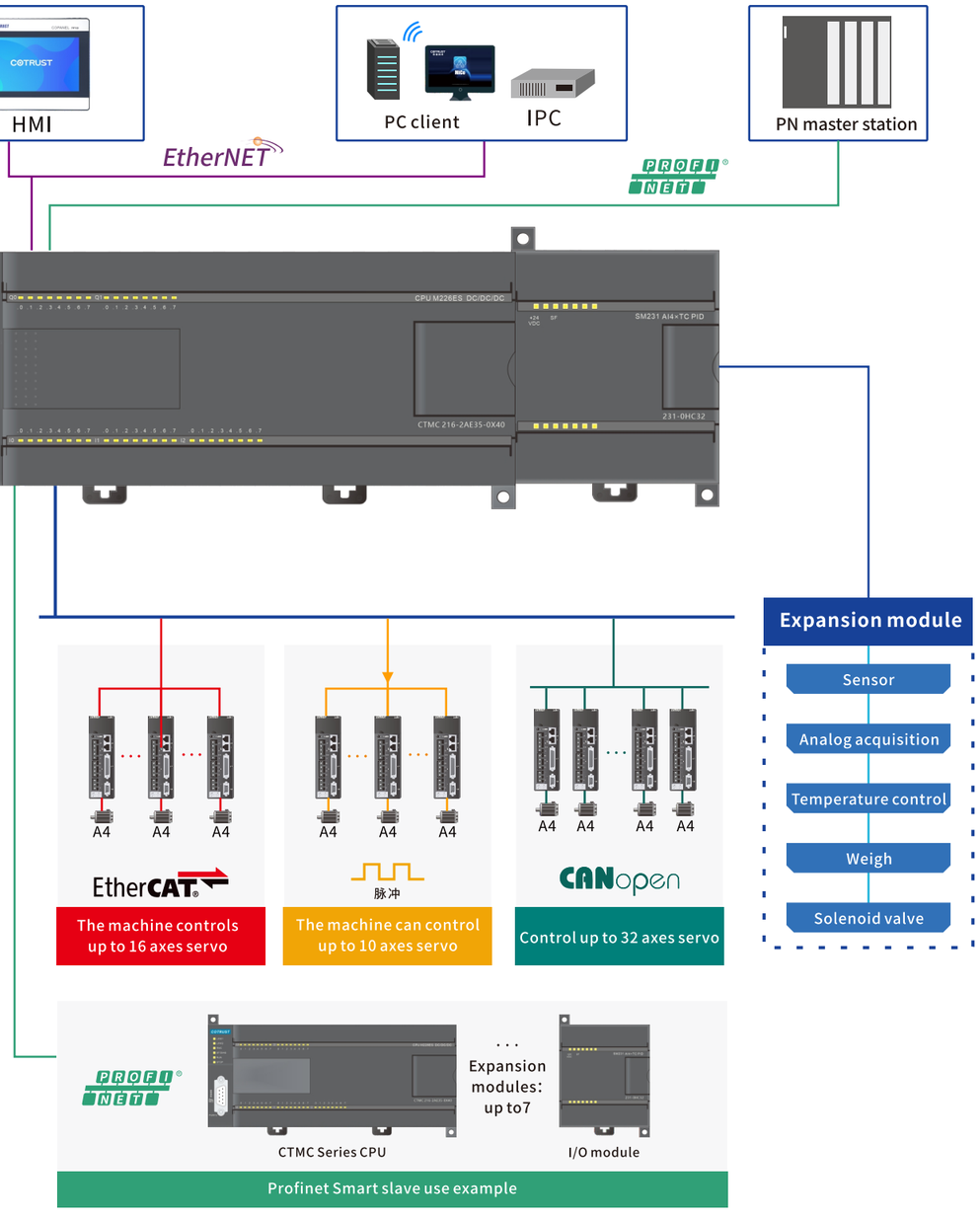
C language

Support C language programming

Trace

Supports the Trace function

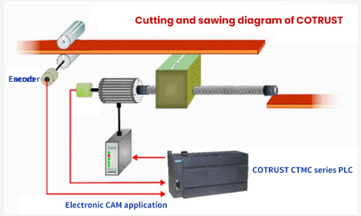
System architecture

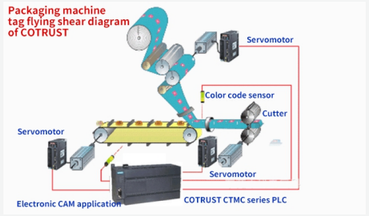


Special library for tracing shears and flying shears

Special library for tracing shears and flying shears

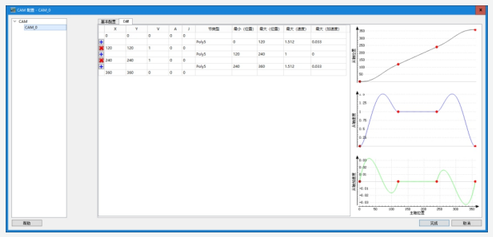
It can be realized by calling the special library of tracing shears and flying shears.
The function of tracing shears and flying shears is applicable to: M228SL, M226SL, M226ES.





Visualization

Without the worry of complicated parameters of the electronic CAM configuration,CAM table and curve can preview the relationship between the spindle position and the position of the axis, the speed of the axis and the acceleration of the axis, and the master-slave axis relationship is clear and visual.



Powerful system expansion

Support 1 BD expansion, including: analog expansion board, RS485 expansion board and CAN expand plate

Digital quantity
Digital I/O: 128DI/128DO
(bus protocol expansions up to 640DI/640DO)

Analog quantity
Analog I/O: 32 AI /32AQ
(expansion CAN extend plate up to 194AI / 194AQ)

Local expansion I/O modules:up to 7

Large capacity

Program space
120KB (basic space)
2*24KB (Secret repository)

Data space
64KB(Data Permanent retention)

Nternal storage
Supports 4M internal memory cards

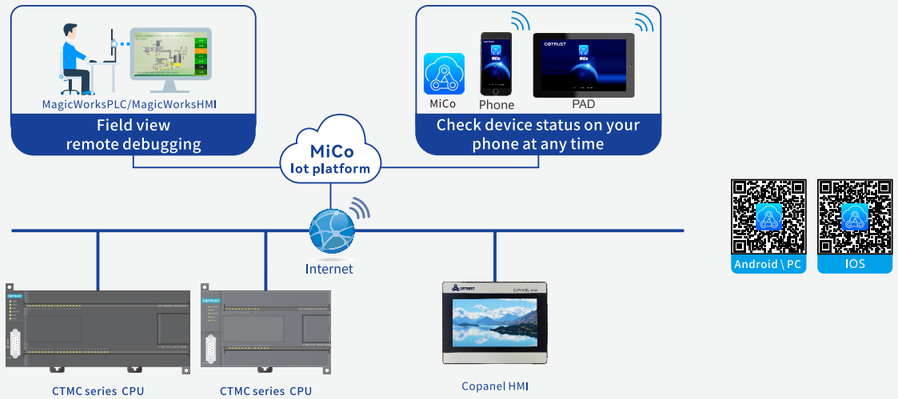
Powerful communication function

- Supports MiCo remote services
- Supports ModBus TCP and ModBus RTU
- Supports UDP_PPI and PPI/MPI
- Supports CANopen communication and CAN free port communication
- Support MQTT protocol
- Supports network port S7 protocol
- Supports Socket free port communication
- EtherCAT communication is supported
- Support Profinet smart slave station
- Supports the dual-port switch function

Support Ethernet communication

(Support remote programming, debugging, monitoring, offline alarm and data exchange)

The CPU body is equipped with Ethernet interface as standard, which integrates powerful Ethernet communication function. Through the Ethernet interface can also communicate with other CPU modules, touch screen, computer, easy networking. The device can be conveniently connected to COTRUST MiCo platform through CPU to realize remote monitoring and mainten ance of the device. MiCo platform provides free Android, IOS and PC clients, and supports offline alarm.



Value-added service

Alarm reminder:
When the battery card power <2V, alarm bit SM195.0; 24V power supply <15V, alarm bit SM195.1.

Online maintenance
Support network port online firmware upgrade, convenient and fast

MiCo remote status bit
SM195.6

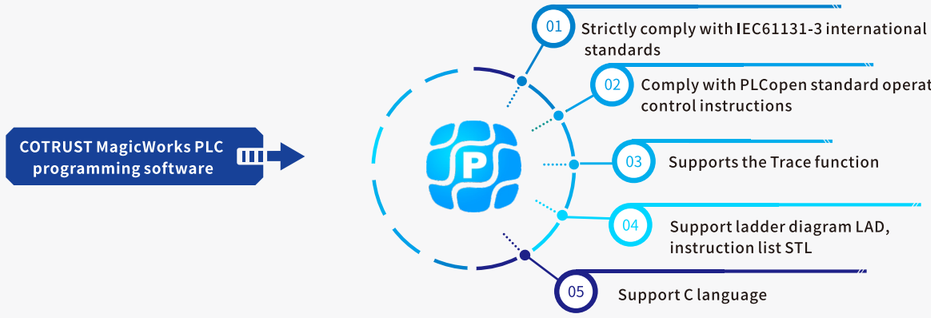
Data power failure is maintained permanently

Support V2 programming cards

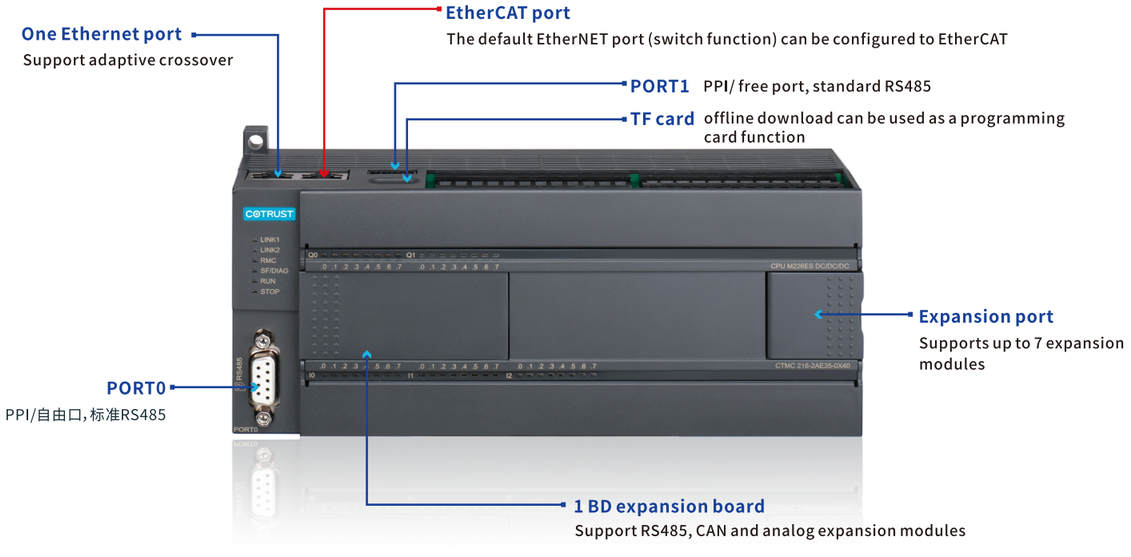
C programming language is supported

Programming tool

CTMC series PLC uses MagicWorks independently developed by Hexin. Programming software, support in line with the PLCopen standard instruction set, but also support Trace tracking function, greatly convenient for users to view the value curve record of tracking variables and analyze the operation control trajectory.



Peripheral interface description

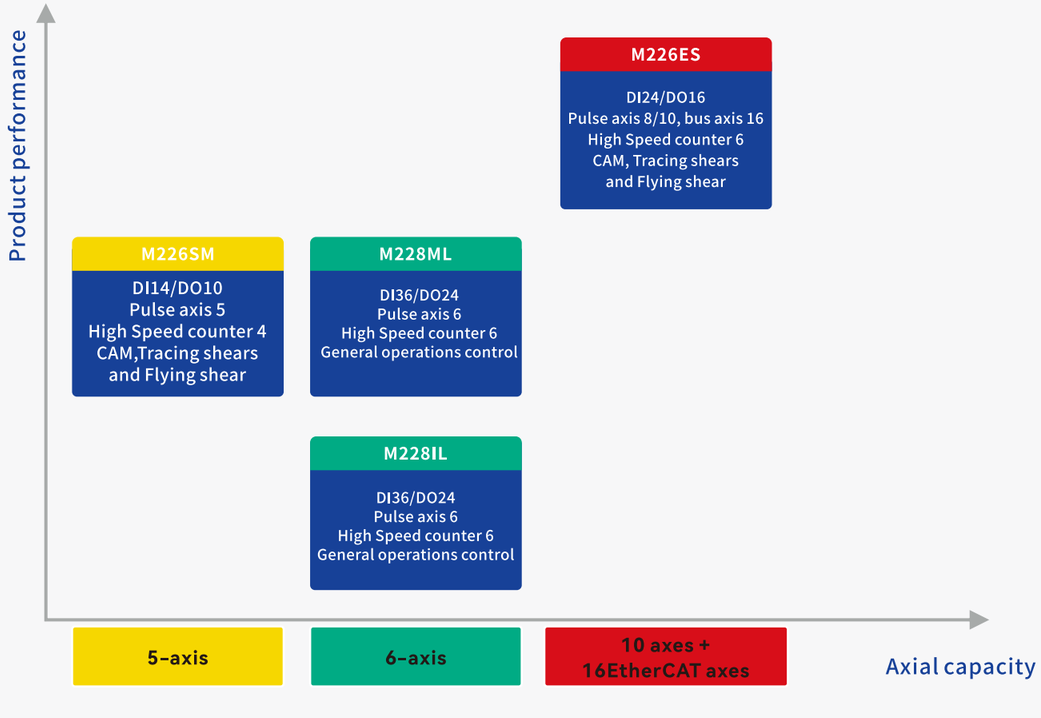


Model description

CTMC 216 - 2AE35 - 0X40

- CTMC: COTRUST motion control products
- 2: 200 series small PLC
- 1: CPU
- 2: Digital expansion module
- 3: Analog expansion module
- 6: Product category identification number, CPU type can be: 6, 8
- 0X40: 24 Input *14 Output *10" 40" input *24 output *16" 60" input *36 output *24
- 35: Indicates the version number of the hardware platform
- E indicates the Local performance classification: "I" (motion control type), "M"(electronic CAM type), "S" (high-speed chase flying shear type), "E" (bus multi-spindle type)
- A: "A"indicates direct current "B"indicates Alternating current
- Product dimensions identification: 1:24points 2:40points 3:60points

Product family



CTMC series PLC product family

40 point Bus motion control CPU：M226ES

16 EtherCAT

10 Pulse

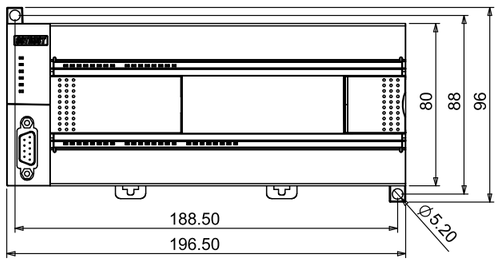
24DI/16DO transistor drain output, 24VDC power supplySupport
16 EtherCAT bus shafts,
support 8/10 *200KHz operation control output,
120KB+24KB+24KB program space /64KB data space
2 PPIs and free communication ports can be switched
1 EtherNET communication port
1 EtherCAT bus communication port (configurable as EtherNET).

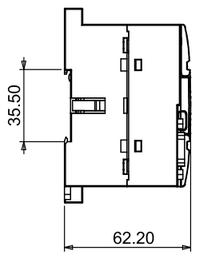
CTMC 216-2AE35-0X40

1. Support PLCopen standard operation control instruction library
2. Support single axis, axis group, synchronization, flying shear movement
3. Support STL, LD, C language
4. Support Trace tracing function
5. Supports the dual-port switch function
6. Supports CAN, RS485 and analog expansion boards
7. Support Profinet intelligent slave station function

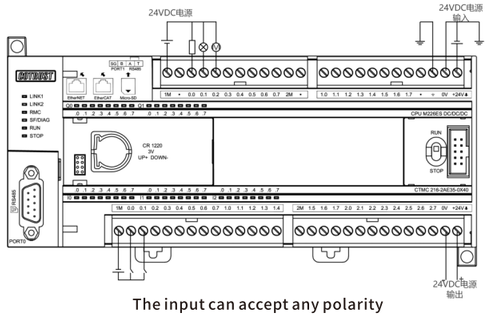
Dimensional specification

Model number:CTMC M226ES
Unit:mm





Wiring instructions



The input can accept any polarity

CTMC series PLC product family

24 point Motion control CPU：M226SM

5 Pulse

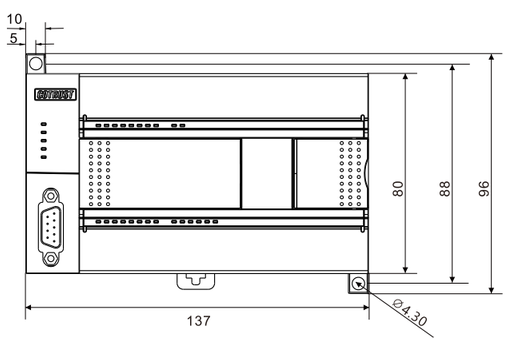
14DI/10DO transistor drain output,24VDC power supply
Support 5 axis *200KHz operation control output,
support 4 channels *200KHz high-speed counter
72KB+24KB+24KB program space /64KB data space
2 PPIs and free communication ports are switchable
1 Ethernet communication port

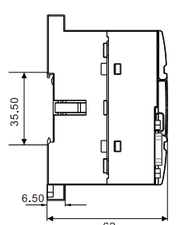
CTMC 216-1AS35-0X24

1. Support PLCopen standard instruction library
2. Support single axis operation control (location, speed and homing) function
3. Support Linear/Circular/continuous interpolation function
4. Support electronic CAM and flying shear function
5. Support Profinet intelligent slave station function
6. Supports CAN, RS485, and analog expansion boards
7. Supports online firmware upgrade of network ports
8. Support C language programming
9. Support Trace tracing function

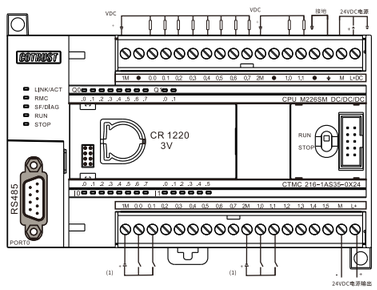
Dimensional specification

Model number:CTMC M226SM
Unit:mm





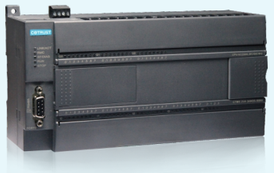
Wiring instructions



(1) Any polarity is acceptable

CTMC series PLC product family

60 point Motion control CPU：M228ML



6 Pulse

36DI/24DO transistor drain output, 24VDC power supply
Support 6 channels *200KHz operation control output
72KB+24KB+24KB program space /64KB data space
2 PPI and free communication ports can be switched,
1 Ethernet communication port

CTMC 218-3AM35-0X60

1. Supports CAN, RS485, and analog expansion boards
2. Supports online firmware upgrade of network ports
3. Support C language programming
4. Support Trace tracing function
5. Support single axis operation control (such as location, speed and homing, etc.) functions
6. Support multi-axis multi-channel Linear/Circular/ continuous interpolation functions
7. Support PLCopen standard instruction library
8. Support Profinet intelligent slave station function

60 point Motion control CPU：M228IL

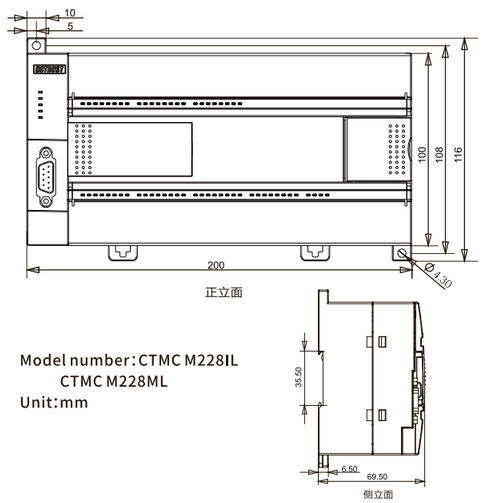
6 Pulse

36DI/24DO transistor drain output, 24VDC power supply
Support 6 channels *200KHz operation control output
72KB+24KB+24KB program space /64KB data space
2 PPI and free communication ports can be switched,
1 Ethernet communication port

CTMC 218-3AI35-0X60

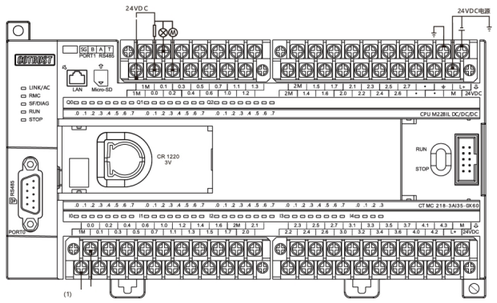
1. Supports CAN, RS485, and analog expansion boards
2. Supports online firmware upgrade of network ports
3. Support C language programming
4. Support Trace tracing function
5. Support single axis operation control (such as location, speed and homing, etc.) functions
6. Support multi-axis multi-channel Linear/Circular/ continuous interpolation functions
7. Support COTRUST motion control library
8. Support Profinet intelligent slave station function

Dimensional specification



Model number：CTMC M228IL
CTMC M228ML
Unit：mm

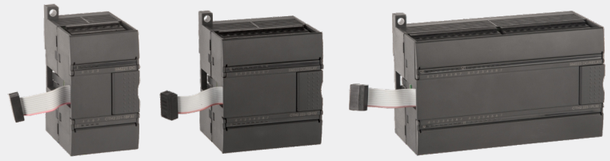
Wiring instructions



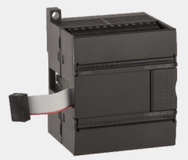
The input can accept any polarity

Expansion module

Input/output module

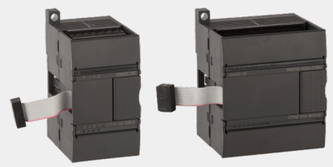


Digital quantity expansion moduleSM221/SM222/SM223
（8DI、16DI、32DI、8DO、16DO、32DO、4DI/4DO、8DI/8DO、16DI/16DO）



High precision analog expansion module
SM231-0HF/1HF

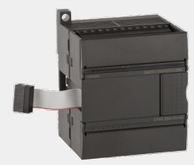
Input/output module



Analog moduleSM231/SM232/SM235
（4AI、2AQ、4AQ、4AI/1AQ）

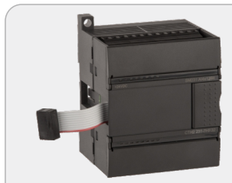
Analog voltage input module
SM231-5HF

Function module



Positioning control module
SM253-1BH

Temperature module



PID module
SM231-7HF/7TD/7TF

Temperature module
SM231-7PB/7PC/7PD
SM231-7PF/7ND/7NF

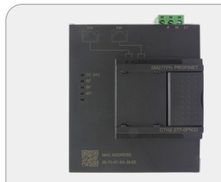
Weighing module

Weighing module
SM231-7WA

Weighing module
SM231-7WF

Communication module

CANopen Slave station module
SM277C



PROFINET slave station module
SM277PN

PROFIBUS-DP Slave station module
SM277A/SM277B

Expansion board

Expansion board
EBH-AMS/CAN/RS485

Technaical Specifications

Product model		M228IL	M228ML	M226SM	M226ES
Order number		CTMC 218-3AI35-0X60	CTMC 218-3AM35-0X60	CTMC 216-1AS35-0X24	CTMC 216-2AE35-0X40
Physical characteristics					
Dimensions (W x H x D)		200×116×69.5mm		137×80×62 mm	196×80×62 mm
Power loss		20W		11W	20W
Program memory		72KB+24KB+24KB			120KB+24KB+24KB
Data memory		64KB			64KB, permanently retained
Maximum number of expansion modules		7			
Maximum number of digits		(Expansion can expansion board up to 640DI/640DO)			
Maximum analog quantity		(Expansion can expansion board up to 194AI/194AQ)			
Data preservation		Permanently retained			
Power characteristics					
Rated input voltage		DC24V			
Impulse current		28.8VDC，12A			
Isolation (field vs. logic)		—			
Hold time (power down)		>10ms			
+5V Power output	Expansion bus	1A			
	BD expansion board bus	200mA (with switch control)			
	Communication	10mA 100Ω resistor			
Sensor +24V power output		Voltage range: 20.4-28.8VDC			
		Rated current: 300mA			
		Ripple noise: related to the input power supply			
		Isolation (sensor and logic) : No			
Power alarm		IsolationPower under15V alarm, alarm bit SM195.1			
Conventional characteristic					
Timer count		512			2048
1ms		4			36
10ms		272			752
100ms		236			1260
Counter		512			2048
Accumulator		4			4
Memory memory bits		256-Bit			8192-Bit
Memory memory bit power off hold time		Maintained permanently			maintained permanently
Local Storage area (L)		64 bytes independent			64 bytes independent
Sequence control relay (S)		256 bits			8192 bits
Time interrupt		Two 1ms resolutions			Two 1ms resolutions
Edge break		4 rising edges and/or 4 falling edges (10.0,10.1,10.2, 10.3)			10 rising edges/or 10 falling edges (10.0-10.7,11.0,11.1)
Boolean operation execution time		⩽0.05μs			
Floating-point operation execution time		⩽6.2μs			⩽1.5μs
System indicator light	SF indicator light (red)	ON: The system is faulty. OFF: The system is normal			
	DIAG indicator light (orange)	ON: program control, OFF: normal			
	RUN indicator (green)	ON: running, OFF: stopped			
	STOP indicator (orange)	ON: stop, OFF: run			
	RMC indicator (green)	ON: The remote control is connected,OFF: the remote control is disconnected			
	LINK/ACT indicator (green)	ON: Ethernet connection, blinking: transmission, OFF: disconnected			

Technical Specifications

Product model		M228IL	M228ML	M226SM	M226ES
Order number		CTMC 218-3AI35-0X60	CTMC 218-3AM35-0X60	CTMC 216-1AS35-0X24	CTMC 216-2AE35-0X40
Regular Features					
Real-time clock		Built-in			
Number of ports on the BD expansion board		1, supporting RS485 expansion board, CAN expansion board, analog expansion board			
Run switch		RUN/STOP			
External battery port		Supported, power less than 2.0V, alarm bit SM195.0			
Programming card		Support			
Memory card		TF card support			
Advanced features		Support Trace tracing function; Support C language programming.			
Operations and control functions		Support multi-axis multi-channel Linear/Circular/continuous interpolation function, Support single-axis motion control (location, speed and homing, etc.) functions;			
			Support electronic CAM and flying shear functions、PLCopen standard instruction library.		
Integrated communication capabilities (PPI/free port)					
Communication interface		2 communication ports;			
		PORT0:PPI/ free port, standard RS485 level			
		PORT1:PPI/ free port, standard RS485 level, leading out on the side			
		After plugging in the RS485 expansion board and restarting, the PORT0 is fixed as the PPI port and cannot be switched, and the free port FPORT0 is configured to the RS485 expansion board.			
PPI baud rate (baud)		9.6k、19.2k&187.5k			
Free port baud Rate (baud)		1.2k ~ 115.2k			
Maximum number of sites		32 stations per segment, 126 stations per network			
Maximum number of primary stations		32			
Point-to-point (PPI master mode)		Yes (NETR/NETW), up to 8 connections, each with a maximum communication of 200 bytes			
MPI connection		8 connections in total (1PG/10P),2 reserved			
Maximum cable length for each segment	Use an isolation repeater	The baud rate is 1,000m at 187.5k and 1,200m at 38.4k			
	Without isolation repeater	50 m			
Ethernet communication function					
Communication interface		1 standard Ethernet port			2 standard Ethernet ports
Communication standards		IEEE802.3 compliant			
Transmission speed		10Mbps/100Mbps adaptive			
Adaptive cross connect		Support			
Hardware interface		RJ45			
Type of protocol		UDP, TCP/IP, Modbus-TCP.MQTT, Profinet intelligent slave station, Socket, S7 protocols, support Ethernet communication between PLCS, support MiCo Ethernet programming lM226ES support EtherCAT			
Configuration mode		Download network block for configuration through programming software MagicWorks PLC, M226ES supports hardware configuration block configuration EtherCAT			
Application interface		Support MiCo service, UDP/PPI, TCP/Modbus, Socket programming, support S7 protocol, M226ES supports EtherCAT402 axis			
Maximum number of connections		8 UDP/PPI, regardless of master/slave			
		8 TCP/Modbus, regardless of master/slave			
		8 S7 protocols, regardless of master/slave station, 16 sockets to connect UDP and TCP 8 each			
		/			The EtherCAT interface supports up to 16 slave connections
Maximum single data transfer		Each UDP/PPI operation has a maximum of 200 bytes			
		TCP/Modbus up to 240 bytes per operation			
		Socket has a maximum of 512 bytes per operation			
		The S7 protocol has a maximum of 200 bytes per operation			
Network port startup time		5 to 10 seconds, depending on the network environment.			

Technaical Specifications

Product model		M228IL	M228ML	M226SM	M226ES
Order number		CTMC 218-3AI35-0X60	CTMC 218-3AM35-0X60	CTMC 216-1AS35-0X24	CTMC 216-2AE35-0X40
Ethernet communication function					
Program memory	RMC	On: The remote server is successfully connected			
		Off: The remote is not connected or the remote is not enabled			
	LINK/ACT	On: The network port hardware is connected			
		Blinking: Data is being exchanged			
		Off: The network port is disconnected			
Communication cable length		100 Mbit/s. Cable type: CAT5e or higher			
Ip address reset function		Turn the running switch five times within 2 seconds			
Firmware upgrade function		Use MagicWorks PLC and MiCo to upgrade firmware remotely from company servers over Ethernet			
I/0 features					
Local digit input points		36		14	24
Type of input		Drain type/source type			
Local digital output points		24		10	16
Type of output		Drain type			
Digit 1/0 mapping area		640DI/640DQ(including CAN communication dedicated image area)			
Analog 1/0 mapping area		194AI/194AQ(including CAN communication dedicated image area)			
Max number of expanded I/O modules allowed		7			
Pulse capture input		36		14	Nm support
High-speed counter	Totality	6		4	6
	Single-phase counter	6×200KHz		4×200KHz	6×200KHz
	AB phase counter	6×100KHz		4×100KHz	6×100KHz
Integrated Communication Function (CANopen)- Used when expanding the CAN communication board model CTH2-CAN-01S2-EB					
Communication interface		1 (8 Pin terminals) "See CANopen communication interface table"			
Transmission rate (kbps)		1000	800	500	250	125	50	20
Maximum length (m)		25	50	100	250	500	1000	2500
Max station address		127						
Site address range		1-127						
Max number of master and slave stations		32						
Configuration mode		CAN configuration blocks and EDS files						
Max-number access		Ordinary IO			CANopen dedicated IO		
		/	Number of bytes	Memory origin address	/	Number of bytes	Memory origin address
		Input	16	IB0	Input	64	IB16
		Output	16	QB0	Output	64	QB16
Max-analog access		Ordinary IO			CANopen专用IO		
		/	Number of bytes	Memory origin address	/	Number of bytes	Memory origin address
		Input	32	AIW0	Input	162	AIW64
		Output	32	AQW0	Output	162	AQW64
Integrated Communication Function (CANfree) - Used when expanding the CAN communication board CTH2-CAN-01S2-EB								
Communication Protocol		CANfree						
Mode of use		Supported by internal library directives						

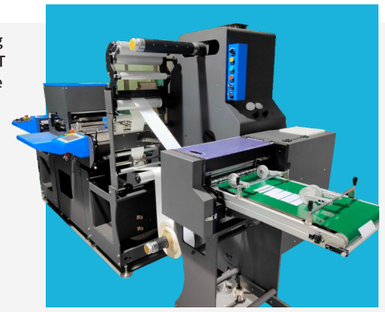
Technaical Specifications

Product model	M228IL	M228ML	M226SM	M226ES
Order number	CTMC 218-3AI35-0X60	CTMC 218-3AM35-0X60	CTMC 216-1AS35-0X24	CTMC 216-2AE35-0X40
Digital input characteristics				
The machine integrates digital quantity input points	36		14	24
Type of input	Drain type/source type			
Rated voltage	24DVC			
Input voltage range	20.4~28.8 VDC			
Surge voltage	35 VDC, Last 0.5 seconds			
Logic 1 Signal (minimum)	15 VDC, 2.5mA			15 VDC, 3mA
Logic 0 signal (maximum)	5 VDC, 1mA			
Connect 2 lines close Switch Sensor (BERO) Allowable leakage current (Max.)	1mA			
Input filter	10.0 to 12.3 supports the following parameters: 0.2us, 0.4us, 0.8us, 1.6us, 3.2us, 6.4us, 12.8us, 0.2ms, 0.4ms, 0.8ms, 1.6ms, 3.2ms, 6.4ms,12.8ms, default is 6.4ms 12.4 to 14.3 Support the following parameters: 0.2ms, 0.4ms, 0.8ms, 1.6ms, 3.2ms, 6.4ms, 12.8ms, default 6.4ms			
Isolation (field vs. logic) Isolation group	500 VAC, 1min			
Simultaneous connected inputs	36		14	24
Maximum cable length	Shielding :500 m (standard input); 50m (high speed counter input)			
	Unshielded :300 m (standard input)			
Digital output characteristics				
The machine integrates digital output points	24		10	16
Output type	Drain type			
Output rated voltage	DC：24V			
Output voltage range	DC：5~30V			
Maximum current	6A			
Output current per common end (Max)	0.5A			
Leakage current (Max.)	10uA			
Surge currentLamp	8A, 100ms			
loadOn-resistance	5W			
Output delay	Typical value 0.15Ω, maximum 0.32Ω			
(Max.)Disconnect to connect/connect to disconnect	Disconnect to connected:			
	0.2us (Q0.0~Q1.3)		0.2us (Q0.0~Q1.1)	0.2us (16 Q point)
	15us (Q1.4~Q2.7)		--	--
	Connected to disconnected:			
	2us (Q0.0~Q1.3)		2us (Q0.0~Q1.1)	2us (16 Q point)
	130us (Q1.4~Q2.7)		--	--
High speed pulse output	6*200KHz (Pulse/Dir)		5*200KHz (Pulse/Dir)	8(Pulse/Dir)/10(Pulse)*200KHz
Output frequency (Max)	200KHz (Q0.0~Q1.3), 1KHz (Q1.4~Q2.7)		200KHz (Q0.0~Q1.1)	200kHz (Q0.0~Q1.7)
Outputs that are switched on simultaneously	All output points			16
Two outputs in parallel	not supported			
Maximum cable Length: Shield	500m			
Maximum cable Length: Unshielded	150m			

Typical Applications

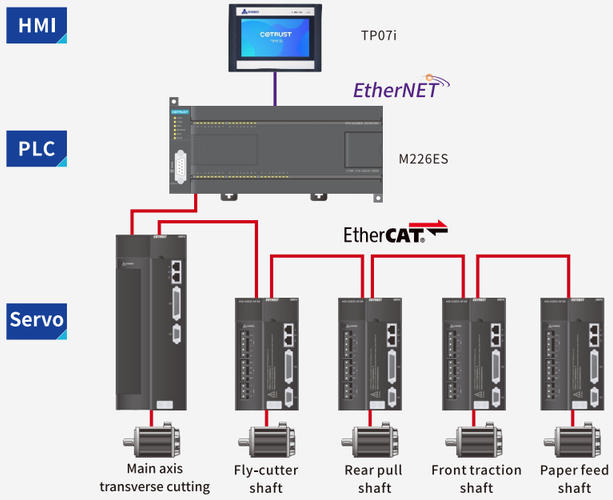
Packaging and printing equipment: die-cutting machine, labeling machine, etc. Logistics equipment: package table, seeding wall machine, etc; Textile equipment: textile and garment sewing machinery; 3C electronic production equipment, lithium battery equipment,Winding equipment, glass edging cutting equipment, cutting equipment, sawing and marking equipment, photovoltaic production equipment, rotary cutting machinery, woodworking machinery and other automation equipment.

Printing industry - die cutting machine



COTRUST Advantage

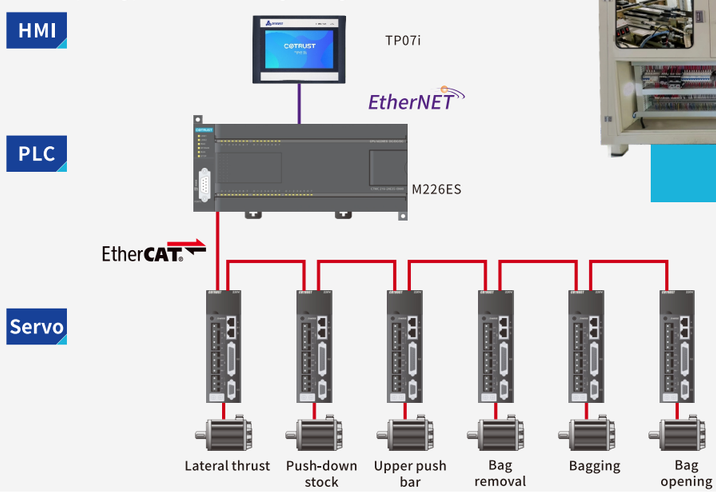
The die cutting length can be adjusted arbitrarily, and the speed matching stability is good.The operation speed of the equipment using the COTRUST control system is higher than that of similar models in the market, and the stable operation is 500pcs/ min. (The market generally 400pcs/ min)



Tissue packaging - medium press

COTRUST Advantage

Cyclic push bag, packaging speed greatly improvedAdaptive belt compensation function, no need for the user to set complex parameters, to ensure that each bag can accurately walk to the opening position after taking the bag.

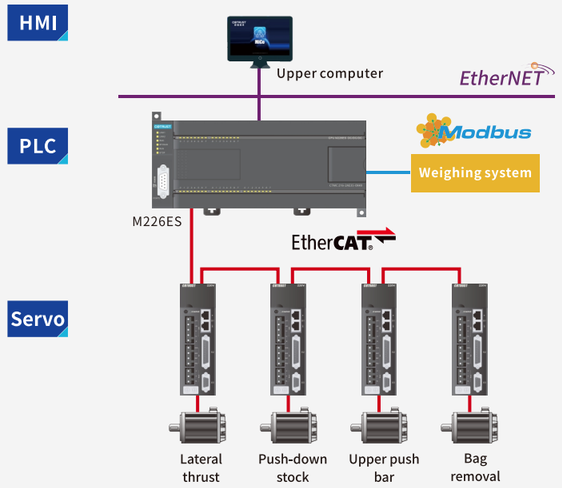


Typical Applications

Logistics industry - supply desk

COTRUST Advantage

M226ES CPU+A4N high performance bus servo; EtherCAT bus communication control, PLC to servo full network cable connection, high communication efficiency; Support MiCo remote platform, access to EtherNET network, can realize remote monitoring, remote programming, convenient for customers remote debugging and maintenance.



Order number

CTMC Series CPU		
M226ES:	Bus motion control CPU, support 16 EtherCAT bus shafts, support 8/10 *200KHz motion control output, 24DI/16DO transistor drain output, 120KB+24KB+24KB program space /64KB data space, 24VDC power supply, 2 PPI and free communication port can be switched, 1 EtherNET communication port, 1 EtherCAT bus communication port (CAN be configured as EtherNET), support CAN, RS485 and analog expansion board; Support Profinet intelligent slave station; Support network port online firmware upgrade; Support C language programming; Support Trace tracing function; Support single axis motion control (such as location, speed and homing, etc.) functions; Support multi-axis multi-channel linear/Circular/continuous interpolation, electronic gear, electronic CAM and flying shear function; Support PLCopen standard instruction library.	CTMC 216-2AE35-0X40
M226SM:	Motion control CPU, support 5 axis *200KHz motion control output, support 4 channels *200KHz high-speed counter, 14DI/10DO transistor drain output, 72KB+24KB+24KB program space /64KB data space, 24VDC power supply, 2 PPI and free communication port can be switched, 1 Ethernet communication port, Support CAN, RS485 and analog expansion board; Support network port online upgrade firmware; Support C language programming; Support Trace tracing function; Support single axis motion control (location, speed and homing) function, support linear/Circular/continuous interpolation function; Support electronic CAM and flying shear function; Support PLCopen standard instruction library; Support Profinet intelligent slave station.	CTMC 216-1AS35-0X24
M228ML:	Motion control CPU, support 6 channels *200KHz motion control output, 36DI/24DO transistor drain output, 72KB+24KB+24KB program space /64KB data space, 24VDC power supply, 2 PPI and free communication port can be switched, 1 Ethernet communication port, Support CAN, RS485 and analog expansion board; Support network port online upgrade firmware; Support C language programming; Support Trace tracing function; Support single axis motion control (location, speed and homing, etc.) functions; Support multi-axis multi-channel linear/Circular/continuous interpolation functions; Support PLCopen standard instruction library; Support Profinet intelligent slave station.	CTMC 218-3AM35-0X60
M228IL:	Motion control CPU, support 6 channels *200KHz motion control output, 36DI/24DO transistor drain output, 72KB+24KB+24KB program space /64KB data space, 24VDC power supply, 2 PPI and free communication port can be switched, 1 Ethernet communication port, Support CAN, RS485 and analog expansion board; Support network port online upgrade firmware; Support C language programming; Support Trace tracing function; Support single axis motion control (location, speed and homing, etc.) functions; Support multi-axis multi-channel linear/Circular/continuous interpolation functions; Support COTRUST motion control library; Support Profinet intelligent slave station.	CTMC 218-3AI35-0X60