CHANGDA TONG
SCIENCE & TECHNOLOGY

$\mathcal{T}$- 1200

T-1200

Product
manual

Tianjin Changdatong Technology Co., LTD

Founded in 2016, Tianjin Changdatong Technology Co., Ltd. is an innovative technology-based enterprise, integrating R&D, production, sales and service. The main products are programmable controllers, data acquisition modules, switches, industrial touch screens and big data platforms.

At present, the products have reached strategic cooperation with the world's top 500 enterprises and have been applied in many metallurgical enterprises. It is the first domestic enterprise to apply programmable controllers, data acquisition modules, switches, and industrial touch screens in the main process sections of metallurgy.

The company's vision and mission is to "become the backbone of the domestic independent industrial control product field".

Its market positioning is "to be a leading brand of completely independent domestic industrial control products, with the best cost-effective products".

T-1200 Motion controller

catalogue

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The T-1200 is a general-purpose programmable controller with SoftMotion control that controls multiple motion axes via EtherCAT bus.

The servo adopts bus control type servo, and the IO expansion rack is also connected to the EtherCAT Ethernet port of the T-1200 controller through EtherCAT bus.

EtherCAT protocol is a real-time protocol based on industrial Ethernet, which is widely used, with excellent performance, flexible topology and simple configuration.

Due to the adoption of Ethernet technology, the network scale and integration ability have broken through the limitations of the traditional fieldbus, and can also achieve the communication technology and modern high-performance industrial PC match.

Motion controller T-1200

- **Support third-party EtherCAT slave station interconnection, flexible configuration, suitable for distributed and centralized control occasions, support up to 32 axis EtherCAT bus motion control, 64 EtherCAT slave station.**
- **Supports two RS485 communications and Ethernet Modbus-TCP.**
- **Body I/O,24 input, 16 output.**
- **There are three types to choose from.**

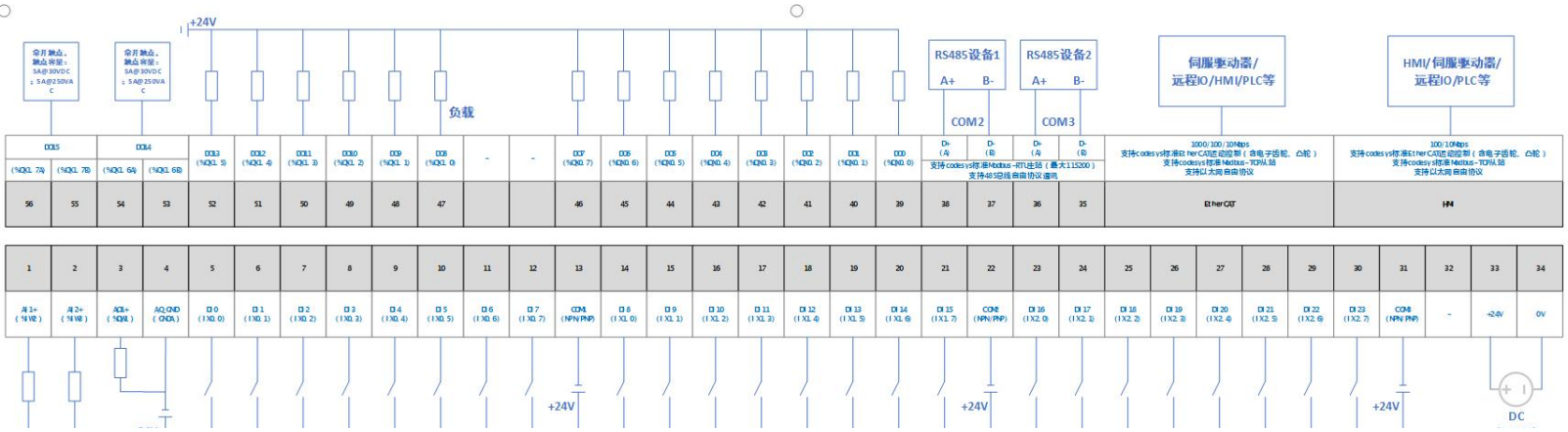
Technical specification

Product model			T-1200-A	T-1200-B	T-1200-C
processor			Main frequency 766MHz	Main frequency 766MHz	The main frequency is 1.2GHz
Basic function	Communication function	RJ45 port 1	1000M communication rate; EtherCAT master and Modbus-TCP slave	1000M communication rate; EtherCAT main station, Modbus-TCP secondary station	1000M communication rate; EtherCAT main station, Modbus-TCP secondary station
		RJ45 port 2	100M communication speed; EtherCAT, slave station of Modbus-TCP	100M communication speed; EtherCAT, slave station of Modbus-TCP	1000M communication rate; EtherCAT, slave station of Modbus-TCP
		RS-485	Route 2, Modbus-RTU main station	Route 1, Modbus-RTU main station	Route 1, Modbus-RTU main station
	Body I/0	Input points	24		
		Output points	16(npn)	16(pnp)	16(npn)
	EtherCAT master station with axle capability		Up to 20 axes	Up to 20 axes	Up to 32 axes
	Expansion capability		64 EtherCAT slave stations		
Programming mode			ST, SFC, FBD, CFC, LD and IL six programming languages		
Power-off hold			32KB		
User program capacity			64M		
Memory (running)			512M		
Storage space			8G		
Power input			DC24V		
NPN type IO driver capability			QX0.0~QX0.7:50mAIQX1.0~QX1.5:65mA		
PNP type IO drive capability			QX0.0~QX1.5:1A		
Overall dimensions (mm)			214x150x40		

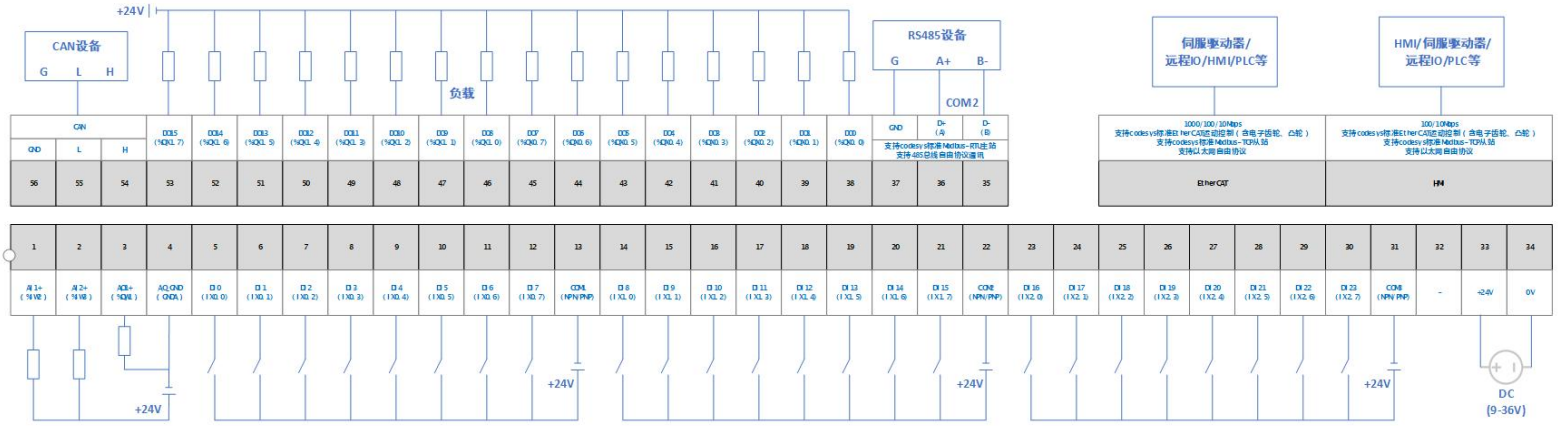
Interface arrangement and signal definition

T-1200 Motion controller					
port	Channel name	netname	type	Feature	remark
EtherCAT	ETH1	gem0	communication	Communication with servo/remote IO etc	Default IP address: 192.168.10.2
HMI	ETH2	axienet0	communication	Communication with HMI/ Remote IO etc	Default IP address: 192.168.11.2
1	AI1	%IW2	input	Analog input 1	0~20mA（12-bit）
2	AI2	%IW3	input	Analog input 2	0~20mA（12-bit）
3	AO1	%QW1	input	Analog input 1	0~20mA（12-bit default）
4	GNDA	simulatively	simulatively	simulatively	simulatively
5	DI0	%IX0.0	input	Input 0 for group 1	Source/drain input
6	DI1	%IX0.1	input	Input 1 for group 1	Source/drain input
7	DI2	%IX0.2	input	Input 2 for group 1	Source/drain input
8	DI3	%IX0.3	input	Input 3 for group 1	Source/drain input
9	DI4	%IX0.4	input	Input 4 for group 1	Source/drain input
10	DI5	%IX0.5	input	Input 5 for group 1	Source/drain input
11	DI6	%IX0.6	input	Input 6 for group 1	Source/drain input
12	DI7	%IX0.7	input	Input 7 for group 1	Source/drain input
13	COM1	0V/24V	Power source	Common end	Connect to 0V or 24V
14	DI8	%IX1.0	input	Input 0 for group 2	Source/drain input
15	DI9	%IX1.1	input	Input 1 for group 2	Source/drain input
16	DI10	%IX1.2	input	Input 2 for group 2	Source/drain input
17	DI11	%IX1.3	input	Input 3 for group 2	Source/drain input
18	DI12	%IX1.4	input	Input 4 for group 2	Source/drain input
19	DI13	%IX1.5	input	Input 5 for group 2	Source/drain input
20	DI14	%IX1.6	input	Input 6 for group 2	Source/drain input
21	DI15	%IX1.7	input	Input 7 for group 2	Source/drain input
22	COM2	0V/24V	Power source	Common end	Connect to 0V or 24V
23	DI16	%IX2.0	input	Input 0 for group 3	Source/drain input
24	DI17	%IX2.1	input	Input 1 for group 3	Source/drain input
25	DI18	%IX2.2	input	Input 2 for group 3	Source/drain input
26	DI19	%IX2.3	input	Input 3 for group 3	Source/drain input
27	DI20	%IX2.4	input	Input 4 for group 3	Source/drain input
28	DI21	%IX2.5	input	Input 5 for group 3	Source/drain input
29	DI22	%IX2.6	input	Input 6 for group 3	Source/drain input
30	DI23	%IX2.7	input	Input 7 for group 3	Source/drain input
31	COM3	0V/24V	Power source	Common end	Connect to 0V or 24V
32	+	+24V	Mains positive	9~36V（6W）	Power input
33	-	0V	Mains negative		
34	D-	B-	communication	Serial port RS485-	Supports codesys standard Modbus-RTU master station Support 485 bus free protocol
35	D+	A+	communication	Serial port RS485+	
36	D-	B-	communication	Serial port RS485-	
37	D+	A+	communication	Serial port RS485+	
38	DO0	%QX0.0	exportation	Group 1 outputs 0	Leaky, low active
39	DO1	%QX0.1	exportation	Group 1 outputs 1	Leaky, low active
40	DO2	%QX0.2	exportation	Group 1 outputs 2	Leaky, low active
41	DO3	%QX0.3	exportation	Group 1 outputs 3	Leaky, low active
42	DO4	%QX0.4	exportation	Group 1 outputs 4	Leaky, low active

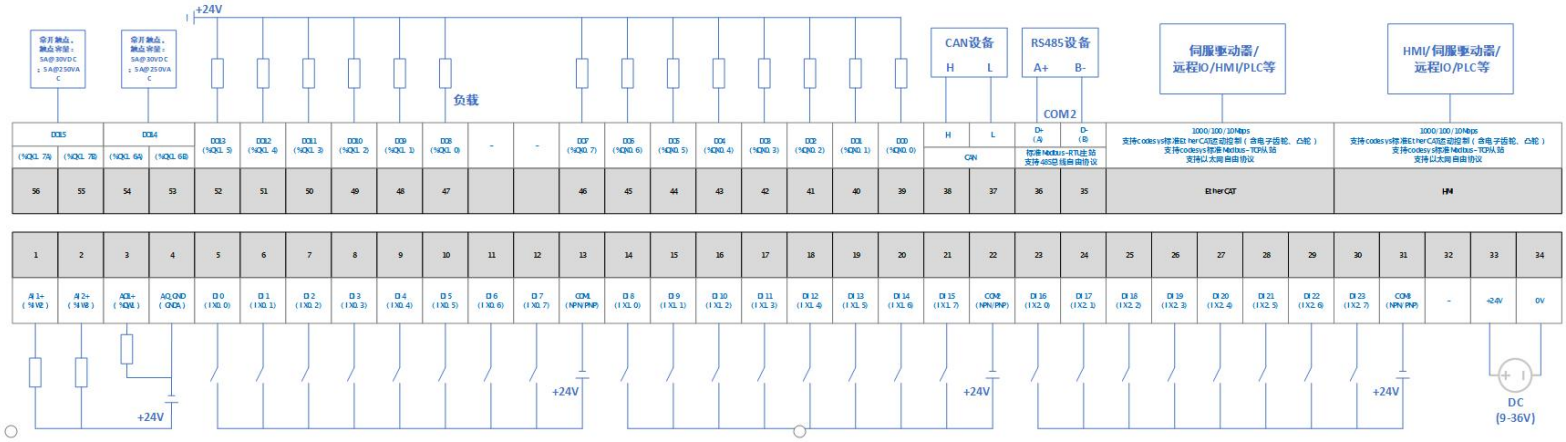
Main wiring diagram



T-1200-A



T-1200-B



T-1200-C

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