

CT-222H 32 channels digital output/24VDC/PNP

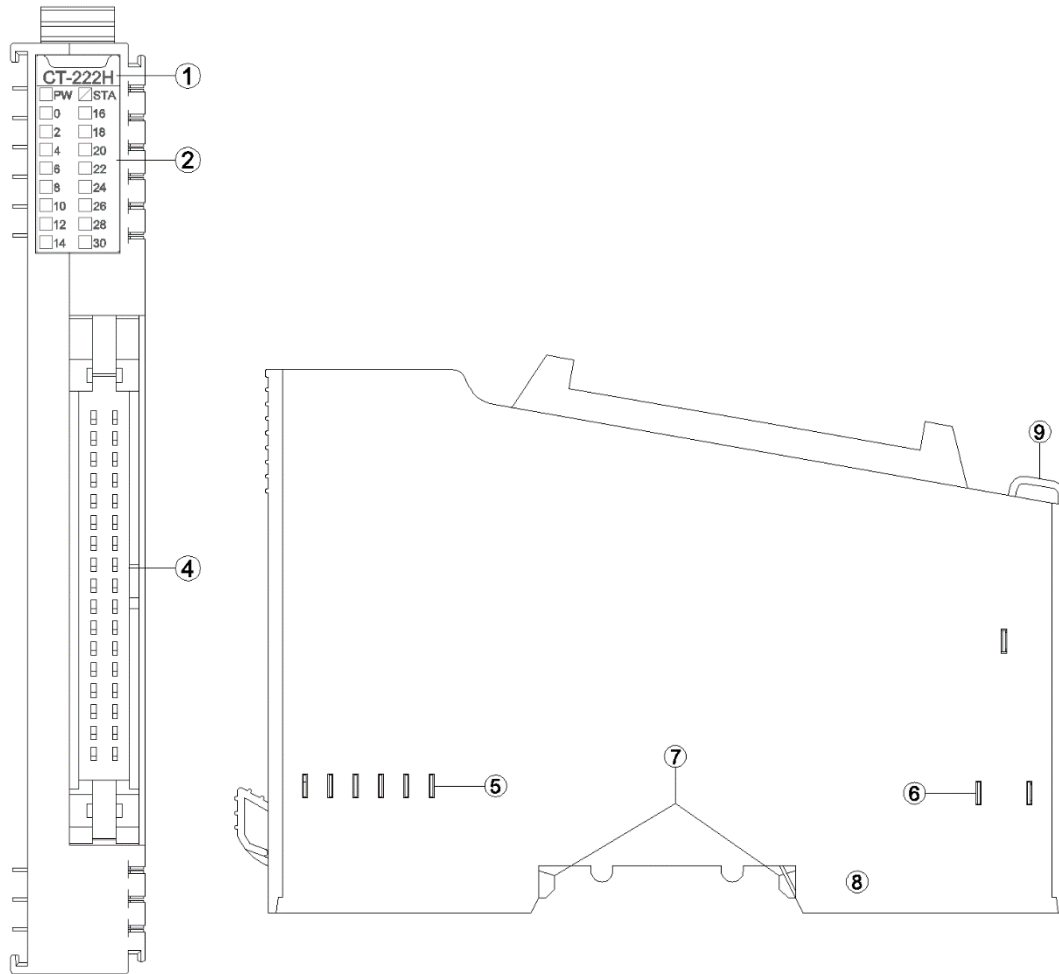
1 Module features

- ◆ the module supports 32 channels digital output; the output voltage is 24VDC and the output high level is valid.
- ◆ module can drive field equipment. (relay, solenoid valve, etc.)
- ◆ the internal bus of the module and field output are using opto-coupler.
- ◆ the module carries 32 digital output channel LED indicator light.
- ◆ the module has the functions of thermal shutdown and overcurrent protection.
- ◆ the module supports short circuit protection and overload protection.

2 Technical parameters

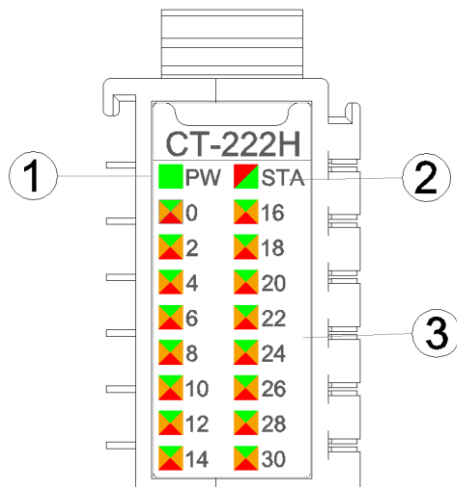
General Parameters	
Power	Max.175mA@5.0Vdc
Isolation	I/O to internal bus: opto-couple isolation (3KVrms)
Field Power	Nominal:24Vdc, Range:22-28Vdc
Wiring	34P male connector 2.54mm Pin header
Mounting Type	35mm DIN-Rail
Size	115*14*75mm
Weight	65g
Environment Specification	
Operational Temperature	-40~85°C
Operational Humidity	5%-95% (No Condensation)
Ingress Protection Rating	IP20
Output Parameters	
Channel Number	32 channels source type output
LED Indicator	32 channel output LED indicator
Rated Current	Typical value: 300mA
Leakage Current	Max: 10uA
Output Impedance	<200mΩ
Output Delay	OFF to ON: Max.100us ON to OFF: Max.150us
Protection	Overtemperature shutdown: typical value is 135°C Overcurrent protection: typical value 1.1A Short circuit protection support

3 Hardware interfaces



- ① Module Type
- ② State indicator
- ④ 34P male connector
- ⑤ Internal Bus
- ⑥ Field Power
- ⑦ Buckle
- ⑧ Grounding Spring Sheet
- ⑩ Fixed Wiring Harness

3.1 LED indicator definition



- ① Power LED indicator (green)
- ② Module State LED indicator (red/green)
- ③ Output channel LED indicator (green/red/orange)

PW Power State	Definition
ON	Internal bus power supply normal
OFF	Internal bus power supply failure
STA Module State	Definition
Green slow flash (2.5 Hz)	Module internal bus is not started
Red slow flash (2.5 Hz)	Module internal bus offline
ON (GREEN)	Operation normal
Flash (2.5 Hz) (RED/GREEN)	updating mode
Flash (10 Hz) (RED/GREEN)	firmware update
Double Flash (RED)	Module exception has been soft-restarted
0-31 channel indicator LED	Definition
ON (GREEN)	Indicates that the output channel signal is valid
ON (RED)	Indicates that the output channel +1 signal is valid
ON (ORANGE)	Indicates that the output channel and channel +1 signal are valid
OFF	Output signal is invalid

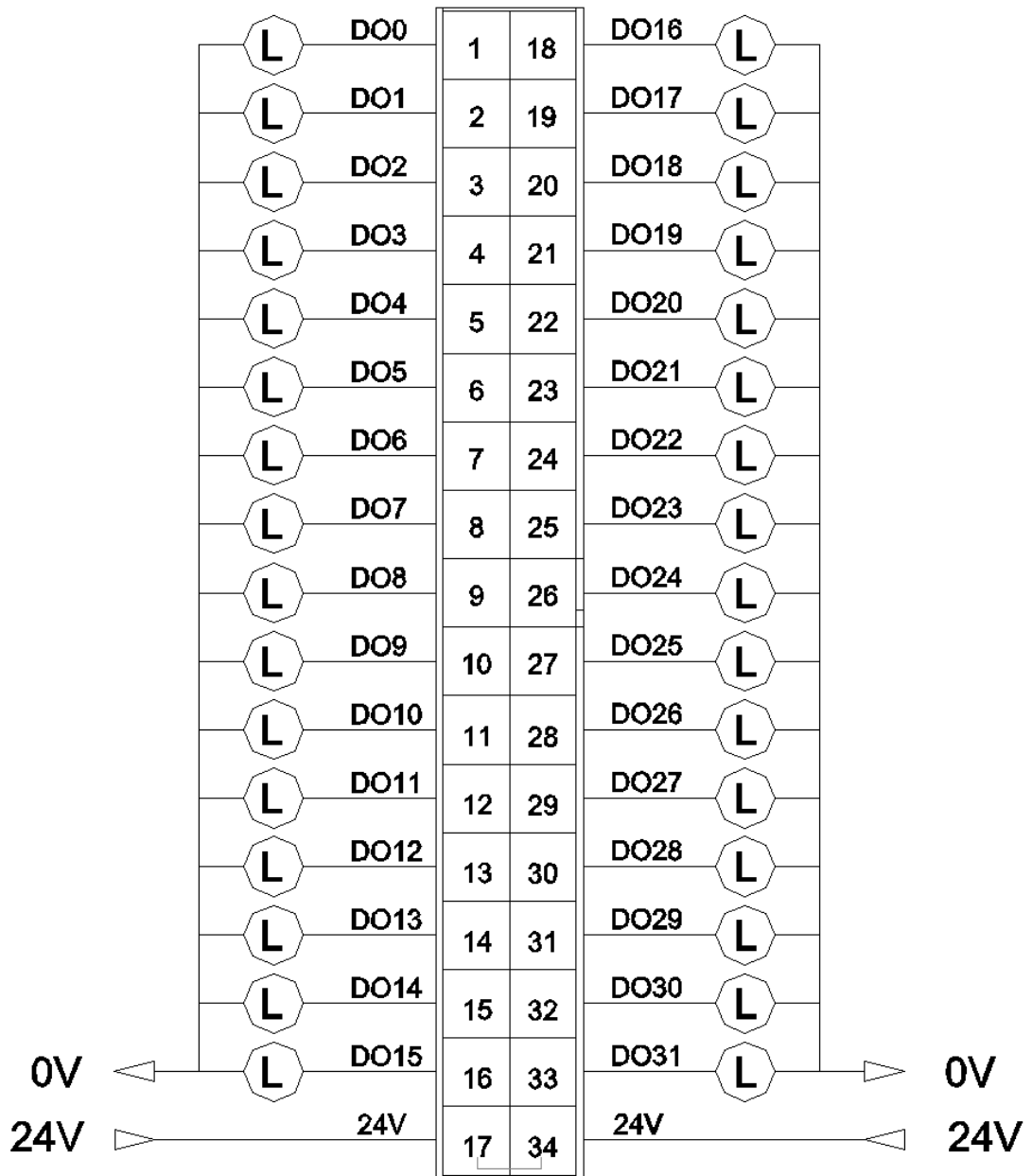
3.2 Terminal definition

Description	Symbol	Terminal Number	Terminal Number	Symbol	Description
Signal Output	DO0	1	18	DO16	Signal Output
	DO1	2	19	DO17	
	DO2	3	20	DO18	

	DO3	4	21	DO19	
	DO4	5	22	DO20	
	DO5	6	23	DO21	
	DO6	7	24	DO22	
	DO7	8	25	DO23	
	DO8	9	26	DO24	
	DO9	10	27	DO25	
	DO10	11	28	DO26	
	DO11	12	29	DO27	
	DO12	13	30	DO28	
	DO13	14	31	DO29	
	DO14	15	32	DO30	
	DO15	16	33	DO31	
24V	24V	17	34	24V	24V

Pins 17 and 34 are internally short-circuited.

4 Wiring



Terminals 17 and 34 are internally short-circuited

5 Process data definition

Output data								
Bit No	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Byte 0	DO Ch#7	DO Ch#6	DO Ch#5	DO Ch#4	DO Ch#3	DO Ch#2	DO Ch#1	DO Ch#0
Byte 1	DO Ch#15	DO Ch#14	DO Ch#13	DO Ch#12	DO Ch#11	DO Ch#10	DO Ch#9	DO Ch#8
Byte 2	DO Ch#23	DO Ch#22	DO Ch#21	DO Ch#20	DO Ch#19	DO Ch#18	DO Ch#17	DO Ch#16
Byte 3	DO Ch#31	DO Ch#30	DO Ch#29	DO Ch#28	DO Ch#27	DO Ch#26	DO Ch#25	DO Ch#24

Data description:

DO Ch#(0-31): when this bit is 1, the corresponding channel output signal is valid, the output is high level, and the output is invalid when it is 0.

0: Output signal is invalid

1: Output signal is valid

6 Configuration parameter definitions

Configuration parameters								
Bit No	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Byte 0	Fault Action for Output Ch#7	Fault Action for Output Ch#6	Fault Action for Output Ch#5	Fault Action for Output Ch#4	Fault Action for Output Ch#3	Fault Action for Output Ch#2	Fault Action for Output Ch#1	Fault Action for Output Ch#0
Byte 1	Fault Action for Output Ch#15	Fault Action for Output Ch#14	Fault Action for Output Ch#13	Fault Action for Output Ch#12	Fault Action for Output Ch#11	Fault Action for Output Ch#10	Fault Action for Output Ch#9	Fault Action for Output Ch#8
Byte 2	Fault Action for Output Ch#23	Fault Action for Output Ch#22	Fault Action for Output Ch#21	Fault Action for Output Ch#20	Fault Action for Output Ch#19	Fault Action for Output Ch#18	Fault Action for Output Ch#17	Fault Action for Output Ch#16
Byte 3	Fault Action for Output Ch#31	Fault Action for Output Ch#30	Fault Action for Output Ch#29	Fault Action for Output Ch#28	Fault Action for Output Ch#27	Fault Action for Output Ch#26	Fault Action for Output Ch#25	Fault Action for Output Ch#24

Byte 4	Fault Value for Output Ch#7	Fault Value for Output Ch#6	Fault Value for Output Ch#5	Fault Value for Output Ch#4	Fault Value for Output Ch#3	Fault Value for Output Ch#2	Fault Value for Output Ch#1	Fault Value for Output Ch#0
Byte 5	Fault Value for Output Ch#15	Fault Value for Output Ch#14	Fault Value for Output Ch#13	Fault Value for Output Ch#12	Fault Value for Output Ch#11	Fault Value for Output Ch#10	Fault Value for Output Ch#9	Fault Value for Output Ch#8
Byte 6	Fault Value for Output Ch#23	Fault Value for Output Ch#22	Fault Value for Output Ch#21	Fault Value for Output Ch#20	Fault Value for Output Ch#19	Fault Value for Output Ch#18	Fault Value for Output Ch#17	Fault Value for Output Ch#16
Byte 7	Fault Value for Output Ch#31	Fault Value for Output Ch#30	Fault Value for Output Ch#29	Fault Value for Output Ch#28	Fault Value for Output Ch#27	Fault Value for Output Ch#26	Fault Value for Output Ch#25	Fault Value for Output Ch#24

Data description:

Fault Action for Output Ch#(0-31): Fault Output mode. When the IO module detects an internal bus exception and fails to communicate with the adapter. And the module will turn to offline mode, so the output data is processed in this way. (default: 0)

0: keep the last time output State.

1: output fault value.

Fault Value for Output Ch#(0-31): when the Fault Output mode is 1, this bit sets the Fault Output Value, and this setting value will be outputted when the internal bus of IO module is offline. (default: 0)

0: Output low level.

1: Output high level.

A Dimension drawing

