Name：EM253 motion control expand module

Order ： CTS7 253-1BH32

Norm：2*200KHz input，single phase or A/B，2*200KHz pulse output

Order Data

Specification	Order No.
TrustPLC CTSC-200series motion control expand module，24VDC power supply，8DI*24VDC, 8DO*NPN, 2*200KHz input，single phase or A/B，2*200KHz pulse output	CTS7 253-1BH32

Performance Parameters

Order No.		CTS7 253-1BH32
Physical Features		
Dimension(W×H×D)		71×62×80mm
Power Dissipation		
Power input		20.4 to 28.8VDC，with anti- reverse connection protection
24 VDC Sensor Power supply		72.7mA
+5V power for the extended bus		217mA
Input Features		
Input type		Sink/Source（IEC type 1/Sink）
Number of integrated digital inputs		8
voltage		24 VDC when 5mA
Maximum continuous permissible voltage		30 VDC
Surge voltage		35 VDC last 0.5 s
Logical 1 Signal (minimum)		When 2.72mA,15.6 VDC（I0.0、I0.1、I0.2、I0.4、I0.5、I0.6） When2.55mA,12.8VDC（I0.3、I0.7）
Logical 0 Signal (maximum)		When 2.69mA,15.4VDC（I0.0、I0.1、I0.2、I0.4、I0.5、I0.6） When 2.51mA,12.6 VDC（I0.3、I0.7）
Input lag		< 1.1us （I0.0、I0.1、I0.2、I0.4、I0.5、I0.6） < 1ms （I0.3、I0.7）
Leakage current allowed（maximum）		1mA
Isolation(field side and logical circuit) Optical Isolation group		√ 500 VAC，1 minute Refer to the Terminal Identification
High-speed input rate High speed counter logic1=16～26 VDC		200KHz（Single-phase,Dual phase）（I0.0、I0.4） 200KHz（A/B phase ）（I0.0 and I0.1、I0.4 and I0.5）
Simultaneous output		8
Cable length （maximum）	isolation	500m standard input，50m high-speed counter input
	Not isolation	300m standard input
Output Features		
Number of integrated Digital inputs		8
Type		Solid-MOSFET(Sink,NPN)

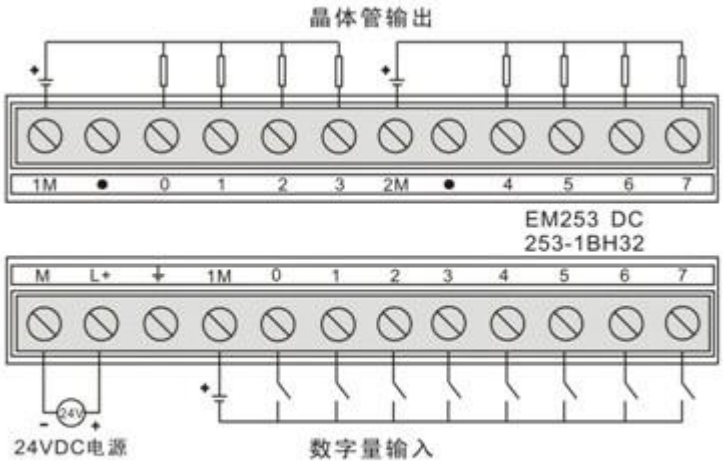
Power	24 VDC
Output voltage range	5 to 28.8 VDC
surge current（maximum）	8A last 100ms
Logical 1 Signal (minimum)	20 VDC
Logical 0 Signal (maximum)	0.1 VDC，10KΩ
Rated current（maximum）	0.5A
The current rating of every pin（maximum）	2.0A
Leakage current(maximum)	10μA
Lighting load（maximum）	3.5W
Induction clamping voltage	L+ 48 VDC，1W Power consumption
On resistance	0.3 Ω（0.6Ω maximum）
Isolation Optical （electrochemical, field side and logical circuit）isolation(Galvanic)	500 VAC，1 minute
Delay（maximum） Off to on On to off	0.2μs（Q0.0、Q0.1、Q0.2、Q0.3），50μs（Q0.4、Q0.5、Q0.6、Q0.7） 0.2μs（Q0.0、Q0.1、Q0.2、Q0.3），130μs（Q0.4、Q0.5、Q0.6、Q0.7）
Pulse frequency（maximum）	200KHz（Q0.0、Q0.2）
Outputs at the same time	Output all when 55°C
Two parallel outputs	only when the two outputs are in the same group
Maximum cable length Shielded Unshielded	500m(standard output) 150m(standard output)

Support Instruction

Table Instruction

function name	Instruction name	Support or not
MC253_INIT_DIR	Configurate motor direction instruction	Support
MC253_READ_POS	Read position instruction	Support
MC253_PTP_R	Single shaft relative motion instruction	Support
MC253_SPEED_CTRL	Speed control instruction	Support
MC253_SET_POS_ZERO	Software reset instruction	Support
MC253_SET_POS_PV	Setting target location instruction	Support
MC253_EXT_RESET_EN_EXT	External reset coordinate enabling instruction	Support
MC253_SET_MAX_ACCELE	Set maximum acceleration instruction	Support
MC253_PWM	Pulse width modulation instruction	Support
MC253_INIT	Motion control module initialization instruction	Support,must be use at initial
MC253_DO_CTRL	Control module output instruction	Support
MC253_READ_DI	Read module input state instruction	Support
MC253_HSC_INIT	Setting module high speed counter instruction	Support
MC253_READ_HSC	Read module high speed counter state instruction	Support

Wiring Diagram



CTS7 253-1BH 接线图

I/O State

I0.0	I0.1	I0.2	I0.3		I0.4	I0.5	I0.6	I0.7
MC253_HSC0 pulse input	MC253_HSC0 ternal direction signal	MC253_HCS0 set signal	Axis of motion 0 scram signal		MC253_HSC1Pulse input	MC253_HSC1External direction signal	MC253_HCS1Reset signal	Axis of motion 1 scram signal
Q0.0	**Q0.1**	**Q0.2**	**Q0.3**		**Q0.4**	**Q0.5**	**Q0.6**	**Q0.7**
Axis 0 pulse input	Axis 0 direction signal	Axis 1 pulse input	Axis 1 direction signal		Common outlet			

Use standard

1、Support Siemens Micro/win programming but PTO/PWM instruction.Used together CO-TRUST motion control lib :motion_ctrl_module_lib

2、EM253 support CTSC-200 series CPU,it is not compatible with Siemens CPU and CO-TRUST

3、Need to call file motion_ctrl_module_lib when use EM253 DI/DO.For example DI call MC253_READ_DI,DO call MC253_DO_CTRL

4、EM253 module occupancy analog address 4AI/4AQ,need to clear away the analog address when want to use

5、Distribute address in the symbol table,attention do not with these address conflict when programming

6、Must be called MC253_INIT instruction when call motion instruction