Delta CNC Controller ASCII

HMI Factory Setting:

Baud Rate: 9600. 7. Even. 1

Controller Station Number: 1

Control Area / Status Area: DT0/DT10

Applicable models: DOP-B / DOP-W / DOP-H / HMC series、DOP-100

Connection

a. RS-485

DOP 9 pin D-sub (RS-485)		Controller RS-485 Terminal
D+ (1)	———	D+
D- (6)	———	D-

Definition of PLC Read/Write Address

a. Registers

Type	Format Word No.(n); Bit No.(b) ; Axis No.(a) ; Code No.(c) ; Group No.(g); Parameter No.(p	Read/Write Range	Data Length	Note
T_Register	**T**n	**T**0 – **T**255	Word	
C_Register	**C**n	**C**0 – **C**63	Word	
D_Register	**D**n	**D**0 – **D**1535	Word	
WRMEM_Register	**WRMEM**n	**WRMEM**0 – **WRMEM**1023	Word	Read Only
WRWMEM_Register	**WRWMEM**n	**WRWMEM**0 – **WRWMEM**1023	Word	
VRWMEM_Register	**VRWMEM**n	**VRWMEM**0 – **VRWMEM**1023	Word	
HC_Register	**HC**n	**HC**64 – **HC**77	Double Word	
G_Register	**G**c/g	**G**0/0 – **G**8/19	Double Word	
MV_Register	**MV**n	**MV**10001 – **MV**11100	Double Word	

P_Register	**P**n/a	**P**0/0 – **P**75/9	Double Word	
PAR_Register (AH)	**WPAR**n.b/a	**WPAR**0.0/0 – **WPAR**9999.31/9	Double Word	
CUT_Register (AH)	**CUT**n/a	**CUT**1/0 – **CUT**100/9	Double Word	
SS_Register (AH)	**SS**n/a	**SS**12/0 –**SS**15/9	Double Word	
		SS41/0 –**SS**41/9		
BC_Register	**BC**n	**BC**0 – **BC**1279	Word	1
SP	**SP**n.a/g.p	**SP**0.0/0.0 – **SP**0.9/7.99	Word	Read Only

b. Contacts

Type	Format	Read/Write Range	Note
	Bit No. (b)		
X_Coil	**X**b	**X**0 – **X**511	
Y_Coil	**Y**b	**Y**0 – **Y**511	
T_Coil	**T**b	**T**0 – **T**255	
C_Coil	**C**b	**C**0 – **C**77	
M_Coil	**M**b	**M**0 – **M**3071	
A_Coil	**A**b	**A**0 – **A**511	唯讀
RMEM_Coil	**RMEM**n.b	**RMEM**0.0 – **RMEM**1023.15	唯讀
RWMEM_Coil	**RWMEM**n.b	**RWMEM**0.0 – **RWMEM**1023.15	
VRWMEM_Coil	**VWMEM**n.b	**VWMEM**0.0 – **VWMEM**1023.15	

1) Device address must be the multiple of 64.

Delta AS series PLC (Standard Modbus TCP)

HMI Factory Setting:

Controller IP Address: 192.168.0.1

Controller COM Port: 502

Controller Station Number: 1

Control Area / Status Area: D0/D10

Applicable models: DOP-B / DOP-W / DOP-H / HMC series、DOP-100

Connection

Standard Jumper Cable / Network Cable without jumper (Auto-detected by HMI)

Definition of PLC Read/Write Address

a. Registers

Type	Format	Read/Write Range	Data Length	Note
	Word No. (n)			
X_Register	Xn	X0 – X63	Word	
Y_Register	Yn	Y0 – Y63	Word	
S_Register	Sn	S0 – S2047	Word	1
M_Register	Mn	M0 – M8191	Word	1
SM_Register	SMn	SM0 – SM2047	Word	1
D_Register	Dn	D0 – D29999	Word	
SR_Register	SRn	SR0 – SR2047	Word	
E_Register	En	E0 – E9	Word	
T_Register	Tn	T0 – T511	Word	
C_Register	Cn	C0 – C511	Word	
HC_Register	HCn	HC0 – HC255	Double Word	

b. Contacts

Type	Format	Read/Write Range	Note
	Bit No. (b)		
X_Coil	Xn.b	X0.0 – X63.15	
Y_Coil	Yn.b	Y0.0 – Y63.15	
D_Coil	Dn.b	D0.0 – D29999.15	
S_Coil	Sb	S0 – S2047	
M_Coil	Mb	M0 – M8191	

Type	Format	Read/Write Range	Note
	Bit No. (b)		
SM_Coil	**SM**b	**SM**0 – **SM**2047	
T_Coil	**T**b	**T**0 – **T**511	
C_Coil	**C**b	**C**0 – **C**511	
HC_Coil	**HC**b	**HC**0 – **HC**255	

1) The device address must be the multiple of 16.

Delta AS series PLC (Standard Modbus)

HMI Factory Setting:

Baud Rate: 9600. 7. Even. 1.

Controller Station Number: 1

Control Area / Status Area: D0/D10

Applicable models: DOP-B / DOP-W / DOP-H / HMC series、DOP-100

Connection

a. RS-232

DOP series 9 pin D-sub (RS-232)		Controller 9 pin D-sub male (RS-232)
RXD (2)	———	(2) TXD
TXD (3)	———	(3) RXD
GND (5)	———	(5) GND

b. RS-485

DOP 9 pin D-sub (RS-485)		Controller RS-485 Terminal
D+ (1)	———	D+
D- (6)	———	D-

Definition of PLC Read/Write Address

a. Registers

Type	Format	Read/Write Range	Data Length	Note
	Word No. (n)			
X_Register	**X**n	**X**0 – **X**63	Word	
Y_Register	**Y**n	**Y**0 – **Y**63	Word	
S_Register	**S**n	**S**0 – **S**2047	Word	1
M_Register	**M**n	**M**0 – **M**8191	Word	1
SM_Register	**SM**n	**SM**0 – **SM**2047	Word	1
D_Register	**D**n	**D**0 – **D**29999	Word	

SR_Register	**SR**n	**SR**0 – **SR**2047	Word	
E_Register	**E**n	**E**0 – **E**9	Word	
T_Register	**T**n	**T**0 – **T**511	Word	
C_Register	**C**n	**C**0 – **C**511	Word	
HC_Register	**HC**n	**HC**0 – **HC**255	Double Word	

b. Contacts

Type	Format	Read/Write Range	Note
	Bit No. (b)		
X_Coil	**X**n.b	**X**0.0 – **X**63.15	
Y_Coil	**Y**n.b	**Y**0.0 – **Y**63.15	
D_Coil	**D**n.b	**D**0.0 – **D**29999.15	
S_Coil	**S**b	**S**0 – **S**2047	
M_Coil	**M**b	**M**0 – **M**8191	
SM_Coil	**SM**b	**SM**0 – **SM**2047	
T_Coil	**T**b	**T**0 – **T**511	
C_Coil	**C**b	**C**0 – **C**511	
HC_Coil	**HC**b	**HC**0 – **HC**255	

1) The device address must be the multiple of 16.

Mitsubishi FX5U Ethernet

人机默认值

控制器 IP 地址：192.168.0.1
控制器通讯端口：1025
控制器站号：0
控制区/状态区：D-0 / D-10
支持机种：DOP-B/HMC/H/W、DOP-100

控制器接线的说明

标准跳线/无跳线网络线 (HMI 自动侦测)

控制器 Read/Write 地址的定义

a. 寄存器

寄存器种类	符号格式 Word No.(n)	读写地址范围	数据长度	注
Input	**X**-n	**X**-0 – **X**-1777	Word	8 进位,2
Output	**Y**-n	**Y**-0 – **Y**-1777	Word	8 进位,2
Latch Relay	**L**-n	**L**-0 – **L**-32767	Word	2
Annunciator	**F**-n	**F**-0 – **F**-32767	Word	2
Step Relay	**S**-n	**S**-0 – **S**-8191	Word	2
Link Relay	**B**-n	**B**-0 – **B**-7FFF	Word	16 进位,2
Special Link Relay	**SB**-n	**SB**-0 – **SB**-7FF	Word	16 进位,2
Internal Relay	**M**-n	**M**-0 – **M**-32767	Word	2
Special Internal Relay	**SM**-n	**SM**-0 – **SM**-2047	Word	2
Timer Value	**TN**-n	**TN**-0 – **TN**-23087	Word	
Retentive Timer Value	**SN**-n	**SN**-0 – **SN**-23087	Word	
Counter Value	**CN**-n	**CN**-0 – **CN**-23087	Word	
Data Register	**D**-n	**D**-0 – **D**-4212735	Word	
Special Data Register	**SD**-n	**SD**-0 – **SD**-2047	Word	
Index Register	**Z**-n	**Z**-0 – **Z**-19	Word	
File Register	**R**-n	**R**-0 – **R**-32767	Word	

Link Register	**W-**n	**W-**0 – **W-**4047FF	Word	16 进位
Special Link Register	**SW-**n	**SW-**0 – **SW-**7FF	Word	16 进位

b. 接点

接点种类	符号格式	读写地址范围	注
	Bit No.(b)		
Input	**X-**b	**X-**0 – **X-**1777	8 进位
Output	**Y-**b	**Y-**0 – **Y-**1777	8 进位
Latch Relay	**L-**b	**L-**0 – **L-**32767	
Annunciator	**F-**b	**F-**0 – **F-**32767	
Step Relay	**S-**b	**S-**0 – **S-**8191	
Link Relay	**B-**b	**B-**0 – **B-**7FFF	16 进位
Special Link Relay	**SB-**b	**SB-**0 – **SB-**7FF	16 进位
Internal Relay	**M-**b	**M-**0 – **M-**32767	
Special Internal Relay	**SM-**b	**SM-**0 – **SM-**2047	
Timer Contact	**TS-**b	**TS-**0 – **TS-**23087	
Timer Coil	**TC-**b	**TC-**0 – **TC-**23087	
Retentive Timer Contact	**SS-**b	**SS-**0 – **SS-**23087	
Retentive Timer Coil	**SC-**b	**SC-**0 – **SC-**23087	
Counter Contact	**CS-**b	**CS-**0 – **CS-**23087	
Counter Coil	**CC-**b	**CC-**0 – **CC-**23087	
Data Register	**D-**n.b	**D-**0.0 – **D-**4212735.15	
File Register	**R-** n.b	**R-**0.0 – **R-**32767.15	
Link Register	**W-**n.b	**W-**0.0 – **W-**4047FF.F	16 进位

注1　此通讯协议必须先透过其编辑软件 GX Works 设定参数。详细设定方法请查阅 PLC 原厂使用手册。

注2　元件地址需为 16 的倍数。

Delta 15MC

HMI Factory Setting:

Baud Rate: 9600. 7. Even. 1

Controller Station Number: 1

Control Area / Status Area: %MW0/%MW10

Applicable models: DOP-B / DOP-W / DOP-H / HMC series、DOP-100

Connection

a. RS-232

DOP series 9 pin D-sub (RS-232)		Controller 15 pin D-sub Female (RS-232)
RXD (2)	———	(3) TXD
TXD (3)	———	(9) RXD
GND (5)	———	(5) GND

b. RS-485

DOP 9 pin D-sub (RS-485)		Controller 15 pin D-sub Female (RS-232)
D+ (1)	———	(11) D+
D- (6)	———	(12) D-

Definition of PLC Read/Write Address

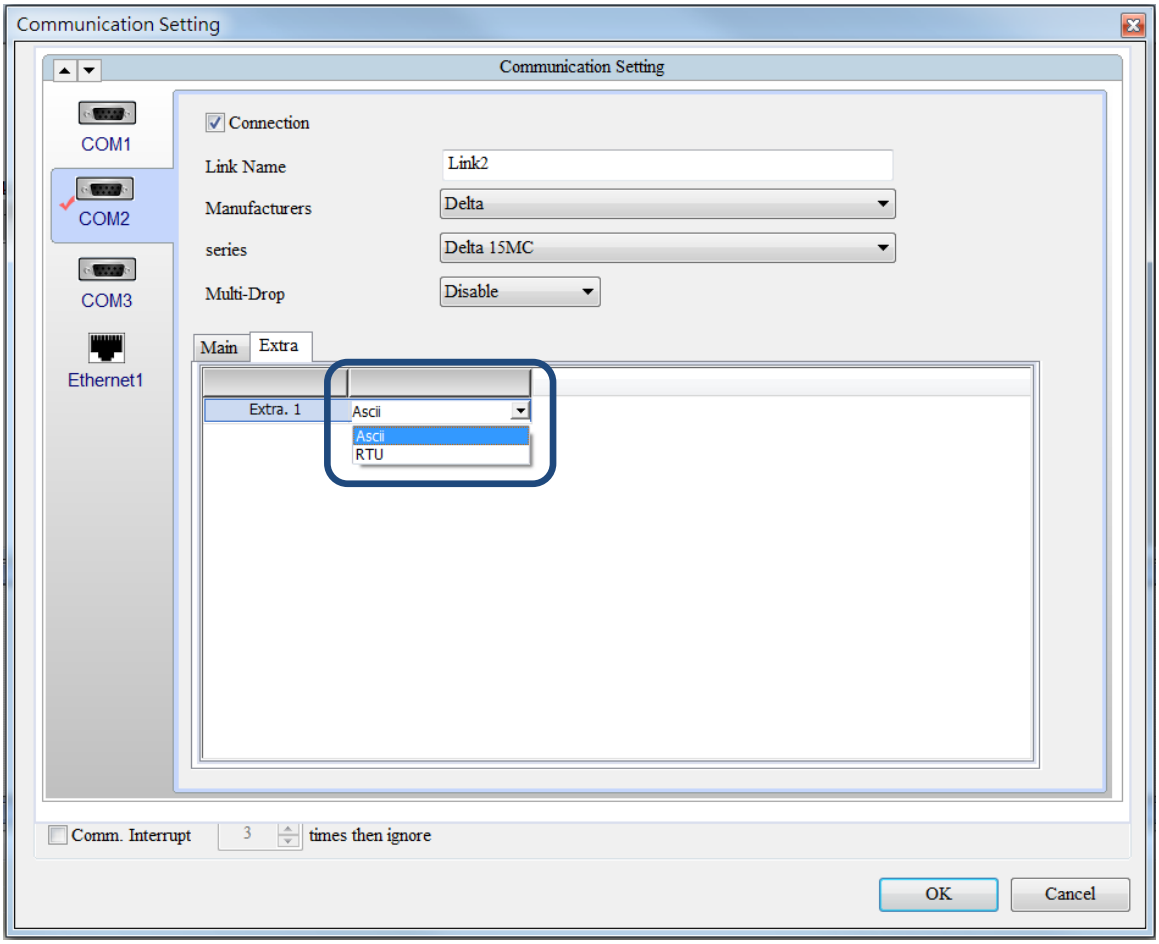
a. Registers

Type	Format	Read/Write Range	Data Length	Note
	Word No. (n)			
Input Relay	**%IW**n	**%IW**0 - **%IW**63	Word	Read Only
Output Relay	**%QW**n	**%QW**0 - **%QW**63	Word	
M_Data	**%MW**n	**%MW**0 - **%MW**65535	Word	
Input Relay	**%ID**n	**%ID**0 - **%ID**31	Double Word	Read Only
Output Relay	**%QD**n	**%QD**0 - **%QD**31	Double Word	
M_Data	**%MD**n	**%MD**0 - **%MD**32767	Double Word	

b. Contacts

Type	Format Byte No.(n) ; Bit No.(b)	Read/Write Range	Note
Input Relay	%IXn.b	%IX0.0 - %IX127.7	Read Only
Output Relay	%QXn.b	%QX0.0 - %QX127.7	
M_Data	%MXn.b	%MX0.0 - %MX131071.7	

1) Controller provides two communication mode to connect with Delta 15MC, there are ASCII and RTU. It can be selected in DOPSoft → Communication Setting → Mitsubishi FX3U Ethernet Controller→ Extra. 1 of Extra tab. Default is ASCII Protocol. Please use software Delta CANopen Builder to set communication mode of Delta 15MC.



Delta 15MC TCP

HMI Factory Setting:

Controller IP Address: 192.168.0.1

Controller Ethernet Port: 502

Controller Station Number: 1

Control Area / Status Area: %MW0/%MW10

Applicable models: DOP-B / DOP-W / DOP-H / HMC series、DOP-100

Connection

Standard Jumper Cable / Network Cable without jumper (Auto-detected by HMI)

Definition of PLC Read/Write Address

a. Registers

Type	Format	Read/Write Range	Data Length	Note
	Word No. (n)			
Input Relay	%IWn	%IW0 - %IW63	Word	Read Only
Output Relay	%QWn	%QW0 - %QW63	Word	
M_Data	%MWn	%MW0 - %MW65535	Word	
Input Relay	%IDn	%ID0 - %ID31	Double Word	Read Only
Output Relay	%QDn	%QD0 - %QD31	Double Word	
M_Data	%MDn	%MD0 - %MD32767	Double Word	

b. Contacts

Type	Format	Read/Write Range	Note
	Byte No.(n) ; Bit No.(b)		
Input Relay	%IXn.b	%IX0.0 - %IX127.7	Read Only
Output Relay	%QXn.b	%QX0.0 - %QX127.7	
M_Data	%MXn.b	%MX0.0 - %MX131071.7	