

2 Functions of Devices in DVP-PLC

SA/SX/SC series MPU:

Type	Device	Item	Range	Function	
Relay (bit)	X	External input relay	X0 ~ X177, 128 points, octal	Total 256 points Corresponds to external input points	
	Y	External output relay	Y0 ~ Y177, 128 points, octal		Corresponds to external output points
	M	Auxiliary Relay	General purpose	M0 ~ M511, 512 points (*1)	Total 4,096 points The contact can be On/Off in the program.
			Latched*	M512 ~ M999, 488 points (*3) M2000 ~ M4095, 2,096 points (*3)	
			Special purpose	M1000 ~ M1999, 1,000 points (some are latched)	
	T	Timer	100ms	T0 ~ T199, 200 points (*1) T192 ~ T199 for subroutine T250 ~ T255, 6 accumulative points (*4)	Total 256 points Timer indicated by TMR instruction. If timing reaches its target, the T contact of the same No. will be On.
			10ms	T200 ~ T239, 40 points (*1) T240 ~ T245, 6 accumulative points (*4)	
			1ms	T246 ~ T249, 4 accumulative points (*4)	
	C	Counter	16-bit counting up	C0 ~ C95, 96 points (*1) C96 ~ C199, 104 points (*3)	Total 235 points Counter indicated by CNT (DCNT) instruction. If counting reaches its target, the C contact of the same No. will be On.
			32-bit counting up/down	C200 ~ C215, 16 points (*1) C216 ~ C234, 19 points (*3)	
			For SA/SX, 32-bit high-speed counter	C235 ~ C244, 1-phase 1 input, 9 points (*3) C246 ~ C249, 1-phase 2 inputs, 3 points (*3) C251 ~ C254, 2-phase 2 inputs, 4 points (*3)	Total 16 points
			For SC, 32-bit high-speed counter	C235 ~ C245, 1-phase 1 input, 11 points (*3) C246 ~ C250, 1-phase 2 inputs, 4 points (*3) C251 ~ C255, 2-phase 2 inputs, 4 points (*3)	Total 19 points
S	Step point	Initial step	S0 ~ S9, 10 points (*1)	Total 1,024 points Used for SFC.	
		Zero return	S10 ~ S19, 10 points (used with IST instruction) (*1)		
		General purpose	S20 ~ S511, 492 points (*1)		
		Latched*	S512 ~ S895, 384 points (*3)		
		Alarm	S896 ~ S1023, 128 points (*3)		
Register (word data)	T	Present value of timer	T0 ~ T255, 256 points	When the timing reaches the target, the contact of the timer will be On.	
	C	Present value of counter	C0 ~ C199, 16-bit counter, 200 points C200 ~ C254, 32-bit counter, 50 points (SC: 53 points)	When the counting reaches the target, the contact of the counter will be On.	
	D	Data register	General purpose	D0 ~ D199, 200 points (*1) D5000~D9999, 5,000 points (*1) (Only supported by SX v.3.0 and above)	Total 5,000 points (SX v.3.0 and above: 10,000 points) Memory area for data storage; E, F can be used for index indication.
			Latched*	D200 ~ D999, 800 points (*3) D2000 ~ D4999, 3,000 points (*3)	
			Special purpose	D1000 ~ D1999, 1,000 points	
Index indication			E0 ~ E3, F0 ~ F3, 8 points (*1)		
N/A	File register	K0 ~ K1,599 (1,600 points) (*4)	Expanded register for data storage.		

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Pointer	N	For Master control loop	N0 ~ N7, 8 points	Control point for main control loop	
	P	For CJ, CALL instructions	P0 ~ P255, 256 points	Position index for CJ and CALL	
	I	Interruption	External interruption	I001, I101, I201, I301, I401, I501, total 6 points	Position index for interruption subroutine.
			Timed interruption	I6□□, I7□□, 2 points (□□ = 1 ~ 99, time base = 1ms)	
			Interruption inserted when high-speed counter reaches target	I010, I020, I030, I040, I050, I060, total 6 points	
Communication interruption			I150, 1 point		
Constant	K	Decimal form	K-32,768 ~ K32,767 (16-bit operation) K-2,147,483,648 ~ K2,147,483,647 (32-bit operation)		
	H	Hexadecimal form	H0000 ~ HFFFF (16-bit operation) H00000000 ~ HFFFFFFFF (32-bit operation)		

*1. Non-latched area cannot be modified.

*2. The preset non-latched area can be modified into latched area by setting up parameters.

*3. The preset latched area can be modified into non-latched area by setting up parameters.

*4. The fixed latched area cannot be modified

Latched settings for all devices in SA/SX/SC series MPU:

M (Auxiliary relay)	General purpose M0 ~ M511		Latched M512 ~ M999	Special auxiliary relay M1000 ~ M1999	Latched M2000 ~ M4095
	It is fixed to be non-latched		Default: latched Start: D1200 (K512) End: D1201 (K999)	Some are latched and cannot be modified	Default: latched Start: D1202 (K2,000) End: D1203 (K4,095)
T (Timer)	100 ms T0 ~ T199		10 ms T200 ~ T239	10 ms T240 ~ T245	1 ms T246 ~ T249
	It is fixed to be non-latched		It is fixed to be non-latched	Accumulative type It is fixed to be latched	
C (Counter)	16-bit counting up C0 ~ C95		32-bit counting up/down C200 ~ C215		32-bit high-speed counting up/down C235 ~ C255
	C96 ~ C199		C216 ~ C234	C216 ~ C234	C235 ~ C255
	It is fixed to be non-latched	Default: latched Start: D1208 (K96) End: D1209 (K199)	It is fixed to be non-latched	Default: latched Start: D1210 (K216) End: D1211 (K234)	Default: latched Start: D1212 (K235) End: D1213 (K255)
S (Step relay)	Initial S0 ~ S9	Zero return S10 ~ S19	General purpose S20 ~ S511	Latched S512 ~ S895	Alarm step S896 ~ S1023
	It is fixed to be non-latched			Default: latched Start: D1214 (K512) End: D1215 (K895)	It is fixed to be latched
D (Register)	General purpose D0 ~ D199 D5000~D9999 (Only supported by SX v.3.0 and above)		Latched D200 ~ D999	Special register D1000 ~ D1999	Latched D2000 ~ D4999
	It is fixed to be non-latched		Default: latched Start: D1216 (K200) End: D1217 (K999)	Some are latched and cannot be modified.	Default: latched Start: D1218 (K2,000) End: D1219 (K4,999)
File Register	K0 ~ K1599 It is fixed to be latched.				