

Environmental Specifications

Item	Specification	Note
Storage temperature	-25°-70°C	
Operating ambient temperature	0°-55°C	
Relative humidity	5-95%	Non-condensing, RH-2
Pollution resistance	Degree II	
Corrosion resistance	Based on IEC-68 standard	
Altitude	≤2000m	
Vibration resistance	Fix by DIN rail	0.5G, 2 hours for each direction of 3 axes
	Fasten by screw	2G, 2 hours for each direction of 3 axes
Shock resistance	10G, three times for each direction of 3 axes	
Noise resistance	1500Vp-p, pulse width 1μS	
Withstand voltage	500VAC, 1 minute (DC)	L, N to any terminal
	1500VAC, 1 minute (AC)	

DC Model Power Specifications

Specification	Item	10/14 Points Main Unit	20/24 Points Main Unit	32/40 Points Main Unit	60 Points Main Unit
Input voltage		24VDC,-15%/+20%			
Max. power capability		2.5W/3W	3.5W/4W	4.5W/5W	6W
Inrush current		20A@24VDC			
Allowable power momentary interruption time		<2ms			
Fuse rating		2A,125VDC			

AC Model Power Specifications (custom products)

Specification	Item	10/14 Points Main Unit	20/24 Points Main Unit	32/40 Points Main Unit	60 Points Main Unit
Input power/Frequency		85 ~ 264VAC / 50 ~ 60Hz			
Max. power capability (Built-in sensor power supply)		21W			
Inrush current		20A@264VAC			
Allowable power momentary interruption time		<20mS			
Fuse rating		2A, 250VAC			

Main Unit Specifications

Specification	Item	B1	B1z	Note
Execution speed		0.33uS / Sequential instruction		
Memory capacity	Program (Word)	7936 Words	3840 Words	
	Comment (Byte)	8K Bytes	4K Bytes	
Program memory		FLASH ROM or SRAM+Lithium battery Back-up		
Sequential instruction		36 instructions		
Function instruction		326 instructions(126 kinds)	323 instructions(123 kinds)	Include derivative instructions
Flow chart command (SFC)		4 instructions		
Communication Interface	Port0 (RS232) Speed 4.8k-115.2kbps	Built-in		Default setting of each port is 906 kbps, Port1-2 provides FATEK or Modbus RTU/ASCII or user defined communication protocol
	Port1-2 (RS232, RS485, Ethernet) Speed 4.8k-921.6kbps	Expandable Port1 and Port2	Built-in Port2(RS485) No expandable	
	Maximum link stations	254		
Digital (Bit status)	X Input contact (DI)	X+Y=128	6 / 8 / 12 / 14 / 20 / 24 / 36	Corresponding to external digital input
	Y Output relay (DO)		4 / 6 / 8 / 10 / 12 / 16 / 24	Corresponds to external digital output
	TR Temporary relay	TR0-TR39 (40)		
M	Internal relay	Non-retentive	M0-M799 (800)*1	Can be configured as retentive type
		Retentive	M1400-M1911 (512)	
	Special relay	M800-M1399 (600)*1	Can be configured as non-retentive	
		M1912-M2001 (90)		

*1: Default, changeable by user
*2: LAIO and LANTC module will occupy Port1

(Continue)

Specification	Item	B1	B1z	Note	
Digital (Bit status)	S Step relay	Non-retentive	S0-S499 (500)*1	S20-S499 can be configured as retentive type	
		Retentive	S500-S999 (500)*1	Can be configured as non-retentive type	
	T Timer "Time-Up" status contact	T0-T255 (256)			
	C Counter "Count-Up" status contact	C0-C255 (256)			
TMR	Time current value register	0.01S Time base	T0-T49 (50)*1	T0-T255 members for each time base can be adjusted	
		0.1S Time base	T50-T199 (150)*1		
		1S Time base	T200-T255 (56)*1		
CTR	Counter current value register	16-bit	Retentive	C0-C139 (140)*1	Can be configured as non-retentive type
			Non-retentive	C140-C199 (60)*1	Can be configured as retentive type
		32-bit	Retentive	C200-C239 (40)*1	Can be configured as non-retentive type
			Non-retentive	C240-C255 (16)*1	Can be configured as retentive type
HR DR	Data register	Retentive	R0-R2999 (3000)*1	Can be configured as non-retentive type	
			D0-D3999 (4000)		
		Non-retentive	R5000-R8071 (3072)*1	When not configured as ROR, it can serve normal register (for read/write)	
			R3000-R3839 (840)*1	Can be configured as retentive type	
ROR	Read only register	R5000-R8071 can be set as ROR, default setting is (0)*1		ROR is stored in special ROR area and not occupy program space	
FR	File register	F0-F8191 (8192)		Saved/retrieved via dedicated instruction	
IR	Input register	R3840-R3857 (18)	-	Corresponding to the external numerical input	
OR	Output register	R3904-R3921 (18)	-	Corresponding to the external numerical output	
SR	Special system register	R3968-R4167 (200)		D4072-4075(4)corresponds LAIO Module inputs*2 D4076-4077(4)corresponds LAIO Module outputs*2	
		D4000-D4095 (96)			
	0.1mS High-speed timer register	R4152-R4154 (3)			
	High-speed counter register	Hardware(4 sets)	DR4096-DR4110 (4x4)		
		Software(4sets)	DR4112-DR4126 (4x4)		
Calendar register	R4128 (sec)	R4129 (min)	R4130 (hour)	R4131 (day)	-
	R4132 (month)	R4133 (year)	R4134 (week)		
XR	Index register	V-Z (2), P0-P9 (10)			
Interrupt control	External interrupt control	32 interrupts(16 points input positive/negative edge)		Only main unit input points	
	Internal interrupt control	8 interrupts (1 * 2 * 3 * 4 * 5 * 10 * 50 * 100mS)			
0.1mS high-speed timer		1(16-bit), 4(32-bit, share with HHSC)			
High-speed counter HSC	Hardware high-speed counter (HHSC)/32-bit	No. of channel	Up to 4		
		Counting mode	8 modes (U/D * U/Dx2 * P/R * P/Rx2 * A/B * A/Bx2 * A/Bx3 * A/Bx4)		
	Software high-speed counter(SHSC)/32-bit	No. of channel	Up to 4		
		Counting mode	3 modes (U/D * P/R * A/B)		
Counting frequency	Maximum sum up to 5KHz		Total number of HHSC and SHSC is 8 HHSC can be converted into 32-bit/0.1mS time base High-Speed Timer(HST) Half of maximum frequency while A/B phase input		
Number of axis		Up to 4			
NC position pulse output (HSPSO)	Output frequency	Maximum is 50KHz (Singled-end input)			
	Pulse output mode	3 modes (U/D * P/R * A/B)			
Programming method		Dedicated position language			
Interpolation		Maximum 4 axes linear interpolation			
Number of points		Up to 4			
HSPWM output	Output frequency	72Hz-18.432KHz (with 0.1%resolution) 720Hz-184.3KHz(with 1%resolution)			
Captured input	Points	Maximum 36 points (All inputs in main unit come with this feature)			
		>10μS (for ultra high/high speed input)			
		>47μS (for medium speed input)			
Digital filter	Minimum captured pulse width	>470μS (for medium/low speed input)			
		Adjustable frequency 14KHz-1.8MHz			
		Adjustable time constant 0.1-1.5mS/1-15mS(unit: 0.1mS/1mS)			
X0-X15		Chosen by frequency at high frequency			
X16-X35		Chosen by time constant at low frequency			
		Time constant 1-15mS adjustable(unit: 1mS)			