WSZ Controller

for FUJI Inverter and Servo system

24C1-E-xxxx

SIMPLE & SMART

24C1-E-xxxx
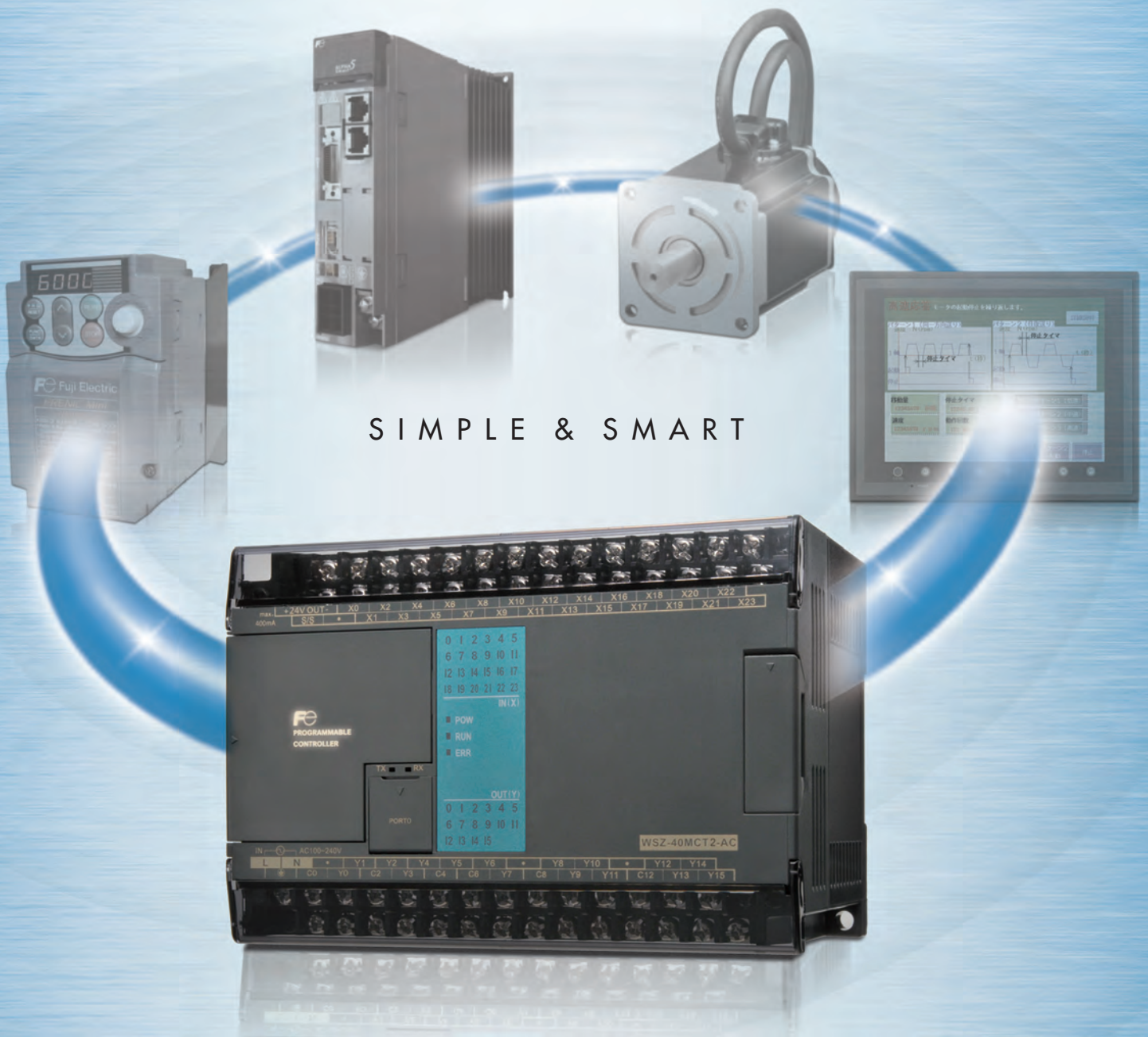
Features

·The Ultimate Compact Controller

The slender design not only saves mounting space, but allows the entire system including distribution panel and control box to be downsize.

·More simple configuration

The combination of WSZ controller, Fuji's servo system and HMI enables to reduce wiring, simplify control and maximize performance.

·High Performance

With "System on Chips " (SoC), WSZ controller realized integration of powerful features such as three high-speed communication ports,four sets of hardware high-speed counters / timers, four axes of high-speed pulse outputs for NC positioning control (with linear interpolation or dynamic tracking) 16 high-speed interrupts or captured inputs.

Model List

Product	Type Code	Main Specifications
Basic Main Units (Up to 20kHz)	WSZ-14MAR2-D24	8 points digital input; 6 points relay output; 1 RS232 port; 24VDC power supply
	WSZ-24MAR2-D24	14 points digital input; 10 points relay output; 1 RS232 port; 24VDC power supply
	WSZ-24MAT2-D24	14 points digital input; 10 points transistor output; 1 RS232 port; 24VDC power supply
Advanced Main Units (Up to 200kHz)	WSZ-14MCT2-D24	8 points digital input; 6 points transistor output; 1 RS232 port; 24VDC power supply
	WSZ-24MCT2-D24	14 points digital input; 10 points transistor output; 1 RS232 port; 24VDC power supply
	WSZ-32MCT2-D24	20 points digital input; 12 points transistor output; 1 RS232 port; 24VDC power supply
	WSZ-40MCT2-D24	24 points digital input; 16 points transistor output; 1 RS232 port; 24VDC power supply
	WSZ-60MCT2-D24	36 points digital input; 24 points transistor output; 1 RS232 port; 24VDC power supply
	WSZ-24MCT2-AC	14 points digital input; 10 points transistor output; 1 RS232 port; 100-240VAC power supply
	WSZ-32MCT2-AC	20 points digital input; 12 points transistor output; 1 RS232 port; 100-240VAC power supply
	WSZ-40MCT2-AC	24 points digital input; 16 points transistor output; 1 RS232 port; 100-240VAC power supply
	WSZ-60MCT2-AC	36 points digital input; 24 points transistor output; 1 RS232 port; 100-240VAC power supply
DIO Expansion Unit/Modules	WSZ-24XYT-AC	14 points digital input; 10 points transistor output; 100-240VAC power supply
	WSZ-8XYR	4 points digital input; 4 points relay output module
	WSZ-8XYT	4 points digital input; 4 points transistor output module
	WSZ-8YT	8 points transistor output module
	WSZ-16YR	16 points relay output module
	WSZ-16YT	16 points transistor output module
AIO Modules/Board	WSZ-2DA	2ch. analog output module
	WSZ-4A2D	4ch. analog input + 2ch analog output module
	WSZ-6AD	6ch. analog input module
	WSZ-B2A1D	2ch. analog Input + 1ch. analog output board
Temperature Measurement Modules	WSZ-6TC	6ch. themocouple temperature input module
	WSZ-16TC	16ch. themocouple temperature input module
AI +Temperature Measurement Combo Module	WSZ-2A4TC	2ch. analog input + 4ch. thermocouple module
Load Cell Module	WSZ-1LC	1ch. load cell measurement module
Communication Modules/Boards	WSZ-CM22	2 ports RS232 communication module
	WSZ-CM55	2 ports RS485 communication module
	WSZ-CM25E	1 port RS232 + 1 port RS485 + Ethernet interface communication module
	WSZ-CB25	1 port RS232 + 1 port RS485 communication board
	WSZ-CBE	1 port 10 Base T Ethernet communication board
	WSZ-CBCAN	1 port CANopen communication board
Memory Pack	WSZ-PACK	Program memory pack
Communication Cables	WSZ-U2C-MD-180	Communication converter cable, main unit Port 0 RS232 to USB-A, 180cm
	WSZ-232P0-9F-150	Communication cable, main unit Port 0 RS232 to DB9F, 150cm
	WSZ-232P0-9M-400	Communication cable, main unit Port 0 RS232 to DB9M, 400cm

Application Example

System Configuration Example

Modbus-RTU

HMI

RS-485

WSZ Controller

Servo System "Smart"
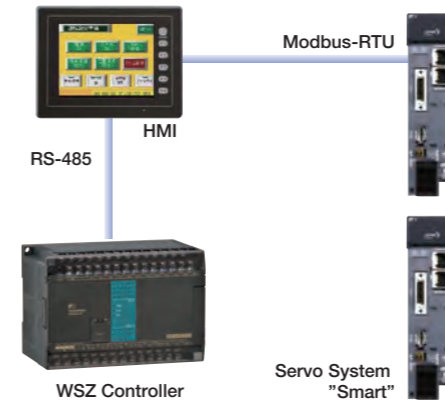
Achieves the Total Support for Motion System!!

Application Example

Controls the film feed starting timing in response to the rate of plastic bottles.

Allows the manufacturing information to be controlled including the no. of shots of plastic bottle, total no. of shots of plastic bottle, and percentage of defectiveness,etc.

Enables visualizing the manufacturing information by using the data from the WSZ controller.

Contents

Environmental specifications

Item			Specification	Note
Operating ambient temperature	Enclosure space	Minimum	5°C	Permanent installation
		Maximum	40°C	
	Open space	Minimum	5°C	
		Maximum	55°C	
Storage temperature			-25~70°C	
Relative humidity (non-condensing, RH-2)			5～95%	
Pollution resistance			Degree II	
Corrosion resistance			Base on IEC-68 standard	
Altitude			≤2000m	
Vibration	Fixed 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			1500 Vp-p, pulse width 1μS	
Withstand voltage			1500**VAC**, 1 minute	L, N to any terminal

AC power supply specifications

Specification \ Item		10/14 points main units	20/24 points main units	32/40 points main units	60 points main units
Input range	Voltage	100~240**VAC**, -15%/+10%			
	Frequency	50/60Hz ±5%			
Max. power consumption (built-in power supply)		21W(SPW14-AC)	36W(SPW24-AC)		
Inrush current		20A@264**VAC**			
Allowable power momentary interruption time		< 20mS			
Fuse rating		2A, 250V			

DC power supply specifications

Specification \ Item	10/14 points main units	20/24 points main units	32/40 points main units	60 points main units
Input voltage	12 or 24 VDC, -15%/+20%			
Max. power consumption (@ full built-in power supply)	21W(SPW14-D12/D24)	36W(SPW24-D12/D24)		
Inrush current	20A@12 or 24VDC			
Allowable power momentary interruption time	< 2mS			
Fuse rating	3A(D12)/1.5A(D24),125V	5A(D12)/2.5A(D24),125V		

Main unit specifications

* : Default, changable by user

Item			Specification	Note
Execution speed			0.33uS/Sequential instruction	
Program capacity			20K Words	
Program memory			FLASH ROM or SRAM + Lithium battery for Back-up	
Sequential instruction			36 instructions	
Function instruction			326 instructions (126 kinds)	Include derivative instructions
Flow chart command (SFC)			4 instructions	
Communication Interface	Port 0 (RS232 or USB)		Communication speed 4.8k ~ 115.2Kbps (9.6Kbps)*	
	Port 1 ~ Port 4 (RS232, RS485 , Ethernet, CANopen or GSM)		Communication speed 4.8k ~ 921.6Kbps (9.6Kbps)*	Port1 ~ 4 provides Modbus RTU/**A**SC II or user defined communication protocol
	Maximum link stations		254	
Digital (Bit status)	X	Input contact (DI)	X0~X255 (256)	Corresponding to external digital input
	Y	Output relay (DO)	Y0~Y255 (256)	Corresponding to external digital output
	TR	Temporary relay	TR0~TR39 (40)	

	Item			Specification	Note
Digital (Bit status)	M	Internal relay	Non-retentive	M0 ~ M799 (800)*	Can be configured as retentive type
				M1400 ~ M1911 (512)	
			Retentive	M800 ~ M1399 (600)*	Can be configured as non-retentive type
		Special relay		M1912 ~ M2001 (90)	
	S	Step relay	Non-retentive	S0 ~ S499 (500)*	S20 ~ S499 can be configured as retentive type
			Retentive	S500 ~ S999 (500)*	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)	
Register (Word data)	TMR	Timer current value register	0.01S Time base	T0 ~ T49 (50)*	T0 ~ T255 numbers for each time base can be adjusted.
			0.1S Time base	T50 ~ T199 (150)*	
			1S Time base	T200 ~ T255 (56)*	
	CTR	Counter current value register	16-bit Retentive	C0 ~ C139 (140)*	Can be configured as non-retentive type
			16-bit Non-retentive	C140 ~ C199 (60)*	Can be configured as retentive type
			32-bit Retentive	C200 ~ C239 (40)*	Can be configured as non-retentive type
			32-bit Non-retentive	C240 ~ C255 (16)*	Can be configured as retentive type
	HR DR	Data register	Retentive	R0 ~ R2999 (3000)*	Can be configured as non-retentive type
				D0 ~ D3999 (4000)	
			Non-retentive	R3000 ~ R3839 (840)*	Can be configured as retentive type
	HR ROR		Retentive	R5000 ~ R8071 (3072)*	When not configured as ROR,it can serve normal register (for read/write)
			Read only register	R5000 ~ R8071 can be set as ROR ~ default setting is (0)*	ROR is stored in special ROR area and not occupy program space
			File register	F0 ~ F8191 (8192)	Save/retrieved via dedicated instruction
	IR	Input register		R3840 ~ R3903 (64)	Corresponding to external numeric input
	OR	Output register		R3904 ~ R3967 (64)	Corresponding to external numeric output
	SR	Special system register		R3968 ~ R4167 (197), D4000 ~ D4095 (96)	
		0.1mS high-speed timer register		R4152 ~ R4154 (3)	
		High-speed counter register	Hardware (4 sets)	DR4096 ~ DR4110 (4x4)	
			Software (4 sets)	DR4112 ~ DR4126 (4x4)	
		Calendar Register		R4128 (sec) / R4129 (min) / R4130 (hour) / R4131 (day) / R4132 (month) / R4133 (year) / R4143 (week)	Optional for MA model
	XR	Index register		V · Z (2), P0 ~ P9 (10)	
Interrupt control		External interrupt control		32 interrupts (16 points input positive/negative edge)	
		Internal interrupt control		8 interrupts (1, 2, 3, 4, 5, 10, 50, 100mS)	
0.1mS high speed timer(HST)				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	• 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 input
			Counting mode	8 modes (U/D, U/Dx2, P/R, P/Rx2, A/B, A/Bx2, A/Bx3, A/Bx4)	
			Counting frequency	Maximum is 200KHz (Single-end input) or 920KHz (differential input)	
	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	
NC position pulse out (HSPSO)		Number of axis		Up to 4	Half of the maximum while A/B output
		Output frequency		Maximum is 200KHz (Single-end output) or 920KHz (differential output)	
		Pulse output mode		3 modes (U/D, P/R, A/B)	
		Programming method		Dedicated position language	
		Interpolation		Maximum 4 axes linear interpolation	
HSPWM output		Number of points		Up to 4	
		Output frequency		72Hz ~ 18.432KHz (with 0.1% resolution) 720Hz ~ 184.32KHz (with 1% resolution)	
Captured input		Points		Maximum 36 points (All inputs in main unit are suitable this feature)	
		Minimum capturable Pulse width		>10 μS (for ultra high speed / high speed input)	
				>47 μS (for Medium speed input)	
				>470 μS (for Medium low speed input)	
Digital filter		X0 ~ X15		Adjustable frequency 14KHz ~ 1.8MHz	Chosen by frequency at high frequency
				Adjustable time constant 0 ~ 1.5mS/0~15mS (unit: 0.1mS/1mS)	Chosen by time constant at low frequency
		X16 ~ X35		Time constant 1 ~ 15mS adjustable (unit: 1ms)	

Digital Input (DI) Specifications

| Item / Specification	5VDC differential input		24VDC single-end input				Notes
	Ultra high speed	High speed	Medium speed(HSC)	Medium low speed (capture input)	Low speed		
Maximum input frequency*/ accumulated time	920KHz	200KHz	20KHz(HHSC) Total 5KHz(SHSC)	0.47mS	4.7mS		
Input signal voltage	5VDC ± 10%		24VDC ± 10%				
Threshold current — ON	>11mA	>8mA	>4mA		>2.3mA		*: Half of maximum frequency while A/B phase input
Threshold current — OFF	<2mA		<1.5mA		<0.9mA		
Maximum input current	20mA	10.5mA	7.6mA		4.5mA		
Input indication	Displayed by LED: light when "ON", dark when "OFF"						
Isolation method	Photocouple isolation, 500VAC, 1 minute						
SINK/SOURCE wiring	Independent wiring	Via variation of internal common terminal S/S and external common wiring					
Noise filtering methods	DHF (0~15mS) +AHF (0.47µS)	DHF (0~15mS) +AHF (4.7µS)	DHF (0~15mS) +AHF (0.47mS)		AHF (4.7mS)		DHF: Digital Hardware Filter AHF: Analog Hardware Filter

Wiring of 5VDC differential input (with frequency up to 920KHz, for high speed or high noise environments)
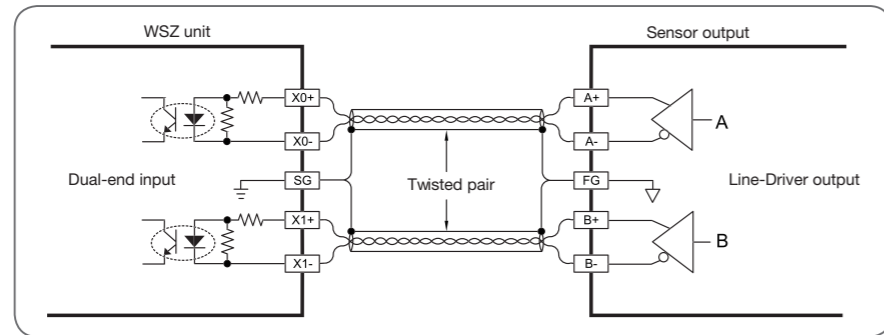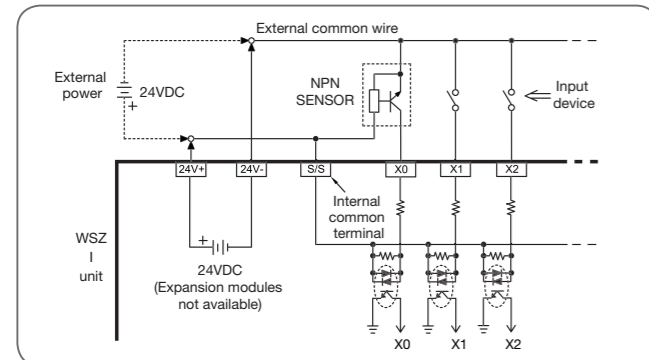

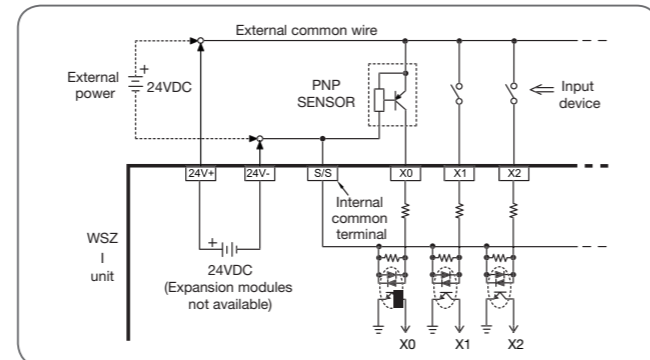### Wiring of 5VDC differential input to 5VDC single-end SINK /SOURCE input (Max. 200KHz)
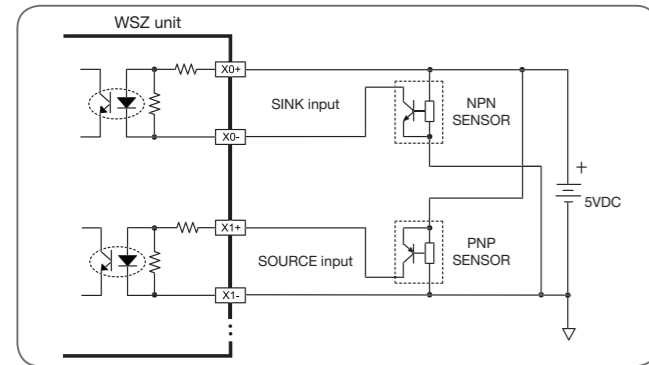
Wiring of 5VDC differential input to 24VDC single-end SINK /SOURCE input (Max. 200KHz)
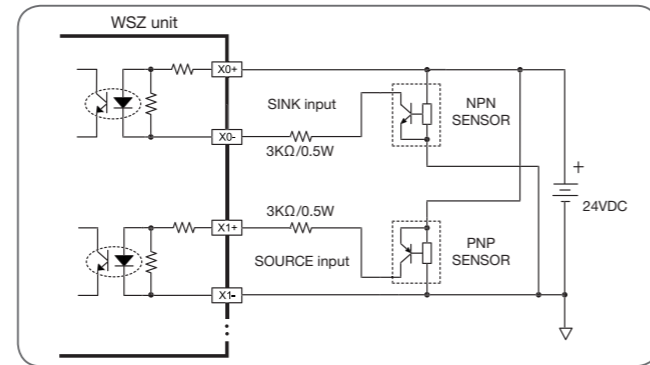
Wiring of 24VDC single-end SINK input

### Wiring of 24VDC single-end SOURCE input

Digital Output (DO) Specifications

| Item / Specification	Differential output	Single-end transistor output			Single-end relay output
	Ultra high speed	High speed	Medium speed	Low speed	
Maximum output frequency*	920KHz	200KHz	20KHz		—
Working voltage	5VDC±10%	5~30 VDC			< 250VAC/30VDC
Maximum load current — Resistive	50mA	0.5A	0.5A	0.5A/0.1A (24YT/J)	2A/single, 4A/common
Maximum load current — Inductive					80VA(AC)/24VA(DC)
Maximum voltage drop/ conducting resistance	—	0.6V	2.2V	2.2V	0.06V (initial)
Minimum load	—	—			2mA/DC power
Leakage current	—	< 0.1mA/30VDC			—
Maximum output delay time — ON→OFF	200nS	2µS	15µS		10mS
Maximum output delay time — OFF→ON			30µS		
Output status indication	Displayed by LED: Light when "ON", dark when "OFF"				
Over current protection	N/A				
Isolation type	Photocouple isolation, 500VAC, 1 minute				Electromagnetic isolation 1500VAC, 1 minute
SINK/SOURCE output type	Independent dual terminals for arbitrary connection	Choose SINK/SOURCE by models and non-exchangeable			Can be arbitrarily set to SINK/SOURCE output

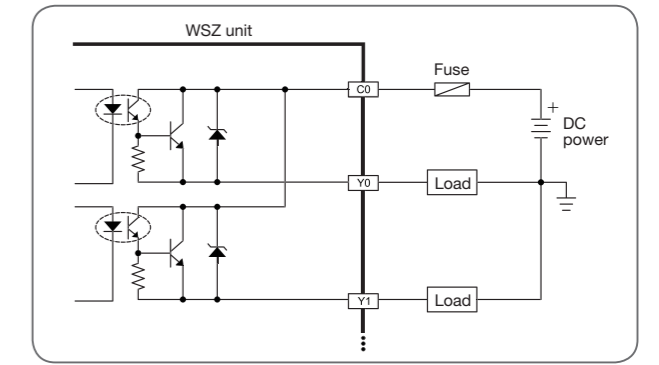* : Half of the maximum frequency while A/B phase output

Wiring of 5VDC differential output (with frequency up to 920KHz, for high speed or high noise environments)
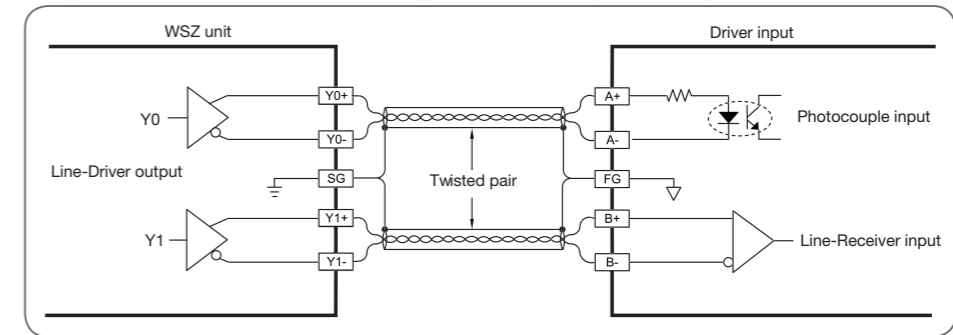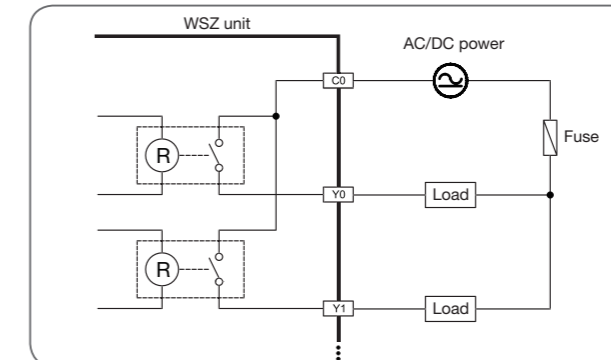

Wiring of transistor single-end SINK output
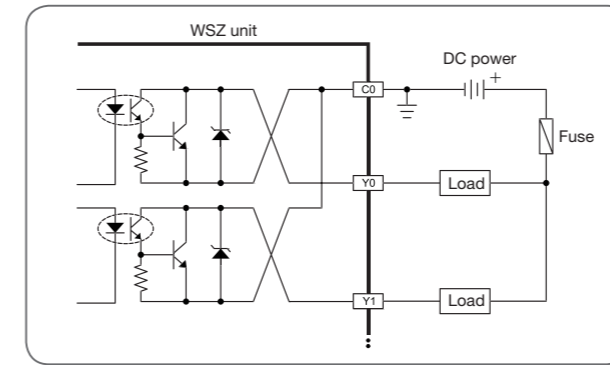
Wiring of transistor single-end SOURCE output

Wiring of relay single-end output

Basic Main Units (MA)

Specification			WSZ-14MAR2-D24	WSZ-24MAR2-D24	WSZ-24MAT2-D24
Digital Input	24VDC	Medium speed (20kHz)	4 points	8 points	8 points
		Medium speed (Total 5kHz)	4 points	6 points	
Digital Output	Relay		6 points	10 points	-
	Transistor	Medium speed (20kHz)	-	-	8 points
		Low speed	-	-	8 points
Communication Port	Built-in		1 port (Port0, RS232)		
	Expandable		2 ports (Port1-2, RS485 or RS232 or Ethernet)		
Calendar			Optional		
Built-in power supply			SPW14-D24	SPW24-D24	
Wiring mechanism			7.62mm fixed terminal block		
Dimension			Figure 2	Figure 1	

Advanced Main Units (MC)

Specification			WSZ-14MCT2-D24/AC	WSZ-24MCT2-D24/AC	WSZ-32MCT2-D24/AC	WSZ-40MCT2-D24/AC	WSZ-60MCT2-D24/AC
Digital Input	24VDC	High speed (200kHz)	2 points	4 points	6 points	6 points	8 points
		Medium speed (20kHz)	2 points	4 points	2 points	2 points	-
		Medium speed (Total 5kHz)	4 points	6 points	8 points		
Digital Output	Relay		-	-	-	-	-
	Transistor	High speed (200kHz)	2 points	4 points	6 points	6 points	8 points
		Medium speed (20kHz)	4 points	4 points	2 points	2 points	-
		Low speed	-	2 points	4 points	8 points	16 points
Communication Port	Built-in		1 port (Port0, USB or RS232)				
	Expandable		4 ports (Port1-4, RS485 or RS232 or Ethernet or GSM or ZigBee)				
Calendar			Built-in				
Built-in power supply			SPW14-D24	SPW24-AC/D24			
Wiring mechanism			7.62mm fixed terminal block				
Dimension			Figure 2	Figure 1			

DIO Expansion Units

Specification			WSZ-24XYT	WSZ-8XYR	WSZ-8XYT	WSZ-8YT	WSZ-16YR	WSZ-16YT
Digital Input	24VDC	Low speed	14 points	4 points		-		-
Digital Output	Relay		-	4 points	-	-	16 points	-
	Transistor	Low speed	10 points	-	4 points	8 points	-	16 points
Built-in power supply			SPW24-D24			-		
Wiring mechanism			7.62mm fixed terminal block					
Dimension			Figure 1	Figure 4			Figure 3	

AIO Modules

Specification	Model	WSZ-6AD	WSZ-4A2D	WSZ-2DA
Input point		6 points	4 points	-
Output point		-	2 points	2 points
Input/Output value		-8192 to 8191 or 0 to 16383 (14-bit)		
Input/output Signal range	Bipolar	Voltage: -10 to 10V or -5 to 5V Current: -20 to 20mA or -10 to 10mA		
	Unipolar	Voltage: 0 to 10V or 0 to 5V Current: 0 to 20mA or 0 to 10mA		
Maximum resolution		Voltage: 0.3mV (5V/16384) Current: 0.61µA (10mA/16384)		
Accuracy		± 1%		
Conversion time		Conversion once for each scan		
Maximum input signal		Input voltage: ±15V Input current: ±30mA		-
Allowable load range		-	Output voltage: 500Ω to 1MΩ Output current: 0 to 500Ω	
Input impedance		Input voltage: 63.2KΩ Input current: 250Ω		
Isolation method		Transformer(power) and photocouple(signal) isolation, 500VAC, 1 minute, no isolation between each channel		
Power consumption		24VDC -15%/+20%, 3.2W max.		
Wiring mechanism		7.62mm fixed terminal block		
Dimension		Figure 4		

AIO Boards

Specification	Model	WSZ-B2A1D
Input point		2 points
Output point		1 point
Input / Output value		0 to 1630 (14-bit representation, valid 12-bit)
Input / Output polar		Unipolar
Input / Output counting range		0 to 10V
Conversion time		Conversion once for each scan
Accuracy		±1%
Isolation method		Non-isolation
Wiring mechanism		3.81mm European terminal block
Installation position		Expansion slot of main unit

Temperature Measurement Modules

Specification	Model	WSZ-6TC	WSZ-16TC
Number of input points		6 points	16 points
Sensor type and temperature measurement range		Thermocouple Sensor: J (-200 to 1200°C) E (-190 to 1000°C) K (-190 to 1300°C) T (-190 to 380°C) R (0 to 1800°C) B (350 to 1800°C) S (0 to 1700°C) N (-200 to 1000°C)	
Temperature compensation		Built-in cold junction compensation	
Resolution		0.1°C	
Temperature refresh time		2 or 4 seconds	3 or 6 seconds
Overall Precision		± (1%+1°C)	
Isolation method		Transformer(power) and photocouple(signal) isolation, 500VAC, 1 minute, isolation between each channel	
Power consumption		24VDC -15%/+20%, 2W max.	
Wiring mechanism		3.81mm european terminal block	7.62mm fixed terminal block
Dimension		Figure 4	Figure 1

AI+Temperature Measurement Combo Modules

Specification	Model	WSZ-2A4TC
Analog input (AI) points		2 points / 14-bit
Temperature measurement input points		4 points (thermocouple)
Analog input specification		Same as WSZ-6AD
Temperature input specification		Same as WSZ-6TC
Power consumption		24VDC-15%/+20%, 2W max.
Wiring mechanism		7.62mm fixed terminal block
Dimension		Figure 4

Load Cell Module

Specification	Model	WSZ-2A4TC
Number of channel		1 channel
Resolution		16-bit (including sign bit)
Occupied I/O points		1 IR (input register) and 8 points DO
Sampling frequency		5/10/20/25/60/120/240/480 Hz optional
Non-linearity degree		0.01% full scale @25 °C
Zero drift		0.2 µV/ °C
Gain drift		10 ppm/ °C
Excitation voltage		5V, maximum load is 250Ω
Level of sensitivity		2mV/V, 5mV/V, 10mV/V, 20mV/V
Filters		Moving averages
Isolation method		Transformer (power) and photocouple (signal) isolation,500VAC, 1 minute
Power consumption		24VDC, -15%/+20%, 2W
Wiring mechanism		7.62mm fixed terminal block
Dimension		Figure 4

Product Specifications

General Communication Boards/Modules

Specification \ Model	WSZ-CB25	WSZ-CM22	WSZ-CM55
RS232 Port	1 port (Port1)	2 ports (Port3, Port4)	-
RS485 Port	1 port (Port2)	-	2 ports (Port3, Port4)
Indicators	Each Port has its own TX, RX LED indicators		
Wiring mechanism	DB9F, 3 pins spring terminal	DB9F	3 pins spring terminal
Installation position	Expansion slot of main units	Figure 5	

Ethernet Communication Boards/Modules

Specification \ Model	WSZ-CBE	WSZ-CM25E
Network interface	10 Base T	
Network protocol	TCP/UDP/IP, ICMP, ARP	
Application protocol	Modbus-TCP server mode	
PLC interface	Port1, Port2	Port4
PLC communication speed	115.2 kbps	9.6k/19.2k/38.4k/57.6k/ 115.2k/230.4kbps
Expansion communication interface	N/A	RS232 (Port3), RS485 (Port4)
Application IP port number	Modbus-TCP 502 or customized	
Security protection	IP based access control	
Indicators	Internet RX, TX, LINK LEDs indicators	
Wiring mechanism	RJ-45	DB9F, spring terminal block 4-pin x1, 3-pin x1
Dimension (Installation position)	Expansion slot of main unit	Figure 5

CANopen® Communication Board

Specification \ Model	WSZ-CBCAN
Communication standard	CAN 2.0A CANopen
Network topology	3-Phase fieldbus
Communication speed	10k/20k/50k/125k/250k/ 500k/1Mbps
Maximum number of connection station	127 stations
Method of sending signal	Event or cyclic transmission
Isolation method	Photocouple (signal) isolation, 500VAC, 1 minute
Number of PDO communication	RXPDO-10, TXPDO-10 total up to 80 registers
Number of SDO channels	Client -1, Server-1
Error control	Heartbeat
Wiring mechanism	3-pin spring terminal block
ID setup method	Same as PLC station number or setup by software
Working mode	Master or slave dual modes
Installation position	Expansion slot of main unit

Memory Pack

Specification \ Model	WSZ-PACK
Memory	1M bits FLASH ROM
Memory capacity	20k Words program + 20k Words data
Write protection	DIP switch ON/OFF protection

Communication Cables

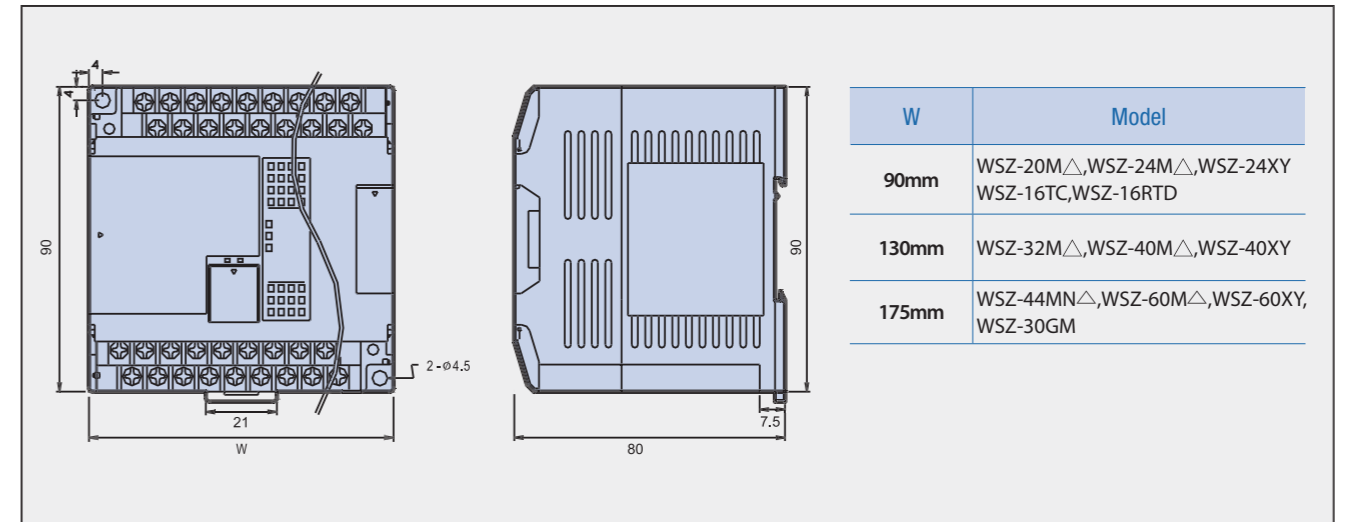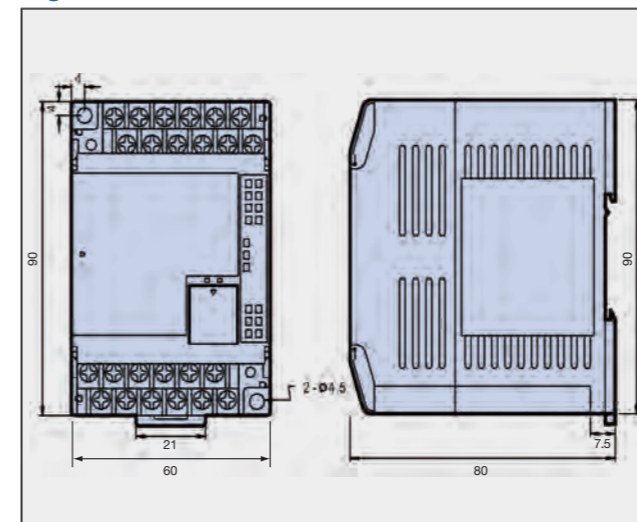| Specification \ Model	WSZ-U2C-MD-180	WSZ-232P0-9F-150	WSZ-232P0-9M-400
Features	Standard USB A connector to RS232 MD4M connector (used in standard PC USB to main unit Port 0 RS232), length 180cm	Dedicated communication cablefor main unit Port 0 (RS232) toDB9F connector, length 150cm	Dedicated communication cablefor main unit Port 0 (RS232) toDB9M connector, length 400cm

Dimensions

Figure 1

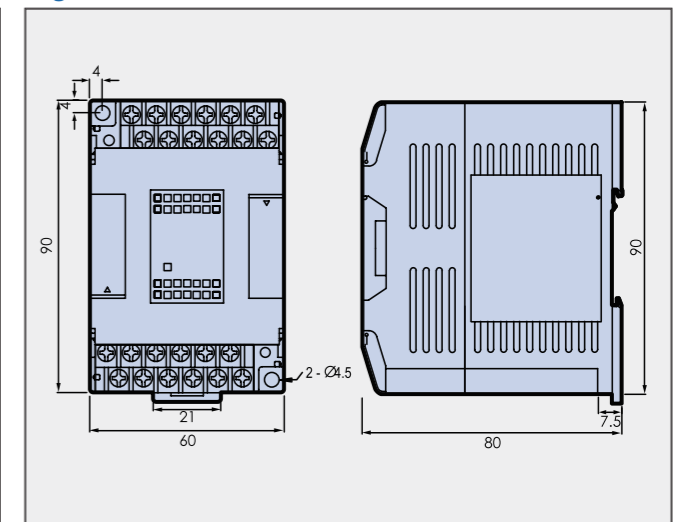| W	Model
90mm	WSZ-20M△,WSZ-24M△,WSZ-24XY WSZ-16TC,WSZ-16RTD
130mm	WSZ-32M△,WSZ-40M△,WSZ-40XY
175mm	WSZ-44MN△,WSZ-60M△,WSZ-60XY, WSZ-30GM

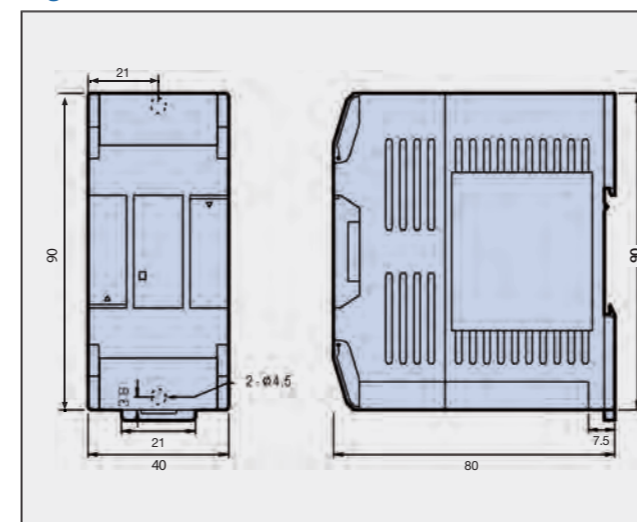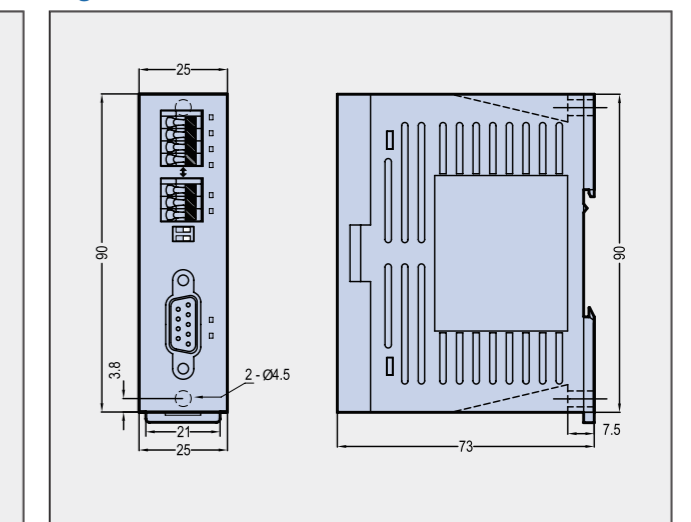**Figure 2**

Figure 3

Figure 4

Figure 5

⚠ SAFETY PRECAUTIONS

1. This catalog is intended for use in selecting required servo systems. Before actually using these products, carefully read their instruction manuals and understand their correct usage.

2. Products described in this catalog are neither designed nor manufactured for combined use with a system or equipment that will affect human lives.
   If you are considering using these products for special purposes, such as atomic energy control, aerospace, medical application, or traffic control, please consult our sales office.

3. If you use our product with equipment that is expected to cause serious injury or damage to your property in case of failure, be sure to take appropriate safety measures for the equipment.

Fuji Electric Co., Ltd.