

# WSZ Programmable Logic Controller



S I M P L E & S M A R T

## 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 downsized.
- **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.

# Specifications

## Environmental Specifications

General Specifications	Data
Ambient temperature	Enclosure equipment: 5 - 40°C Open equipment: 5 - 55°C
Storage temperature	-25 - +70°C
Relative humidity (non-condensing, RH-2)	5 - 95%
Pollution level	Degree II
Corrosion resistance	By IEC-68 standard
Altitude	≤2000 m
Vibration	Fixed by DIN RAIL: 0.5 G, for 2 hours each along the 3 axes Secured by screw : 2 G, for 2 hours each along the 3 axes
Shock	10 G, 3 times each along the 3 axes
Noise suppression	1500 Vp-p width 1 μs
Withstand voltage	1500 VAC, 1 minute

## Programming Specifications

System Specifications	Data
I/O points	Input contact (DI): 256 Output relay (DO): 256
Program capacity	20 K words
Program memory	SRAM + Lithium battery for back-up (Option: FLASH ROM)
Internal relays	1912
Special relays	90
Step ladder	1000
Timer	256
Counter	16-bit: 200, 32-bit: 56
High-speed counter	32 bit HHSC*3 4 (max.200 kHz), SHSC*4 4 (max.5 kHz)
Real-time clock	Year, Month, Day, Hour, Minute, Second, Weekday
Data register	10912
File register	8192
Index register	12
Special register	293
Interrupt control	External interrupt control: 32 (16 points positive/ negative edges) Internal interrupt control: 8 (1,2,3,4,5,10,50,100 ms)
Data link	WSZ CPU LINK, Modbus master, Modbus slave
Communication interface	RS232C, RS485 (option)

Unit Type	Part Number	DI Specifications					Total Inputs	DO Specifications			Total Outputs		RS232 port	Power Supply	
		HS		MS		MLS		LS	HS	MS	LS	DO			RO
		200kHz	20kHz (*1)	5kHz (*2)	0.47ms	4.7ms		DI	200kHz	20kHz					
Basic Main Units	WSZ-14MAR2-D24		4	4			8					6	Yes	24Vdc	
	WSZ-24MAR2-D24		8	6			14					10			
	WSZ-24MAT2-D24		8	6			14		8	2		10			
Advanced Main Units with Motion Control	WSZ-14MCT2-D24	2	2	4			8		2	4		6	No		
	WSZ-24MCT2-D24	4	4	6			14	4	4	2		10			
	WSZ-32MCT2-D24	6	2	8	4		20	6	2	4		12			
	WSZ-40MCT2-D24	6	2	8	8		24	6	2	8		16			
	WSZ-60MCT2-D24	8		8	20		36	8		16		24			
	WSZ-24MCT2-AC	4	4	6			14	4	4	2		10			
	WSZ-32MCT2-AC	6	2	8	4		20	6	2	4		12			
	WSZ-40MCT2-AC	6	2	8	8		24	6	2	8		16			
DIO Expansion Modules	WSZ-60MCT2-AC	8		8	20		36	8		16		24	Not Applicable		
	WSZ-24XYT-AC					14	14			10		10			
	WSZ-8XYT					4	4			4		4			
	WSZ-8XYR					4	4					4			
	WSZ-16YR											16			
	WSZ-8YT									8		8			
WSZ-16YT									16		16				

Note :  
HS: High Speed, MS: Medium Speed, MLS: Medium Low Speed, LS: Low Speed, TC: Thermocouple,  
LC: Load Cell, (\*1): Hardware High Speed Counter, (\*2) Software High Speed Counter

Unit Type	Part Number	I/O details				IO value	Input / Output Analog Signal		Sensor type
		AI	AO	TC	LC		Unipolar	Bipolar	
AIO Modules	WSZ-4A2D	4	2			14bit	Voltage: -10~10Vdc, -5~5Vdc Current: -20~20mA, -10~10mA	Voltage: *0~10Vdc, 0~5Vdc, Current: 0~20mA, 0~10mA	J (-200~1200°C), E (-190~1000°C) K (-190~1300°C), T (-190~380°C) R (0~1800°C), B (350~1800°C) S (0~1700°C), N (-200~1000°C)
	WSZ-6AD	6							
	WSZ-2DA		2						
AI +Temperature Measurement Combo Modules	WSZ-2A4TC	2		4					
Temperature Measurement Modules	WSZ-6TC			6					
	WSZ-16TC			16					
Load Cell Module	WSZ-1LC				1	16bit		Load Cell 250N, 5V Excitation	

Communication modules	Descriptions	Connector type	
Communication Modules	WSZ-CM22	RS232: 2 Ports (Port 3 & 4)	DB9F connector
	WSZ-CM55	RS485: 2 Ports (Port 3 & 4)	3 pins spring terminal
	WSZ-CM25E	Rs232: Port 3, RS485: Port 4	DB9F, 3 pins spring terminal
Onboard option cards	Descriptions	Connector type	
Communication Boards	WSZ-CB25	Rs232: Port 1, RS485: Port 2	DB9F, 3 pins spring terminal
	WSZ-CBE	1 port 10 Base T Ethernet, Protocol: TCP/UDP/IP, ICMP, ARP	RJ45
	WSZ-CBCAN	1 port CAN2.0A CANopen	DB9F, 3 pins spring terminal
AIO Boards	WSZ-B2A1D	2Ch. Analog Input + 1Ch. Analog output, 12bit, Unipolar (0~10vdc)	3.81mm European terminal block
Memory Pack Programming Devices	WSZ-PACK	Memory pack, 20K word program + 20K word data, DIP switch protection	
Communication cables	Descriptions	Connector type	
USB-RS232 Converter Cable	WSZ-U2C-MD-180	Standard PC to Main Unit Port 0 (RS232), length: 180cm	Standard USB to MD4M
Communication Cables	WSZ-232P0-9F-150	Dedicated communication cable for main unit Port 0(RS232), Length 150cm	DB9F to MD4M
	WSZ-232P0-9M-400	Dedicated communication cable for main unit Port 0(RS232), Length 400cm	DB9M to MD4M

### Head Office:

### Fuji Electric India Private Ltd.

409-410, Meadows, Sahar Plaza, J.B.Nagar, Andheri-Kurla Road, Andheri (E), Mumbai - 400 059, India

Phone : +91-22-4252 4850, 4010 4870/71, 2820 6383 | Fax : +91-22-4010 4872

E-mail : info@fein.fujielectric.com | www.fujielectric.co.in