

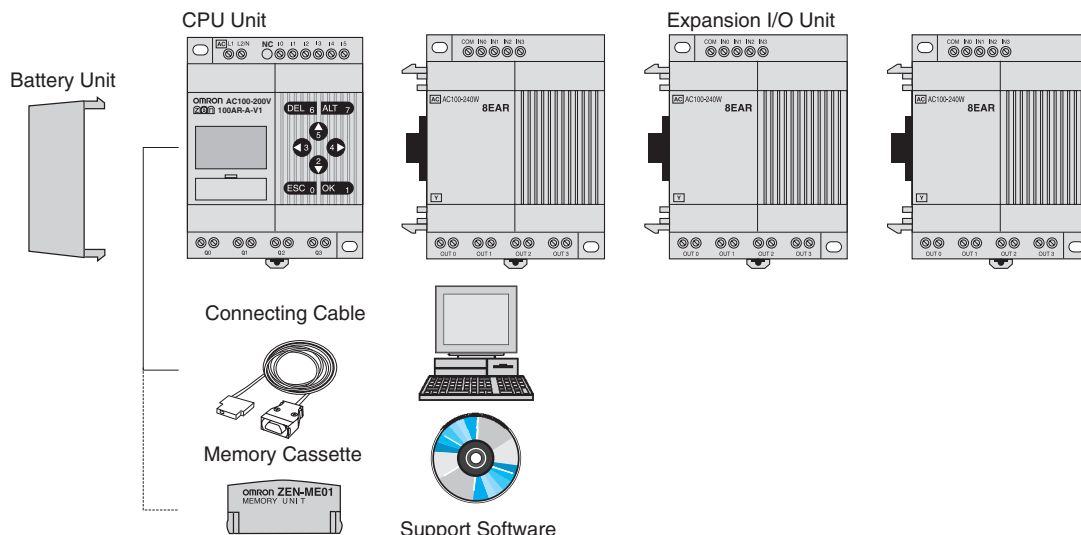
Nano Programmable Controller ZEN

The ZEN has the features and functions of both a programmable controller and smart relay to allow simple yet powerful control. Apply the ZEN to small-scale control applications where simple functionality and low cost are critical. Control programs can be created using a 32-bit Windows-based ZEN support software or by using the operation buttons on the front panel (LCD models only). The ZEN is also flexible with many CPU types, multiple expansion options, and a wide selection of accessory options.



- 10-point or 20-point CPUs available
- Flexible expansion with up to 44 I/O points (24 Inputs and 20 Outputs)
- NPN/PNP inputs
- Analog inputs
- 100-240 VAC or 24 VDC supply voltages
- Easy programming with use of ZEN support software
- Extremely compact, with both DIN rail and bolt-on that allows installation in most locations
- Real Time Clock (RTC) and Daylight Savings Time (DST)
- Display user-set character strings, times, timer/counter preset values, or analog-converted values with user defined messages
- Memory Back-up using EEPROM or Battery
- Password protection

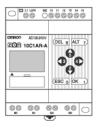
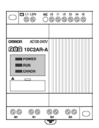
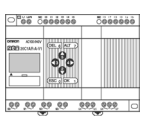
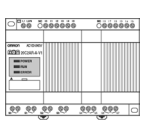
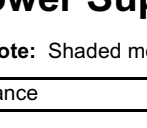
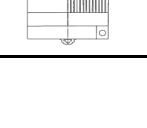

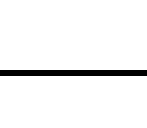
Basic Configuration



Ordering Information

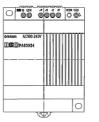
■ CPU

Stock Note: Shaded models are normally stocked.

Appearance	Power Supply	Inputs		Outputs		Calendar and clock function	Model
LCD type With LCD and operation buttons 	100 to 240 VAC, 50/60 Hz	100 to 240 VAC	6 inputs	Relays	4 outputs	Yes	ZEN-10C1AR-A-V1
	(Not isolated)						
	24 VDC	24 VDC					
	(Not isolated)						
LED type No LCD nor operation buttons 	100 to 240 VAC, 50/60 Hz	100 to 240 VAC	6 inputs	Relays	4 outputs	No	ZEN-10C2AR-A-V1
	(Not isolated)						
	24 VDC	24 VDC					
	(Not isolated)						
LCD type With LCD and operation buttons 	100 to 240 VAC, 50/60 Hz	100 to 240 VAC	12 inputs	Relays	8 outputs	Yes	ZEN-20C1AR-A-V1
	(Not isolated)						
	24 VDC	24 VDC					
	(Not isolated)						
LED type No LCD nor operation buttons 	100 to 240 VAC, 50/60 Hz	100 to 240 VAC	12 inputs	Relays	8 outputs	No	ZEN-20C2AR-A-V1
	(Not isolated)						
	24 VDC	24 VDC					
	(Not isolated)						
LCD type With LCD and operation buttons 	100 to 240 VAC, 50/60 Hz	100 to 240 VAC	12 inputs	Relays	8 outputs	No	ZEN-20C1DR-D-V1
	(Not isolated)						
	24 VDC	24 VDC					
	(Not isolated)						
LED type No LCD nor operation buttons 	100 to 240 VAC, 50/60 Hz	100 to 240 VAC	12 inputs	Relays	8 outputs	No	ZEN-20C2DR-D-V1
	(Not isolated)						
	24 VDC	24 VDC					
	(Not isolated)						
LCD type With LCD and operation buttons 	100 to 240 VAC, 50/60 Hz	100 to 240 VAC	12 inputs	Transistors	8 outputs	No	ZEN-10C1DT-D-V1
	(Not isolated)						
	24 VDC	24 VDC					
	(Not isolated)						
LED type No LCD nor operation buttons 	100 to 240 VAC, 50/60 Hz	100 to 240 VAC	12 inputs	Transistors	8 outputs	No	ZEN-10C2DT-D-V1
	(Not isolated)						
	24 VDC	24 VDC					
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


■ Power Supply

Stock Note: Shaded models are normally stocked.

Appearance	Power Ratings	Input Voltage	Output Voltage	Output Current	Model
	30W	100 to 240 VAC	24 VDC	1.3 A	ZEN-PA03024




Expansion I/O

Stock Note: Shaded models are normally stocked.

No. of I/O points/Appearance	Inputs	4 inputs	Outputs	4 outputs	Model
8 I/O 	100 to 240 VAC (isolated)		Relays		ZEN-8EAR
	24 VDC (isolated)		Transistors		ZEN-8EDR ZEN-8EDT
4 inputs 	100 to 240 VAC (isolated)		—	—	ZEN-4EA
	24 VDC (isolated)		ZEN-4ED		
4 outputs 	—	—	Relays	4 outputs	ZEN-4ER


Optional Accessories

Stock Note: Shaded models are normally stocked.

Name and appearance	Functions	Model
Memory Cassette 	EEPROM Used to save and copy programs	ZEN-ME01
Battery Unit 	Uses a battery to back up programs and data. Mount a Battery Unit if the loss of calendar, clock, holding bit, holding timer, and counter present values will cause problems in systems with long power interruptions. (Battery life: 10 years minimum)	ZEN-BAT01
Personal Computer Connecting Cable 	Connects the computer and ZEN when the ZEN Support Software is used. (Cable length: 2 m)	ZEN-CIF01

Support Software

Stock Note: Shaded models are normally stocked.

Name and appearance	Functions	Model
ZEN Support Software 	Runs on Windows 95, 98, ME, 2000, XP, or NT4.0 Service Pack 3 (CD-ROM) Used for offline programming, all parameter settings, program transfers, and printing.	ZEN-SOFT01-V_

Manuals

Product	Description	Model
Operation Manual	ZEN Programmable Relay Operation Manual	Z183
Operation Manual	ZEN Support Software Operation Manual	Z184

Specifications

■ CPU and Expansion Modules

Item		Specifications	
Model numbers	LCD type	ZEN-10C1AR-A-V1 ZEN-10C2AR-A-V1	ZEN-10C1DR-D-V1 ZEN-20C1DR-D-V1 ZEN-10C1DT-D-V1 ZEN-20C1DT-D-V1
	LED type	ZEN-10C2AR-A-V1 ZEN-20C2AR-A-V1	ZEN-10C2DR-D-V1 ZEN-20C2DR-D-V1 ZEN-10C2DT-D-V1 ZEN-20C2DT-D-V1
Power supply voltage		100 to 240 VAC, 50/60 Hz	24 VDC
Allowable power supply voltage		85 to 264 VAC, 47/63 Hz	20.4 to 26.4 VDC
Power consumption (CPU Unit + 3 Expansion I/O Units)		30 VA max.	6.5 W max.
Inrush current		40 A max.	20 A max.
Insulation resistance		20 M Ω (at 500 VDC) min. between power supply AC external terminals and all input terminals, and relay or transistor outputs.	
Dielectric strength		2300 VAC, 50/60 Hz for 1 min (leakage current 1 mA max.) between power supply AC external terminals and all input terminals, and relay or transistor outputs.	
Noise immunity		Conforms to IEC61000-4-4, 2 kV (power supply line)	
Vibration resistance		Conforms to JISC0040, 10 to 57 Hz, amplitude 0.075 mm 57 to 150 Hz, acceleration 9.8 m/s ² 80 min in X, Y, and Z directions (Sweep time 8 min x 10 sweeps = 80 mins total.)	
Shock resistance		Conforms to JIS C004, 147 m/s ² 3 times in X, Y, and Z directions	
Ambient temperature		LCD type (with LCD and operation buttons): 0° to 55°C LED type (no LCD/operation buttons): -25° to 55°C	
Ambient humidity		10% to 90% (with no condensation)	
Environmental conditions		No corrosive gases	
Storage temperature		LED type (with LCD and operation buttons): -20° to 75°C LED type (no LCD/operation buttons): -40° to 75°C	
Terminal block		Solid-wire terminal block	
Power supply holding time		10 ms min.	2 ms min.
Weight		300 g max.	
Enclosure rating		IP20 (Mounted inside a control panel)	