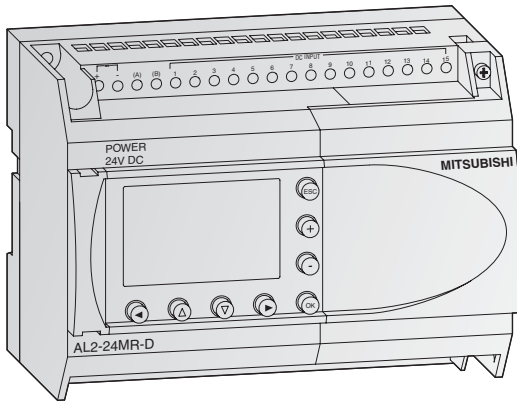


Specifications ALPHA 2



e.g. AL2-24M□□

ALPHA 2 Base Units

The ALPHA 2 controllers offer simple reliable control for a range of automation applications including lighting, air conditioning, security systems, and temperature and water control.

Special features:

- Transistor and relay output options
- Analog input/output
- High Speed counters up to 1 kHz
- GSM function for communication with mobile phones
- Language support for 8 different languages
- Display unit for messages and function block data

Base Units with 10–24 I/Os

Specifications		AL2-10MR-A	AL2-10MR-D	AL2-14MR-A	AL2-14MR-D	AL2-24MR-A	AL2-24MR-D
Electrical specifications							
Integrated inputs/outputs		10	10	14	14	24	24
Power supply		100–240 V AC	24 V DC	100–240 V AC	24 V DC	100–240 V AC	24 V DC
Digital inputs		6	6	8	8	15	15
Analog inputs		—	6	—	8	—	8
Channels		—	6	—	8	—	8
Integrated outputs		4	4	6	6	9	9
Max. power consumption	W	4.9	4.0	5.5	7.5	7.0	9.0
Typ. power consumption	All I/Os ON/OFF W	3.5/1.85 240 V AC 3.0/1.55 120 V AC	2.5/0.75	4.5/2.0 240 V AC 3.5/1.5 120 V AC	4.0/1.0	5.5/2.5 240 V AC 4.5/2.0 120 V AC	5.0/1.0
Weight	kg	0.2	0.2	0.3	0.3	0.35	0.3
Dimensions (WxHxD)	mm	71.2x90x55	71.2x90x55	124.6x90x52	124.6x90x52	124.6x90x52	124.6x90x52
Order information	Art. no.	215070	215071	215072	215073	215074	215075
Accessories		Power supplies with DIN-rail or wall mounting possibilities for powering the 24 V DC modules (refer to the power supply chapter in this catalogue)					

Environmental Specifications

General specifications	Alpha 2 series
Ambient temperature	Display: -10–55 °C, Hardware: -25–55 °C (storage temperature: -30–+70 °C)
Protection rating	IP20
Noise immunity	1000 Vpp with noise generator; 1 μs at 30–100 Hz, tested by noise simulator
Dielectric withstand voltage	3750 V AC, >1 min. according to EN60730
Allowable relative humidity	35–85 % (no condensation)
Shock resistance	Acc. to IEC 68-2-27: 147 m/s ² acceleration, 11 ms 3x3 directions
Vibration resistance	direct mounting
	DIN rail mounting
Insulation resistance	500 V DC, 7 MΩ acc. to EN60730-1
Ambient conditions	No corrosive gases, no dust
Certifications	Please refer to pages 66–67 in this catalogue

Electrical Specifications

Power supply specifications	DC powered modules (AL2-□MR-D)	AC powered modules (AL2-□MR-A)
Power supply	24 V DC	100–240 V AC (50/60 Hz)
Inrush current at ON	≤7.0 A (at 24 V DC)	≤6.5 A (at 240 V AC)
Allowable momentary power failure time	5 ms	10 ms

Digital Inputs

Input voltage	24 V DC (+20 %/-15 %)	100–240 V AC (+10 %/-15 %), 50/60 Hz
Input current	The input current changes depending on Source or Sink.	
	For Sink: (AL2-10/14/24MR-D) = 5.5 mA, 24 V DC	101–108 0.13 mA/120 V AC* 0.25 mA/240 V AC*
Response time	OFF→ON	35–85 ms, 120 V AC 25–55 ms, 240 V AC
	ON→OFF	35–85 ms, 120 V AC 50–130 ms, 240 V AC

Analog Inputs

Analog input range	0–500	—
Resolution	9 bit, (10 V/500)	—
Conversion speed	ms	8
Voltage	0–10 V DC	—
Impedance	kΩ	142 ±5 %
Accuracy	±5 % (0.5 V DC)	—

* Current leakage from the sensors connected to the inputs might provide enough current to turn the controller On. Do not use two wire sensors

Output specifications	All modules
Type	Relay
Switching voltage (max.)	V 250 V AC, 30 V DC
Rated current	10M, 14M: 8 A/point 24M (001-004): 8 A/point 24M (005-009): 2 A/point
Max. switching load	- inductive load 14M, 24M: 249 VA, 250 V AC/373 VA, 250 V AC 24M: 93 VA, 125 V AC/93 VA, 250 V AC
Minimum load	10 mA, 5 V DC
Response time	ms ≤10

Programming Specifications

System specifications	Alpha 2 series
Programming method	Function block
Program capacity	200 function blocks or 5000 bytes
Program processing	Cyclic processing of the stored program
Number of available instructions	38 different function blocks
Program storage	Integrated EEPROM and optional additional EEPROM cassette
Data storage	At voltage loss the current status of values, running time meters, and real-time data are stored for up to 20 days (at temperatures of 0 to 25 °C) through integrated capacitors
Processing time	1 ms + 20 μs/log. instruction (complex commands 500 μs/instruction)
Real-time clock	Seconds, minutes, hours, day of week, month, year (4-digit); accuracy: 5 s/day; automatic summer and winter time toggling
Program protection	Program and keys (3 levels)