

### Digital Extension Modules

There are 4 different extension modules available for the ALPHA 2, which allow the controller to be extended through additional inputs or outputs. The modules are inserted directly into the ALPHA 2 and therefore do not take up any additional space.

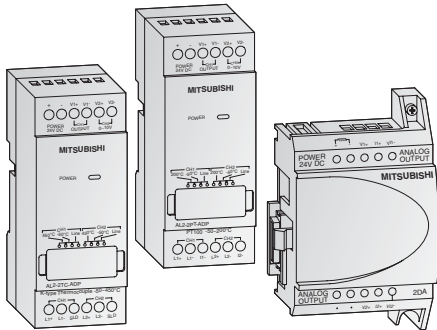
The AL2-4EX has the additional feature that 2 inputs may be used as high-speed counters with a counting frequency of 1 kHz.

All modules feature photocoupler insulation for all I/Os.

*Note: The digital extension modules cannot be used with the AL2-10MR series.*

Digital extension modules specifications	AL2-4EX-A2	AL2-4EX	AL2-4EYR	AL2-4EYT
<b>Inputs</b>				
Integrated inputs	4	4	—	—
Input voltage	220–240 V AC	24 V DC (+20 %, -15 %)	—	—
Input current	7.5 mA at 240 V AC (50 Hz), 9.0 mA at 240 V AC (60 Hz)	5.4 mA ±1 mA at 24 V DC	—	—
<b>Outputs</b>				
Integrated outputs	—	—	4	4
Output type	—	—	Relay	Transistor
Switched voltage (max.)	V	—	250 V AC, 30 V DC	5–24 V DC
Rated current	A	—	2 A per output	1 A per output
<b>Electrical specifications</b>				
Power Supply AC range (+10 %, -15 %)	220–240 V AC	24 V DC	100–240 V AC	24 V DC
<b>Mechanical specifications</b>				
Weight	kg	0.05	0.05	0.05
Dimensions (WxHxD)	mm	53.1x90x24.5	53.1x90x24.5	53.1x90x24.5
<b>Order information</b>				
Art. no.	142522	142521	142523	142524

*Note: EI1 and EI2 of the AL2-4EX can be used as high-speed counter inputs. In each case the response time for the high-speed counter inputs will be 0.5 ms or less. The AL2-4EX-A2, AL2-4EX, AL2-4EYR and AL2-4EYT modules can not be used with the AL2-10MR series.*



### Analog Extension Modules

The analog extension modules significantly increase the range of applications for the ALPHA 2. With these modules it is possible to output voltage or current signals or to measure temperatures.

Three different analog extension modules are available:

- The AL2-2DA offers two additional analog outputs for the ALPHA 2 and converts a digital input value into a voltage or a current. This module is inserted directly into the ALPHA 2.

*Note: the AL2-2DA cannot be used with the AL2-10MR series.*

- The AL2-2PT-ADP connects an external PT100 sensor to convert temperature readings into analog signals (0–10 V).
- The AL2-2TC-ADP connects thermocouple sensors (K type) to convert temperature readings into analog signals (0–10 V).

Analog extension modules specifications	AL2-2DA	AL2-2PT-ADP	AL2-2TC-ADP
<b>Analog inputs</b>			
Integrated inputs	—	2	2
Connectable temperature sensors	—	PT100 sensor Temp. coefficient 3.850 ppm/°C (IEC 751)	Thermocouple (K type), isolated type (IEC 584-1 1977, IEC 584-2 1982)
Compensated range	—	-50—+200 °C	-50—+450 °C
<b>Analog outputs</b>			
Integrated outputs	2	—	—
Analog output voltage range	0–10 V DC (5 kΩ 1 MΩ)	—	—
Analog output current range	4–20 mA (max. 500 Ω)	—	—
<b>Electrical specifications</b>			
Number of channels	2	2	2
Power Supply	24 V DC (-15—+10 %), 70 mA	24 V DC (-15—+20 %), 1 W	24 V DC (-15—+20 %), 1 W
<b>Mechanical specifications</b>			
Weight	kg	0.05	0.07
Dimensions (WxHxD)	mm	53.1x90x24.5	35.5x90x32.5
<b>Order information</b>			
Art. no.	151235	151238	151239