

## AE-MAESTRO ELECTRICAL SPECIFICATIONS AND RATINGS (3x400V Series)

Technical specifications and maximum ratings are shown in Table T-1. Device will be damaged if maximum ratings are exceeded or if improper auxiliary units are used. Therefore, select auxiliary devices according to the tables shown below.

Table T-1 Electrical Specifications of 400V Series

<b>MODEL (400V Series)</b>	<b>AEM404</b>	<b>AEM405</b>	<b>AEM407</b>	<b>AEM411</b>	<b>AEM415</b>	<b>AEM422</b>	<b>AEM430</b>
<b>Nominal Motor Power</b>	4 kW (5.5 HP)	5.5 kW (7.5 HP)	7.5 kW (10 HP)	11 kW (15 HP)	15 kW (20 HP)	22 kW (30 HP)	30 kW (40 HP)
<b>Nominal Output Current</b>	9 A	13 A	18 A	25 A	32 A	45 A	60 A
<b>Maximum Current Allowed Time</b>	18 A 5 s	26 A 5 s	36 A 5 s	50 A 5 s	64 A 5 s	90 A 5 s	120 A 5 s
<b>Control Circuit Supply Voltage</b>	1-Phase 100V.....240V AC 50/60 Hz +- %5						
<b>Line Voltage</b>	3-Phase 340V.....420V AC 50/60 Hz +- %5						
<b>Motor Output Voltage</b>	3-Phase 0V.....420V AC 0.....100 Hz						
<b>Carrier Frequency</b>	6.....16 kHz						

- Select **braking resistors** by regarding Table T-2. Please not that these values are valid for devices for 3x400V line.

Table T-2 Electrical Specifications of Braking Resistors (*for 400V Series*)

Braking Resistors for 400V Series	AEM404	AEM405	AEM407	AEM411	AEM415	AEM422	AEM430
Braking Resistor Values	120 Ω	80 Ω	60 Ω	40 Ω	30 Ω	20 Ω	15 Ω
Minimum Resistor Power of Asynchronous Motor (Car speed < 1.6m/s)	1.000 W	1.200 W	1.500 W	2.200 W	3.000 W	4.400 W	6.000 W
Minimum Resistor Power of Asynchronous Motor (Car speed ≥ 1.6m/s)	1.500 W	1.800 W	2.250 W	3.300 W	4.500 W	6.600 W	9.000 W
Minimum Resistor Power of Synchronous Motor (Car speed < 1.6m/s)	1.500 W	1.800 W	2.250 W	3.300 W	4.500 W	6.600 W	9.000 W
Minimum Resistor Power of Synchronous Motor (Car speed ≥ 1.6m/s)	2.000 W	2.400 W	3.000 W	4.400 W	6.000 W	8.800 W	12.000 W
Minimum Resistor Power of Synchronous Motor (Car speed ≥ 2.0m/s) (With FAN when car speed ≥ 2.5m/s)	2.500 W	3.000 W	3.750 W	5.500 W	7.500 W	11.000 W	15.000 W

- Select **circuit breakers** used in the control panel by regarding Table T-3.

Table T-3 Technical Specifications of the Circuit Breaker Units (*for 400V Series*)

Circuit Breaker Selection	AEM404	AEM405	AEM407	AEM411	AEM415	AEM422	AEM430
Power Input Supply Circuit Breaker (F3X)	16 A	20 A	25 A	32 A	40 A	63 A	80 A
Control Circuit Input Power Circuit Breaker (F4)	1 A						
Battery Circuit Breaker (FBAT)	16 A	16 A	16 A	25 A	25 A	32 A	50 A
UPS Circuit Breaker (FTR1)	4 A						

- Select cables used inside the control panel and for auxiliary devices by regarding Table T-4.

Table T-4 Minimum Cable Cross Sections (*for 400V Series*)

<b>Minimum Cable Cross Sections</b>	<b>AEM404</b>	<b>AEM405</b>	<b>AEM407</b>	<b>AEM411</b>	<b>AEM415</b>	<b>AEM422</b>	<b>AEM430</b>
<b>Power Input and Motor Cables</b>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>	6 mm <sup>2</sup>	10 mm <sup>2</sup>	10 mm <sup>2</sup>
<b>Braking Resistor Cables</b>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>	6 mm <sup>2</sup>
<b>UPS Connection Cables</b>	1,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>	6 mm <sup>2</sup>
<b>Battery Connection Cables</b>	4 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>	6 mm <sup>2</sup>	6 mm <sup>2</sup>
<b>Control Terminal Cables</b>	0,75 mm <sup>2</sup>						
<b>Encoder Terminal Cables</b>	0,35 mm <sup>2</sup>						