



# Position **Controllers**

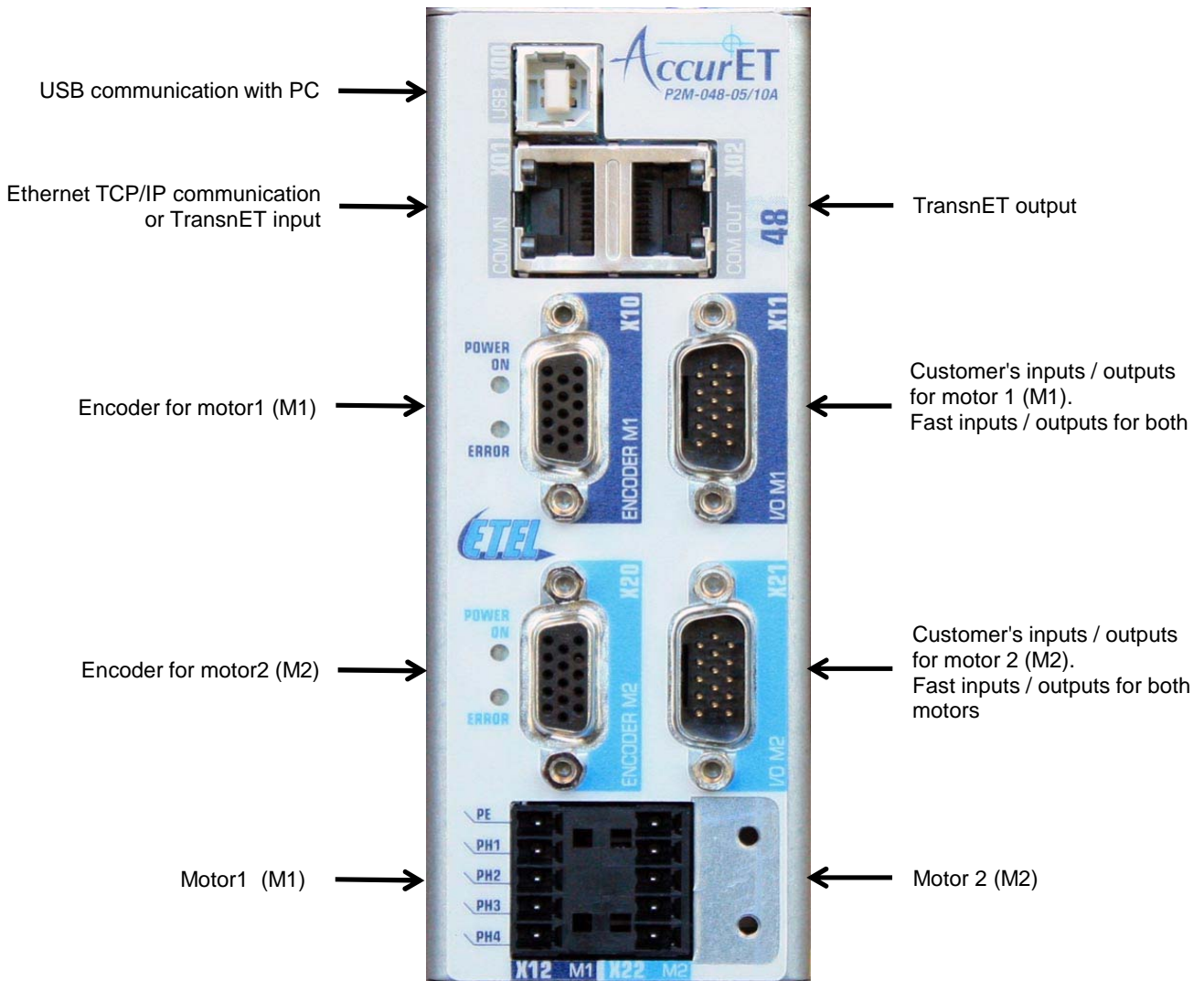
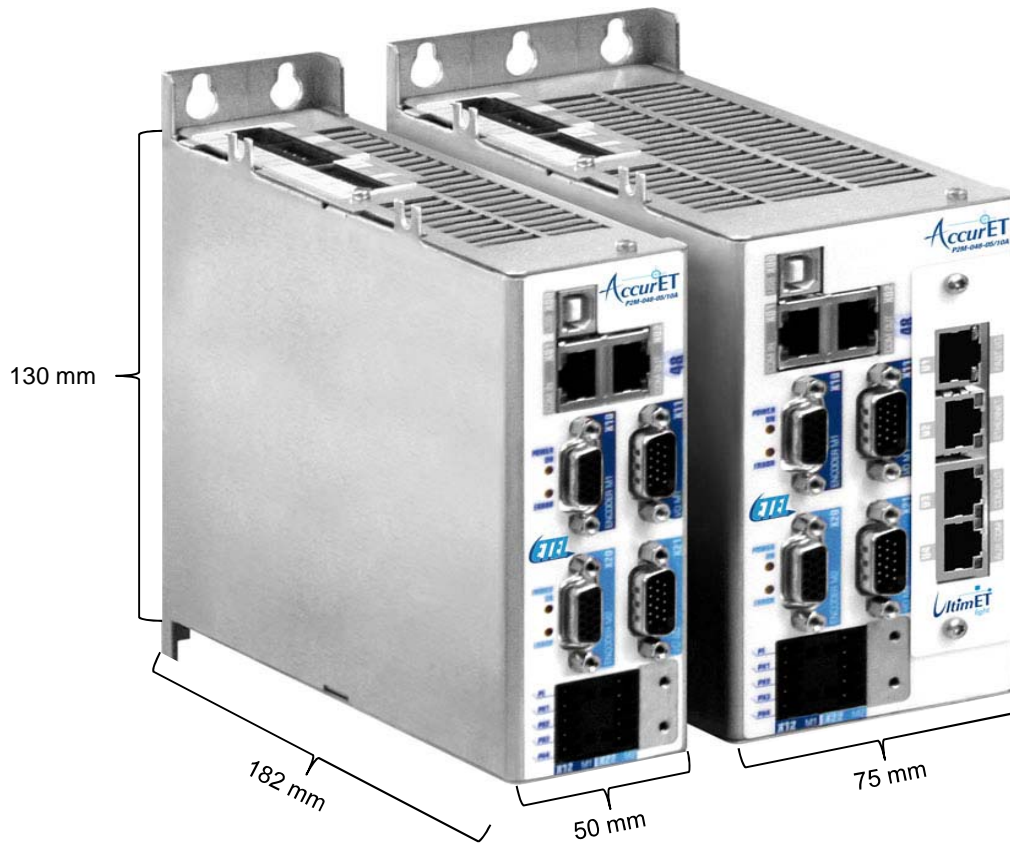
**AccurET DATA SHEETS**



CONTROLLERS		UNIT	EA-P2M-048-2.5/5A	EA-P2M-048-05/10A
Number of axes		-	2	2
Current range	Continuous current (per axis)	Arms	2.5	5
	Max. overload current (per axis)	Arms	5	10
Power input	DC voltage	VDC	15 - 48	15 - 48
	Max. current	Arms	10	10
Control input	DC voltage	VDC	24 VDC ( $\pm 10\%$ )	24 VDC ( $\pm 10\%$ )
	Max. current at 24 VDC	Arms	Typ. 1.3 A / Max. 2.5 A	Typ. 1.3 A / Max. 2.5 A
PWM frequency		kHz	10, 20	10, 20
Weight		kg	0.98	1.13

CONTROL FEATURES		UNIT	
General	Motion profile and command management sampling time	$\mu\text{s}$	400 (down to 200)
	Current loop sampling time	$\mu\text{s}$	50
	Position loop sampling time	$\mu\text{s}$	50
	Basic motion profiles	-	Trapezoidal, S-curve, Sine, look-up table, ..., interpolated (refer to UlimET)
	Advanced motion profiles	-	Refer to UlimET motion controller
Communication interface	USB 2.0 (for setting only)	-	Full speed (12 Mbps)
	ETEL real-time bus / cycle time	-	TransnET at 1 Gbps / 100 $\mu\text{s}$ (down to 50 $\mu\text{s}$ )
	Ethernet (TCP/IP)	-	10 / 100 MHz
Position encoder interface	Analog 1 Vpp	-	Max. 500 kHz input frequency
	Digital (TTL)	-	Max. 10 MHz input frequency
	EnDat 2.1 and 2.2	-	RS485
User's inputs / outputs	Digital inputs / outputs	-	4 / 2 (per axis)
	Fast digital inputs / outputs	-	6 / 4 (common to both axes)
	Analog inputs / outputs	-	0 / 0
	With additional optional board	-	8 digital inputs and outputs / 4 analog inputs and outputs (16 bits)
Software / programmability	ComET commissioning software	-	For setting / monitoring (Windows Vista, 7, 8 and 10)
	ETEL Device Interface (EDI)	-	DLL files for C/C++/.NET (Windows 7, 8 and 10 (32/64-bit)), RTX2016 (32-bit) and RTX64
	Firmware update	-	USB, Ethernet TCP/IP and TransnET

ADVANCED FEATURES		
Fast triggers (1D and 2D)	Fast trigger based on theoretical or real position with less than 20ns reaction time.	
Force control	Precise force control with or without sensor. Zero stop time for outstanding troughput.	
Identification tools	Powerfull indentification tool for fine tuning and machine performance evaluation.	
Gantry control	Advanced control algorithm to drastically reduce settling times on gantry type machines.	
Stage protection	Safety algorithm to handle very fast and controlled axis stop.	
Cogging and friction compensation	Learning algorithm to compensate disturbances like friction and cogging.	
Dual encoder feedback	Optimized management of dual encoder feedback on a single axis.	
RTV (Real Time Values)	8 channels of real time data per axis for upper level motion management.	
Trajectory filters	Advanced trajectory shapes to avoid axis vibrations and reduce settling times.	



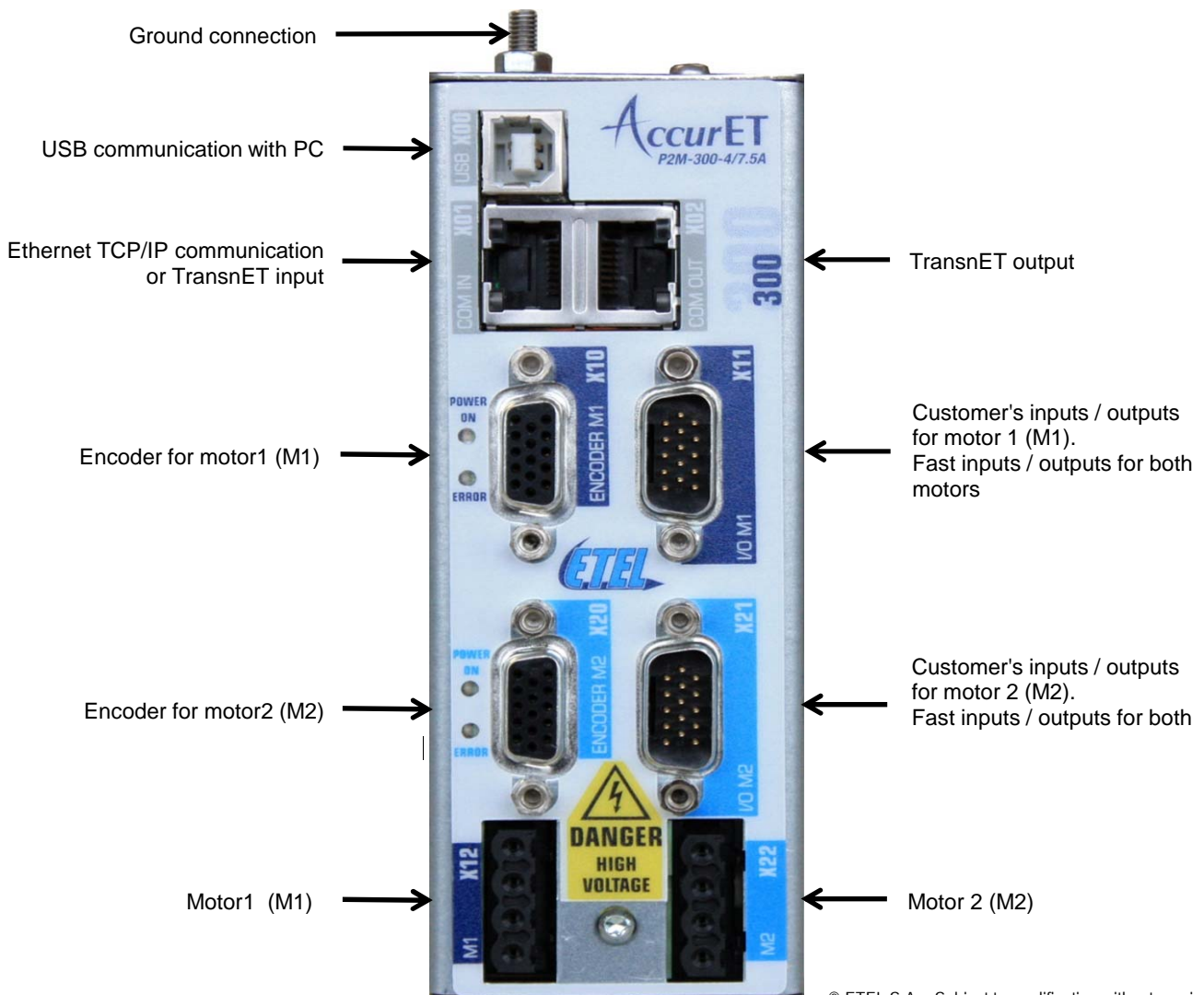
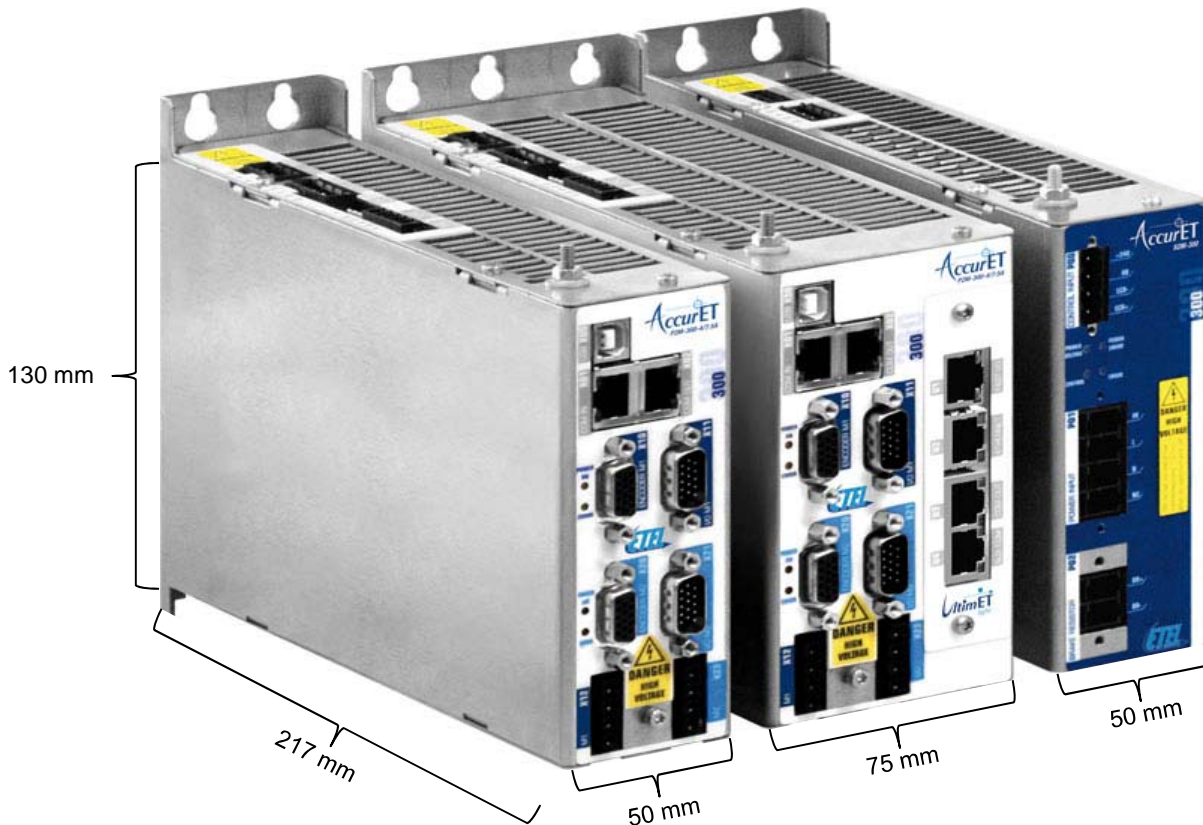
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CONTROLLERS		UNIT	EA-P2M-300-4/7.5A	EA-P2M-300-07/15A
Number of axes		-	2	2
Current range	Continuous current (per axis)	Arms	4	7 (PWM at 10 kHz)
	Max. overload current (per axis)	Arms	7.5	15
Power input	DC voltage	VDC	48 - 340	48 - 340
	Max. current	Arms	8	8
PWM frequency		kHz	10, 20	10, 20
Weight		kg	1.4	1.6

POWER SUPPLY		UNIT	EA-S0M-300-40/80A
Power input	AC voltage (single phase)	VAC	71 - 240 (50 / 60Hz)
	Max. AC current	A	10 (at 71 - 240 VAC)
	Max. inrush current	Apeak	15 at 240 VAC
	Max. continuous power	kW	2.4
Auxiliary input	DC voltage	VDC	24 ± 10%
	Max. current	A	10
Power output	DC voltage	VDC	100 - 340
	Max. continuous current	Arms	10 (limited by max. AC input current)
	Max. pulse current	A	40
Auxiliary output	DC voltage	VDC	24 ± 10%
	Max. continuous current	A	10

CONTROL FEATURES		UNIT	
General	Motion profile and command management sampling time	µs	400 (down to 200)
	Current loop sampling time	µs	50
	Position loop sampling time	µs	50
	Basic motion profiles	-	Trapezoidal, S-curve, Sine, look-up table, ..., interpolated (refer to UltimET)
	Advanced motion profiles	-	Refer to UltimET motion controller
	Power safety relay	-	Relay disabling the output power bridge
Communication interface	USB 2.0 (for setting only)	-	Full speed (12 Mbps)
	ETEL real-time bus / cycle time	-	TransnET at 1 Gbps / 100 µs (down to 50 µs)
	Ethernet (TCP/IP)	-	10 / 100 MHz
Position encoder interface	Analog 1 Vpp	-	Max. 500 kHz input frequency
	Digital (TTL)	-	Max. 10 MHz input frequency
	EnDat 2.1 and 2.2	-	RS485
User's inputs / outputs	Digital inputs / outputs	-	4 / 2 (per axis)
	Fast digital inputs / outputs	-	6 / 4 (common to both axes)
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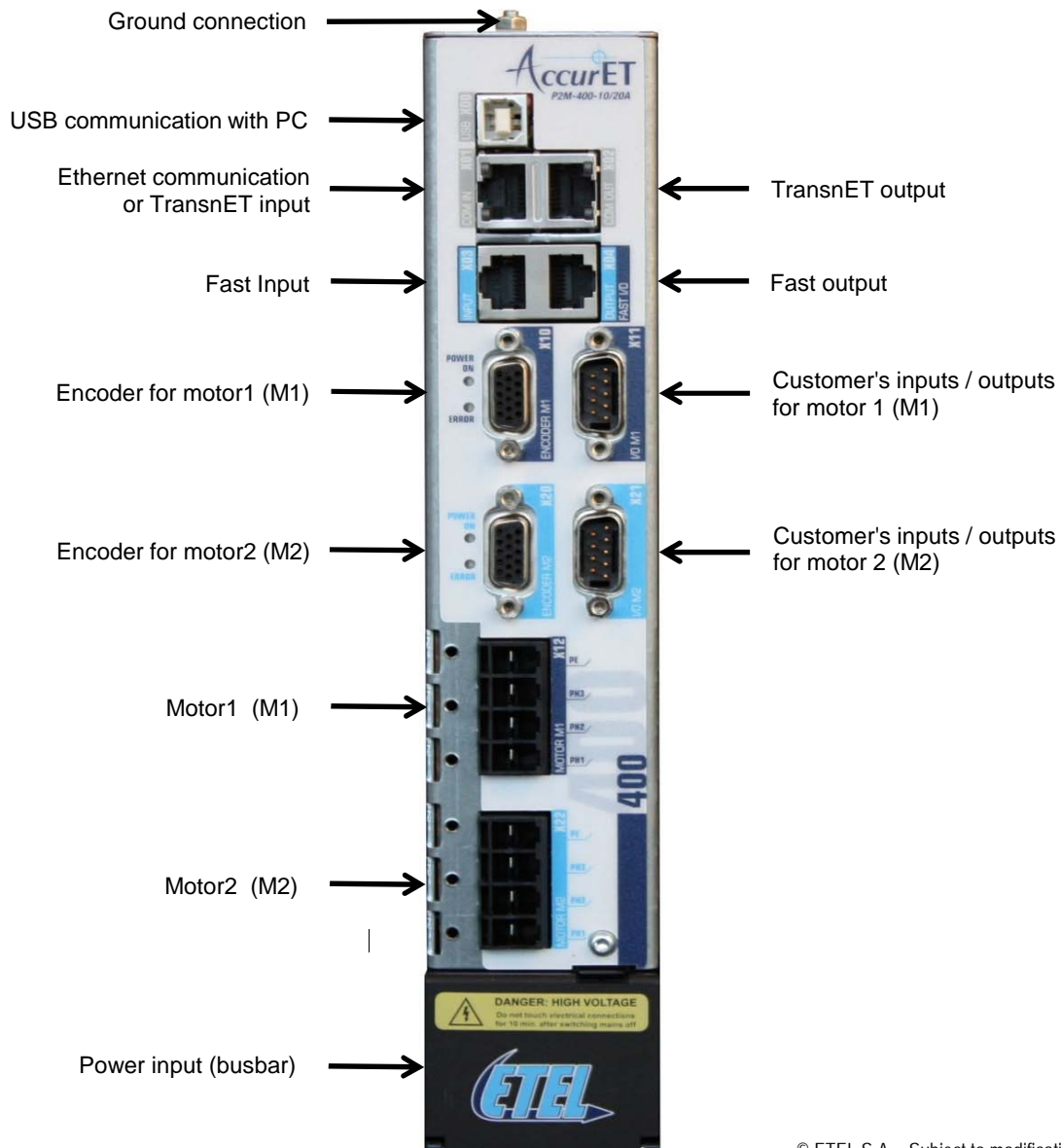
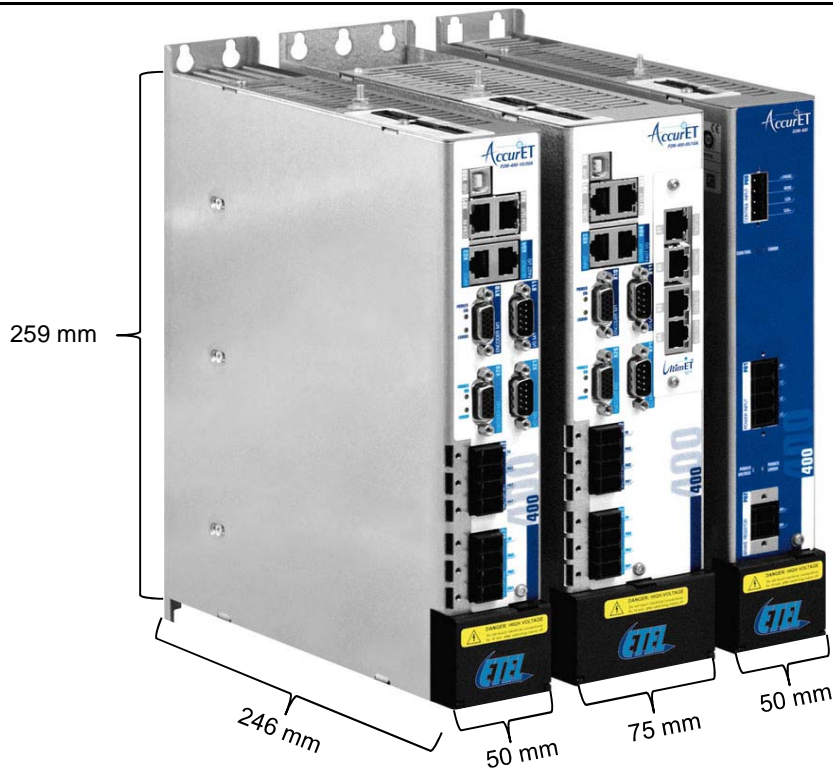
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CONTROLLERS		UNIT	EA-P2M-400-05/10A	EA-P2M-400-10/20A	EA-P2M-400-15/40A
Number of axes		-	2	2	2
Current range	Continuous current (per axis)	Arms	5	10 (PWM at 10 kHz)	15 (PWM at 10 kHz)
	Max. overload current (per axis)	Arms	10	20	40
Power input	DC voltage	VDC	48 - 400	48 - 400	48 - 400
	Max. current	Arms	30	30	30
PWM frequency		kHz	10, 20	10, 20	10, 20
Weight		kg	3.3	3.3	4

POWER SUPPLY		UNIT	EA-S0M-400-40/80A
Power input	AC voltage (single or 3-phases)	VAC	71 - 280 (50 / 60Hz)
	Max. AC current	A	10
	Max. inrush current	Apeak	15 at 280 VAC
	Max. continuous power	kW	2.8 (with 1-phase AC input) or 4.8 (with 3-phase AC input)
Auxiliary input	DC voltage	VDC	24 (0 +10%)
	Max. current	A	10
Power output	DC voltage	VDC	100 - 400
	Max. continuous current	Arms	10 (limited by max. AC input current)
	Max. pulse current	A	80
Auxiliary output	DC voltage	VDC	24 ± 10%
	Max. continuous current	A	10

CONTROL FEATURES		UNIT	
General	Motion profile and command management sampling time	µs	400 (down to 200)
	Current loop sampling time	µs	50
	Position loop sampling time	µs	50
	Basic motion profiles	-	Trapezoidal, S-curve, Sine, look-up table, ..., interpolated (refer to UltimET)
	Advanced motion profiles	-	Refer to UltimET motion controller
	Power safety relay	-	Relay disabling the output power bridge
Communication interface	USB 2.0 (for setting only)	-	Full speed (12 Mbps)
	ETEL real-time bus / cycle time	-	TransnET at 1 Gbps / 100 µs (down to 50 µs)
	Ethernet (TCP/IP)	-	10 / 100 MHz
Position encoder interface	Analog 1 Vpp	-	Max. 500 kHz input frequency
	Digital (TTL)	-	Max. 10 MHz input frequency
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CONTROLLERS		UNIT	EA-P2M-600-15/40A
Number of axes		-	2
Current range	Continuous current (per axis)	Arms	15 (PWM at 5 kHz)
	Max. overload current (per axis)	Arms	40
Power input	DC voltage	VDC	200 - 600
	Max. current	Arms	30
PWM frequency		kHz	5, 10
Weight		kg	4

POWER SUPPLY		UNIT	EA-S0M-600-40/80A
Power input	AC voltage (three phases)	VAC	142 - 424 (50 / 60 Hz)
	Max. AC current	A	10
	Max. inrush current	Apeak	15 at 424 VAC
	Max. continuous power	kW	7.3 (with 3-phase AC input)
Auxiliary input	DC voltage	VDC	24 (0 +10%)
	Max. current	A	10
Power output	DC voltage	VDC	200 - 600
	Max. continuous current	Arms	10 (limited by max. AC input current)
	Max. pulse current	A	80
Auxiliary output	DC voltage	VDC	24 ± 10%
	Max. continuous current	A	10

CONTROL FEATURES		UNIT	
General	Motion profile and command management sampling time	µs	400 (down to 200)
	Current loop sampling time	µs	50
	Position loop sampling time	µs	50
	Basic motion profiles	-	Trapezoidal, S-curve, Sine, look-up table, ..., interpolated (refer to UltimET)
	Advanced motion profiles	-	Refer to UltimET motion controller
	Power safety relay	-	Relay disabling the output power bridge
	Communication interface	USB 2.0 (for setting only)	-
ETEL real-time bus / cycle time		-	TransnET at 1 Gbps / 100 µs (down to 50 µs)
Ethernet (TCP/IP)		-	10 / 100 MHz
Position encoder interface	Analog 1 Vpp	-	Max. 500 kHz input frequency
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