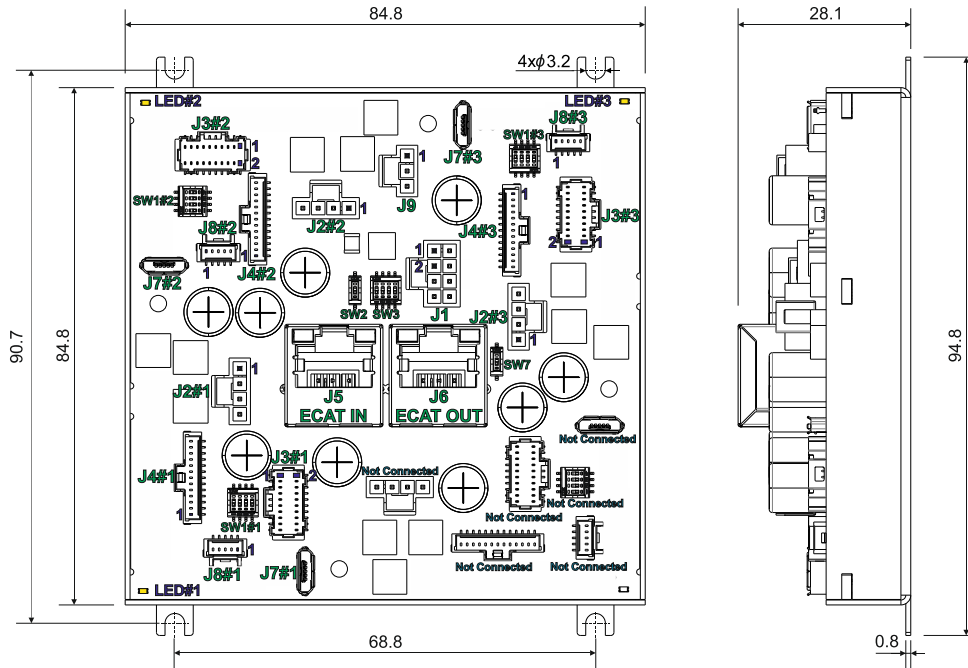




Micro 4803 SY3-CAT Multi Axis System DATASHEET P/N: P020.200.E403



All dimensions are in mm. Drawing not to scale.

Motor – sensor configurations				
Sensor	Motor			
	PMSM	BLDC	DC BRUSH	
Incr. Encoder	Ⓢ		Ⓢ	
Incr. Encoder + Dig. Hall	Ⓢ	Ⓢ		
Linear Halls	Ⓢ			
Digital Halls control only	Ⓢ			
SSI / BiSS-C/ EnDAT/ TAMAGAWA/ Panasonic/ Nikon / Sanyo Denki	Ⓢ	Ⓢ	Ⓢ	
Tacho			Ⓢ	

Features
<ul style="list-style-type: none"> 3 axis compact CAN motion system
<ul style="list-style-type: none"> Universal solution for control of rotary and linear brushless and brushed motors
<ul style="list-style-type: none"> One supply connector: Motor 7 to 48 V_{DC}, Logic 6 to 48 V_{DC}
<ul style="list-style-type: none"> Motor output current per axis: <ul style="list-style-type: none"> Nominal: 4A_{RMS} / 5.6A amplitude nominal; Peak: 10A_{RMS} / 14A amplitude peak.
<ul style="list-style-type: none"> Feedback Devices per axis (1x Hall sensors + 2x encoders): <ul style="list-style-type: none"> 1 x Hall sensor interface (digital or linear)
<ul style="list-style-type: none"> 1st feedback devices supported: <ul style="list-style-type: none"> Incremental A / B (index Z available only for 1 encoder): differential or single-ended
<ul style="list-style-type: none"> Absolute: differential or single-ended encoder. Supported protocols: SSI, BiSS, EnDAT, TAMAGAWA, Panasonic, Nikon, Sanyo Denki
<ul style="list-style-type: none"> 2nd feedback devices supported: <ul style="list-style-type: none"> Incremental encoder interface (differential)
<ul style="list-style-type: none"> Absolute differential encoder. Supported protocols: SSI, BiSS, EnDAT, TAMAGAWA, Panasonic, Nikon, Sanyo Denki
<ul style="list-style-type: none"> Integrated termination resistors for the 1st feedback connector of each axis, selectable by Sliding switches
<ul style="list-style-type: none"> 1 x analogue input software selectable per axis: 12-bit 0-5V or ±10V: Reference, Feedback or general purpose
<ul style="list-style-type: none"> 3 x digital inputs per axis: 2 for limit switches + one Enable, NPN, pull-to-GND to activate, pull-up on-board to +5V. Pull to GND to activate
<ul style="list-style-type: none"> 3 x configurable I/Os per axis, each software selectable as: <ul style="list-style-type: none"> Digital input, NPN, with pull-up on-board to +5V. Pull to GND to activate; Digital output, NPN (open-collector), with pull-up on-board to +5V. Sink current: 1 x 1.5A to drive inductive loads (such as mechanical brake), 2 x 0.1A.
<ul style="list-style-type: none"> RS-232 serial & USB & dual 100Mbps EtherCAT® interfaces
<ul style="list-style-type: none"> Commissioning (set-up) possible through RS232, USB, FoE (File-over-EtherCAT) or EoE (Ethernet-over-EtherCAT)
<ul style="list-style-type: none"> EtherCAT connection: standard RJ45 ports
<ul style="list-style-type: none"> Operating ambient temperature: 0-40°C (over 40°C with de-rating)
<ul style="list-style-type: none"> Programmable protections: any short-circuit between motor phases, GND and/or supply, over/under-voltage, over-current, I²t, control error
<ul style="list-style-type: none"> >99% voltage efficiency

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Mating Connectors			
Producer	Part No.	Connector	Description
Molex	1053071203	J9	1x3 Nano-Fit, 2.50mm Pitch Nano-Fit Wire-to-Board Housing, 3 circuits
Molex	1053071204	J2#x	1x4 Nano-Fit, 2.50mm Pitch Nano-Fit Wire-to-Board Housing, 4 circuits
Molex	5011892010	J3#x	2x10 Pico-Clasp, 1.00mm Pitch Pico-Clasp Wire-to-Board Housing, 20 Circuits
Molex	5013301300	J4#x	1x13 Pico-Clasp, 1.00mm Pitch Pico-Clasp Wire-to-Board Housing, 13 Circuits
Molex	1053081208	J1	Nano-Fit Receptacle Housing, TPA Capable, 2.50mm Pitch, Dual Row, 8 Circuits, Black, Glow-Wire Capable
Molex	5013300500	J8#x	Pico-Clasp Receptacle Crimp Housing, 1.00mm Pitch, Single Row, Friction Lock, 5 Circuits, White
Tensility International Corp	1002333	J7#x	USB cable, Cable USB A Male - Micro B Male, 1m, shielded, black, 9.6mm plastic width
Molex	0797582140	J1, J9 J2#x	Pre-Crimped wires for Nano-Fit Cable Assembly, Nano-Fit Crimp Terminal Socket to Nano-Fit Crimp Terminal Socket, 300mm
Molex	0797581019	J3#x, J4#x, J8#x	Pre-Crimped wires for Pico-Clasp Cable Assembly, Pico-Clasp Crimp Terminal Socket to Pico-Clasp Crimp Terminal Socket, 300mm
Molex	1053001400	J1, J9 J2#x	Pins for Nano-Fit Nano-Fit Crimp Terminal, Female, 0.76µm Gold (Au) Plating, Lubricated, 24-26 AWG
Molex	5011937000	J3#x, J4#x, J8#x	Pins for Pico-Clasp 1.00mm Pitch, Pico-Clasp Female Crimp Terminal, Gold Plating 0.10µm, 28-32 AWG, Reel
Molex	638276000	J1, J9 J2#x	Crimp tool Nano Fit Crimp Tool, Ratchet, Molex Nano-Fit 105300 Series 26-24AWG Socket Contacts, 207129 Series
Molex	638191500	J3#x, J4#x, J8#x	Crimp tool Pico-Clasp Crimp Tool, Ratchet, Molex Pico-Clasp 501193 & 501334 Series 32-28AWG Contacts

* "x" can be drive 1, 2, or 3

Pin	Name	Type	Description
J1 1,2,3	+Vmot	I	Positive terminal of the motor supply: 7 to 48 V _{DC} . Internally connected to all 3 drives +V _{mot} pins.
4	PE	-	Earth connection.
5,6,7	GND	-	Ground return.
8	PE	-	Earth connection

Pin	Name	Type	Description
J2#x 1	A	O	Phase A for 3-ph motors, Motor+ for DC brush motors.
2	B	O	Phase B for 3-ph motors, Motor- for DC brush motors.
3	C	O	Phase C for 3-ph motors.
4	PE	-	Earth connection

Pin	Name	Type	Description
1	232TX	O	RS-232 Data Transmission.
2	232RX	I	RS-232 Data Reception.
3	GND	-	Ground return.
4	+Vlog	I	Positive terminal of the logic supply input: 6 to 48 V _{DC} . Internally connected to all 3 drives +V _{log} pins.
5	IN2/LSP	I	5-60V digital NPN input. Positive limit switch input.
6	IN3/LSN	I	5-60V digital NPN input. Negative limit switch input.
J4#x 7	I/O0	I/O	5-50V NPN general-purpose digital programmable input IN0 /or NPN 1.5A output OUT0.
8	I/O1	I/O	5-50V NPN general-purpose digital programmable input IN1 / or NPN 0.1A output OUT1.
9	I/O4	I/O	5-50V NPN general-purpose digital programmable input IN4 / or NPN 0.1A output OUT4.
10	IN5/Enable	I	5-60V digital NPN input. Drive Enable input.
11	GND	-	Ground return.
12	AnalogIn	I	Analog input (range software selectable 0-5V or ±10V)
13	+5V	O	Supply for all feedback sensors.

Pin	Name	Type	Description
1	GND	-	Ground return.
2	Hall1	I	Digital Hall, or Linear Hall sensor 1.
3	+5V	O	5V supply for all feedback sensors.
4	Hall2	I	Digital Hall, or Linear Hall sensor 2.
5	+5V	O	5V supply for all feedback sensors.
6	Hall3	I	Digital Hall, or Linear Hall sensor 3.
J3#x 7	EncA1+/EncA1 Dt1+/Dt1	I	Encoder 1 A / data positive (differential or single-ended). Set SW1 pin 1 for differential.
8	GND	-	Ground return.
9	EncA1-/Dt1-	I	Encoder 1 A- / data negative (differential) or Pulse-, or Data- for SSI, or Slave- for BiSS. Set SW1 pin 1 for differential.
10	+5V	O	5V supply for all feedback sensors.
11	EncB1+/EncB1 Clk1+/Clk1	I	Encoder 1 B / clock positive (differential or single-ended). Set SW1 pin 2 for differential.
12	EncA2+/EncA2 Dt2+/Dt2	I	Incr. encoder2 A+ diff. input, or Pulse+, or Data+ for SSI, or Slave+ for BiSS; has 120Ω resistor between pins 12 and 14.
13	EncB1/ Clk1-	I	Encoder 1 B- / clock negative (differential). Set SW1 pin 2 for differential.
14	EncA2-/Dt2-	I	Incr. encoder2 A- diff. input, or Pulse-, or Data- for SSI, or Slave- for BiSS; has 120Ω resistor between pins 12 and 14.
15	Z1+	I	Incr. encoder1 Z single-ended or Z+ diff. input. Set SW1 pin 3 for differential.
16	EncB2+/EncB2 Clk2+/Clk2	I/O	Incr. encoder2 B+ diff. input, or Dir+, or Clock+ for SSI, or Master+ for BiSS; has 120Ω resistor between pins 16 and 18.
17	Z1-	I	Incr. encoder1 Z- diff. input. Set SW1 pin 3 for differential.
18	EncB2- Clk2-	I	Incr. encoder2 B- diff. input, or Dir-, or Clock- for SSI, or Master- for BiSS; has 120Ω resistor between pins 16 and 18.
19	GND	-	Ground return.
20	+Vlog	I	Positive terminal of the logic supply input: 6 to 48 V _{DC} .

Port	Name	Type	Description
J5	ECAT IN	I	EtherCAT standard RJ45 Ethernet IN port.
J6	ECAT OUT	O	EtherCAT standard RJ45 Ethernet OUT port.
J7#x	USB	I/O	Standard Micro USB for PC data transfer

Pin	Name	Type	Description
J8#x 1	+Vlog	I	Positive terminal of the logic supply input: 6 to 48 V _{DC} . Internally connected to other +V _{log} pins.
2	IN2/LSP	I	5-60V digital NPN input. Positive limit switch input. Internally connected to J4#x pin 5.
3	IN3/LSN	I	5-60V digital NPN input. Negative limit switch input. Internally connected to J4#x pin 6.
4	GND	-	Ground return.
5	PE	-	Earth connection

Pin	Name	Type	Description
J9 1	Rsvd	-	Reserved. Do not connect.
2	GND	-	Ground return.
3	+Vlog	I	Positive terminal of the logic supply input: 6 to 48 V _{DC} . Internally connected to all 3 drives +V _{log} pins.

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SW1#x – Feedback Resistors selection

Position	Description
1	ON = Connect an 120Ω resistor between EncA1-/Dt1- and EncA1+/EncA1/Dt1+/Dt1 feedback pins.
2	ON = Connect an 120Ω resistor between EncB1/Clk1- and EncB1+/EncB1/Clk1+/Clk1 feedback pins.
3	ON = Connect an 120Ω resistor between Z1- and Z1+ feedback pins.
4	Reserved.

SW7 - Reserved

SW2 & SW3 - AxisID Selection

SW2	SW3			Drive AxisID			
	Pin 1	Pin 2	Pin 3	Pin 4	Drive #1	Drive #2	Drive #3
off	off	off	off	off	1	2	3
off	off	off	off	on	9	10	11
off	off	off	on	off	17	18	19
off	off	off	on	on	25	26	27
off	off	on	off	off	33	34	35
off	off	on	off	on	41	42	43
off	off	on	on	off	49	50	51
off	off	on	on	on	57	58	59
off	on	off	off	off	65	66	67
off	on	off	off	on	73	74	75
off	on	off	on	off	81	82	83
off	on	off	on	on	89	90	91
off	on	on	off	off	97	98	99
off	on	on	off	on	105	106	107
off	on	on	on	off	113	114	115
off	on	on	on	on	121	122	123
on	off	off	off	off	129	130	131
on	off	off	off	on	137	138	139
on	off	off	on	off	145	146	147
on	off	off	on	on	153	154	155
on	off	on	off	off	161	162	163
on	off	on	off	on	169	170	171
on	off	on	on	off	177	178	179
on	off	on	on	on	185	186	187
on	on	off	off	off	193	194	195
on	on	off	off	on	201	202	203
on	on	off	on	off	209	210	211
on	on	off	on	on	217	218	219
on	on	on	off	off	225	226	227
on	on	on	off	on	233	234	235
on	on	on	on	off	241	242	243
on	on	on	on	on	249	250	251

LEDs

Each LED#x (yellow) shows if the corresponding drive logic supply is powered and if its internal +5V power supply is operational

Electrical characteristics

All parameters measured under the following conditions (unless otherwise specified):

- $V_{LOG} = 24 \text{ VDC}$; $V_{MOT} = 48 \text{ VDC}$; $F_{PWM} = 20 \text{ kHz}$
- Supplies start-up / shutdown sequence: -any-
- Load current (sinusoidal amplitude) = 5.6A
- Data is provided for each axis of the system

Operating Conditions		Min.	Typ.	Max.	Units
Ambient temperature		0		40 ¹	°C
Ambient humidity	Non-condensing	0		90	%Rh
Altitude / pressure ²	Altitude (vs. sea level)	-0.1	0 ± 2.5	2	Km
	Ambient Pressure	0 ²	0.75 ± 1	10.0	atm

Storage Conditions		Min.	Typ.	Max.	Units
Ambient temperature		-40		100	°C
Ambient humidity	Non-condensing	0		100	%Rh
Ambient Pressure		0		10.0	atm
ESD capability (Human body model)	Not powered; applies to any accessible part			±0.5	kV
	Original packaging			±15	kV
Mechanical Mounting		Min.	Typ.	Max.	Units
Airflow		natural convection ³ , closed box			
Spacing required for horizontal mounting	Between adjacent drives		10		mm
	Between drives and nearby walls		10		mm
	Space needed for drive removal		20		mm
	Between drives and roof-top		30		mm
Insertion force	Using recommended mating connectors		20		N
Extraction force			8		N
Environmental Characteristics		Min.	Typ.	Max.	Units
Size (Length x Width x Height)	Global size	84.8 x 68.8 x 23.1			mm
		~3.3 x 2.7 x 0.9			inch
Weight		-			g
Cleaning agents	Dry cleaning is recommended	Only Water- or Alcohol- based			
Protection degree	According to IEC60529	IP20			-
Logic Supply Input (+V _{LOG})		Min	Typ	Max.	Units
Supply voltage	Nominal values	6	24	48	V _{DC}
	Absolute maximum values, drive operating but outside guaranteed parameters	4.9		60	V _{DC}
	Absolute maximum values, continuous	-0.5		63	V _{DC}
Supply current	+V _{LOG} = 12V		90	150	mA
	+V _{LOG} = 24V		60	90	
	+V _{LOG} = 48V		45	60	
Voltage Measurement - Total error				1.5	%
Utilization category Acc. to 60947-4-1 (I _{PEAK} ≤ 1.05 * I _{NOM})		DC-1			
Motor Supply Input (+V _{MOT})		Min	Typ.	Max.	Units
Supply voltage	Nominal values	7		48	V _{DC}
	Absolute maximum values, drive operating but outside guaranteed parameters	6		60	V _{DC}
	Absolute maximum values, continuous	-0.5		63	V _{DC}
Supply current	Idle		25		mA
	Operating	-15	±3	+15	
	Absolute maximum value, short-circuit condition (Duration ≤ 10ms) [†]			16.5	
Voltage Measurement - Total error				1.5	%
Utilization category Acc. to 60947-4-1 (I _{PEAK} ≤ 4.0 * I _{NOM})		DC-3			
Motor Outputs (A/A+, B/A-, C)		Min.	Typ.	Max.	Units
Nominal current	PMSM motors sinusoidal amplitude			5.6	A
	PMSM motors sinusoidal RMS			4	A _{RMS}
	DC/BLDC motors continuous			4.85	A
Peak current	maximum 2.5s	-14		+14	A
Short-circuit protection threshold		±16.5		±18	A
Short-circuit protection delay		2		4	µs
On-state voltage drop	Nominal output current; including typical mating connector contact resistance		0.1		V
Off-state leakage current			0.3	1	mA
Voltage Efficiency			92		%
Motor inductance (phase-to-phase)	Recommended value, for current ripple max. ±5% of full range; +V _{MOT} = 48 V	F _{PWM} 20 kHz		900	µH
		40 kHz		480	
		60 kHz		320	
	Minimum value, limited by short-circuit protection; +V _{MOT} = 48 V	80 kHz		240	µH
		100 kHz		200	
		20 kHz		270	
Motor electrical time-constant (L/R)	Recommended value for ±5% current measurement error	60 kHz		150	µs
		40 kHz		100	
		80 kHz		80	
		100 kHz		60	
		20 kHz		330	
Current measurement	FS = Full Scale accuracy	40 kHz		170	%FS
		60 kHz		140	
		80 kHz		80	
		100 kHz		66	

¹ Operating temperature at higher temperatures is possible with reduced current and power ratings

² Micro 4803 can be operated in vacuum (no altitude restriction), but at altitudes over 2,500m, current and power rating are reduced due to thermal dissipation efficiency.

³ In case of forced cooling (conduction or ventilation) the spacing requirements may drop substantially down to zero as long as the ambient temperature is kept below the maximum operating limit

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Supply Output (+5V)		Min.	Typ.	Max.	Units
Output voltage	Current sourced = 400mA	5.05	5.2	5.25	V
Output current ¹	24V motor	650	800		mA
Short-circuit to GND protection Yes / Drive resets at event					
Over-voltage protection NOT protected					
ESD protection	Human body model	±1			kV
Digital Inputs (IN0, IN1, IN2/LSP, IN3/LSN, IN4, IN5/ENA)		Min.	Typ.	Max.	Units
Mode compliance NPN					
Default state	Input floating (wiring disconnected)	Logic HIGH			
Input voltage	Logic "LOW"		1.4	1.8	V
	Logic "HIGH"	IN0, IN1, IN4, IN5/ENA	3.1	2.5	
	Hysteresis		0.9	1.1	
	Logic "LOW"		1.4	1.6	
	Logic "HIGH"	IN2/LSP, IN3/LSN	4	3.5	
	Hysteresis			0.6	
	Floating voltage (not connected)			4.5	
Input current	Absolute maximum, continuous	-5		+55	mA
	Logic "LOW"; Pulled to GND		9	10	
Input frequency	Logic "HIGH"; Pulled to +24V			0.4	
Minimum pulse		0		500	kHz
ESD protection	Human body model	±2			kV
Digital Outputs (OUT0, OUT1, OUT4)		Min.	Typ.	Max.	Units
Mode compliance All outputs (OUT0, OUT1, OUT4) NPN 24V					
Default state	Not supplied (+V _{LOG} floating)	High-Z (floating)			
	Immediately after power-up	Logic "HIGH"			
Output voltage	Logic "LOW"; output current = 1.5A for OUT0/ 0.05A for the other digital outputs			0.4	V
	Logic "HIGH"; output current = 0, no load	4	4.5	5	
	Logic "HIGH"; external load to +V _{LOG}			V _{LOG}	
	Absolute maximum, continuous (free-wheeling diodes to +V _{LOG} to GND)	-0.5		V _{LOG} +0.5	
	Absolute maximum, surge (duration ≤ 1s)	-1		V _{LOG} +1	
Output current	Logic "LOW", sink current, short duration, duty cycle ≤ 1%			0.1	A
				2	
				0.15	A
				2.5	
	Logic "HIGH", source current; external load to GND; V _{OUT} ≥ 2.0V			5	mA
	Logic "HIGH", leakage current; external load to +V _{LOG} ; V _{OUT} = V _{LOG} max = 40V		0.05	0.1	mA
Minimum pulse width		0.5			µs
ESD protection	Human body model	±15			kV
Encoder Inputs (A+, A-, B+, B-, Z+, Z-, A2+, A2-, B2+, B2-) ²		Min.	Typ.	Max.	Units
Single-ended mode compliance	Leave A1-, B1-, Z1-, A2-, B2- floating	TTL/CMOS/Open-collector (NPN)			
Single-ended threshold	A1+, B1+, Z1+, A2+, B2+	1.2	1.3	1.5	V
Single-ended input current	Input pulled to GND against on-board 2.2 KΩ pull-up to 5V		2.2	2.5	mA
Differential mode compliance	For full RS422 compliance, see ²	TIA/EIA-422-A			
Input voltage	Hysteresis	±0.03	±0.05	±0.2	V
	Differential mode	-15		+15	
	Common-mode range (A+ to GND, etc.)	-7		+12	
Input impedance, differential	A+, A2+, B+, B2+, Z+, Z2+ A-, A2-, B-, B2-, Z-, Z2-		2.2		kΩ
Input frequency	Differential mode	0		15	MHz
Minimum pulse width	Differential mode	33			ns
ESD protection	Human body model	±30			kV

Hall Inputs (Hall1, Hall2, Hall3)		Min.	Typ.	Max.	Units	
Mode compliance	TTL / CMOS / Open-collector (NPN sink), or analog (linear) 0...5V					
Default state	Input floating (Wiring disconnected)	4.5	4.7	5		
Input voltage	Digital		1.5	1.7	V	
		Logic "LOW"	3	2.5		
		Logic "HIGH"		0.5		
	Hysteresis					
	Analog	0	0.5...4.5	4.95		
Input current	Logic "LOW"; Pulled to GND		2.3		mA	
	Logic "HIGH"; Internal 2.2KΩ pull-up to 5V		0			
Minimum pulse width			70		µs	
ESD protection	Human body model		±15		kV	
RS-232		Min.	Typ.	Max.	Units	
Compliance TIA/EIA-232-C						
Bit rate	Software selectable	9600		115200	Baud	
Short-circuit	232TX short to GND	Guaranteed				
ESD protection	Human body model	±2			kV	
ESD protection	Human body model	±1			kV	
Absolute encoder interface: SSI, BiSS-C, EnDAT, Tamagawa, Nikon, Sanyo Denki		Min.	Typ.	Max.	Units	
Differential mode (CLOCK, DATA)	For full RS422 compliance, see ³	TIA/EIA-422-A				
CLOCK (DATA)	Differential; 50Ω differential load	1.5	3.3		V	
Output voltage	Common-mode, referenced to GND	1	1.7	3		
CLOCK frequency	Software selectable	1000, 2000, 3000, 4000			kHz	
CLOCK (DATA) Short-circuit protection	Common-mode voltage ±15V	Yes, protected				
DATA format	Software selectable	Binary / Gray				
		Single-turn / Multi-turn				
		Counting direction				
DATA resolution	Single-turn				56	
		Multi-turn and single-turn				56
			If total resolution >31 bits, some bits must be ignored by software setting to achieve a max 31 bits resolution			
Analog Inputs (REF, FDBK)		Min.	Typ.	Max.	Units	
0...5V Mode						
Input voltage	Operational range	0		4.95	V	
	Absolute maximum values, continuous	-12		+18		
	Absolute maximum, surge (duration ≤ 1s)			±36		
Input impedance	To 1.447V		20		kΩ	
Resolution			12		bits	
Integral linearity			±2		bits	
Offset error			±2	±10	bits	
Gain error			±1%	±3%	%FS ⁴	
Bandwidth (-3dB)	Software selectable	0		1.5	kHz	
ESD protection	Human body model	±2			kV	
±10V Mode		Min.	Typ.	Max.	Units	
Differential voltage range			±10		V	
Common-mode voltage range	Referenced to GND	-12	0...10	+50	V	
Input impedance	To 1.447V		20		kΩ	
Resolution			12		bits	
Integral linearity				0.036	%FS ⁴	
Offset error	Common-mode voltage =		±0.2	±0.5	%FS ⁴	
Gain error	0...10 V		±0.5	±3	%FS ⁴	
Bandwidth (-3dB)	Software selectable	0		5.5	kHz	
EtherCAT®		Min.	Typ.	Max.	Units	
Compliance IEEE802.3, IEC61158						
Transmission line specification	According to TIA/EIA-568-5-A	Cat. 5e.UTP				
J5, J6 pinout	EtherCAT® supports MDI/MDI-X auto-crossover	TIA/EIA-568-A or TIA/EIA-568-B				
Software protocols compatibility		CoE, CiA402, IEC61800-7-301				
Node addressing	By software	1 + 255			-	
	By Hardware				-	
MAC addressing		none			-	
ESD protection	Human body model	±15			kV	

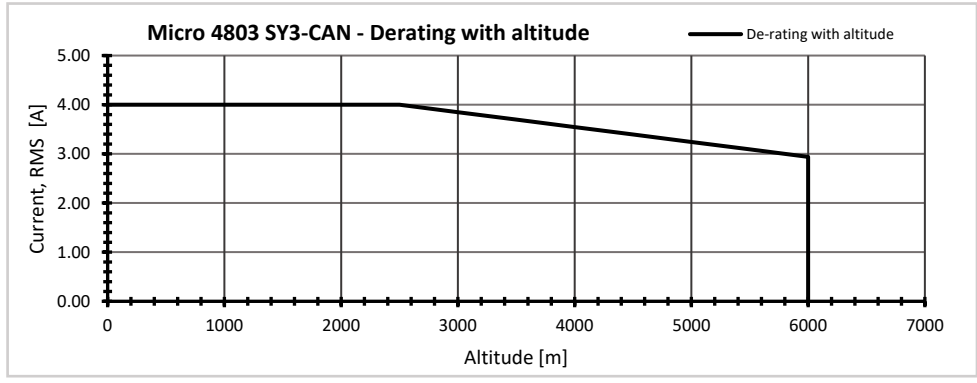
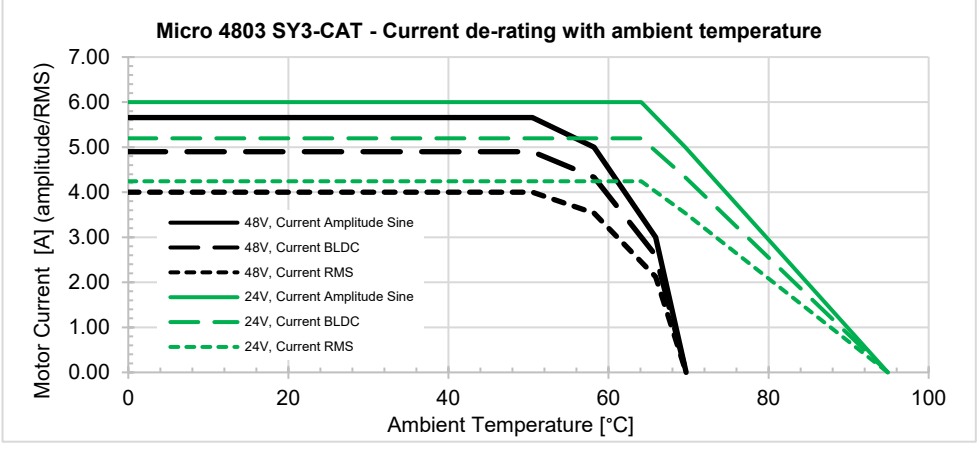
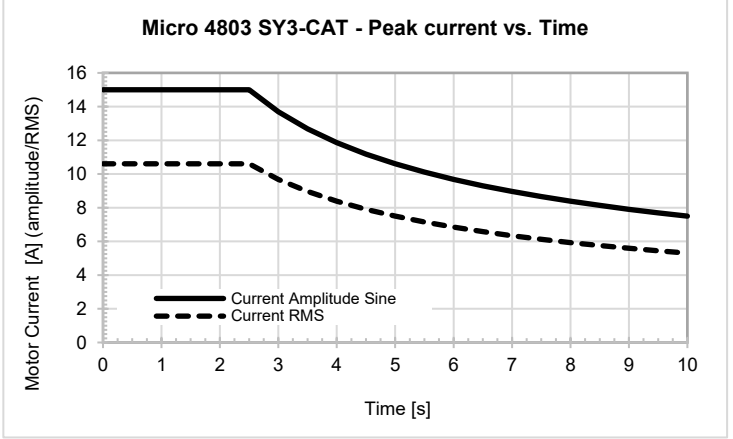
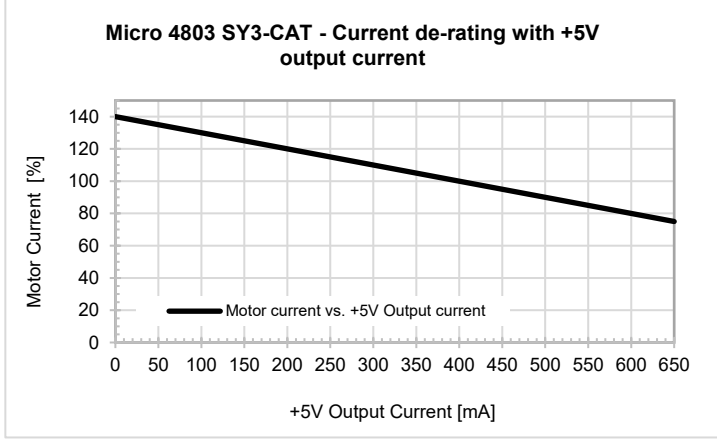
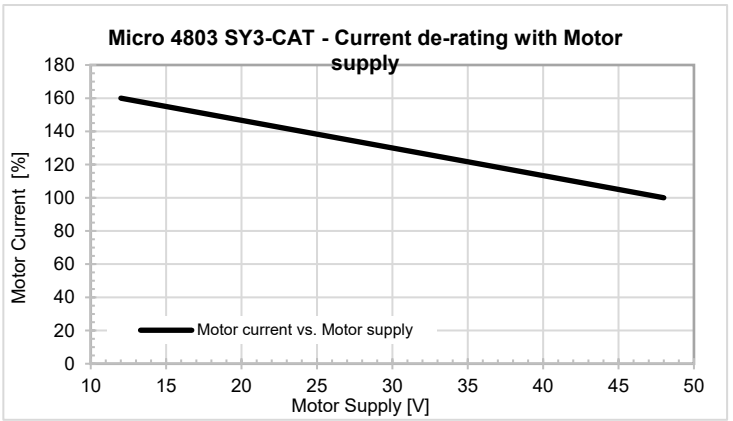
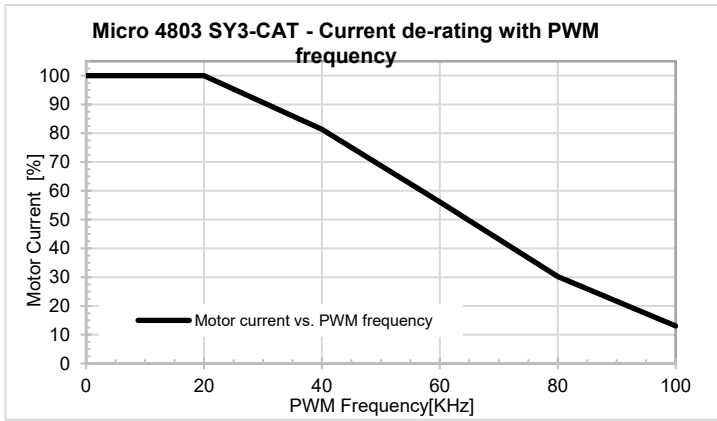
¹ For more details see the "Current de-rating with +5V output current" graph

² Full RS-422 compatibility, as well as noise rejection improvement the setting of SW1 pins 1, 2, 3 for each signal pair (A1+/A1-, B1+/B1-, Z1+/Z1-) is needed

³ Full RS-422 compatibility, as well as noise rejection improvement the setting of SW1 pins 1, 2, 3 for each signal pair (A1+/A1-, B1+/B1-, Z1+/Z1-) is needed

⁴ "FS" stands for "Full Scale"

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ALN	June 22, 2021		November 2, 2023	AS
		Title of document	N° document	
		Micro 4803 SY3-CAT Multi Axis System PRODUCT DATA SHEET		P020.200.E403.10M.DSH
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TECHNOSOFT		Micro 4803 SY3-CAT Multi Axis System PRODUCT DATA SHEET		N° document P020.200.E403.10M.DSH
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