

DCU 210E Engine Control Unit

Part#: 1006475

Rev. September 30, 2015

Interfaces

Section	Ch.	Cond.	Min	Typ.	Max	Unit	Comment
Power Supply, Vcc	1	@ 24 VDC	8 -	12/24 0.5	32 2	VDC A	Max ripple 10% without exceeding Min and Max values.
Flexible I/O	19		-				Can be configured as described in section Flexible I/O section below.
Config. Relay Outputs	2		0	-	1	A	Potential free/Form C contacts. Internally fused.
Tacho	1		0.1 4	5 -	10 32	kHz Vpp	Magnetic pickup
Thermistor / PT100 Inputs	2		50 0	- -	60000 800	Ω $^{\circ}\text{C}$	Accuracy: +/- 2.0 %. With optional wire resistance comp
CAN bus #1	1		-	250	-	kbps	SAE J1939
CAN bus #2	1		-	250	-	kbps	SAE J1939
Ethernet	1		-	10 / 100	-	Mbps	Auto Crossover
Modbus TCP	1		-	10 / 100	-	Mbps	
Modbus RTU	1		9600	19 200	115200	baud	8 bit, even parity, 1 stop bit. Failsafe biasing, internal termination
RIO Link Connection	1		-	19 200	-	baud	8 bit, even parity, 1 stop bit
USB Port	1		-	-	480	Mbps	USB 2.0 Hi-speed Memory Interface

Flexible I/O

Section	Ch.	Cond.	Min	Typ.	Max	Unit	Comment
4 – 20 mA Input	19		0	4-20	25	mA	Accuracy: +/- 0.5 % of typical range
Digital Input	19		8 0	- -	36 2	V	High level Low level
Digital Output	19		- 0	Vcc-0.5 -	- 0.2	V A	Power supply - 0.5 V Current limited
Analogue Input	19		0	-	32	V	Accuracy: +/- 0.05 V
24 V Supply Output	19		- 0	Vcc-0.5 -	- 0.2	V A	Current limited
0 V Supply Output	4		0 0	0.1 -	- 0.5	V A	
5 V Supply Output	1		4.8 0	5.0 -	5.2 0.1	V A	For supply of 0-5 V sensors etc. Current limited.

Screen

Section	Conditions	Width	Typ.	Height	Unit	Comment
Size	-	-	5.7	-	inch	
Resolution	-	640	-	480	pixels	
Pixel Density	-	-	140	-	PPI	
Colours	-	-	262144	-	colours	

	Conditions	Min	Typ.	Max	Unit	Comment
Viewing angle	horizontal	±60	±65	-	Deg.	Contrast ratio >10:1
	vertical	±47	±52	-		

Measurements and Weight

Section	Weight	Width	Height	Depth	Unit	Comment
Size	-	167	135	68	mm	Depth without connectors
Cut out	-	156	124	-	mm	Access depth: 90 mm
Weight	0.8	-	-	-	kg	

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Environmental

Section	Condition	Min	Typ.	Max	Unit	Comment
Vibration	Operational	-	4	-	g	IEC 60068-2-6 Fc
Operating Temperature	Operational	-25	-	70	°C	IEC 60068-2-1
Storage Temperature	Not powered	-30	-	+85	°C	
Dry Heat	Operational	-	-	70	°C	IEC 60068-2-2 Bb/Be
		-	-	16	hours	
Damp Heat, cyclic	Cyclic 20-55-20	-	-	-	°C	IEC 60068-2-30 Db
	Humidity 95%	-	-	-	-	
	Duration	-	-	48	hours	
Enclosure	Operational	IP56	-	-	-	Including panel seal
High Voltage	Not powered	-	-	548	Vrms	Voltage applied between <i>clamped</i> supply and shield.
		-	-	1	minute	
Fast low-energy Transients/bursts	Operational	-	-	-	-	IEC 61000-4-4
		-	-	2	kV	24 VDC supply lines, 5 kHz
		-	-	1	kV	Signal lines, 5 kHz
Slow high-energy Transients/surges	Operational	-	-	-	-	IEC 61000-4-5
		-	-	0.5	kV	24 VDC supply lines
		-	-	1	kV	Signal lines
Electrostatic Discharge, ESD	Operational	-	-	-	-	IEC 61000-4-2
		8	-	8	kV	Air
		6	-	6	kV	Contact

EMC

Section	Condition	Min	Typ.	Max	Unit	Comment
Conducted emission	Operational	-	-	-	-	CISPR 16-1-1 / 16-1-2 / 16-2-1
Radiated emission	Operational	-	-	-	-	Quasi-peak at 3m:
		150	-	300	kHz	80-52 dBμV/m, 9 kHz BW
		0.3	-	30	MHz	52-34 dBμV/m, 9 kHz BW
		30	-	156	MHz	54 dBμV/m, 120 kHz BW
		156	-	165	MHz	24 dBμV/m, 9 kHz BW
Conducted Immunity	Operational	-	-	10	Vrms	IEC 61000-4-6
		-	-	-	-	
Radiated Immunity	Operational	80	-	2 000	MHz	IEC 61000-4-3
		-	-	-	-	10 V/m, 80% AM, 400 Hz/1kHz

Validity of Information

Data valid at revision date. Auto-Maskin reserves the right to make improvements and changes of specification at any time.

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