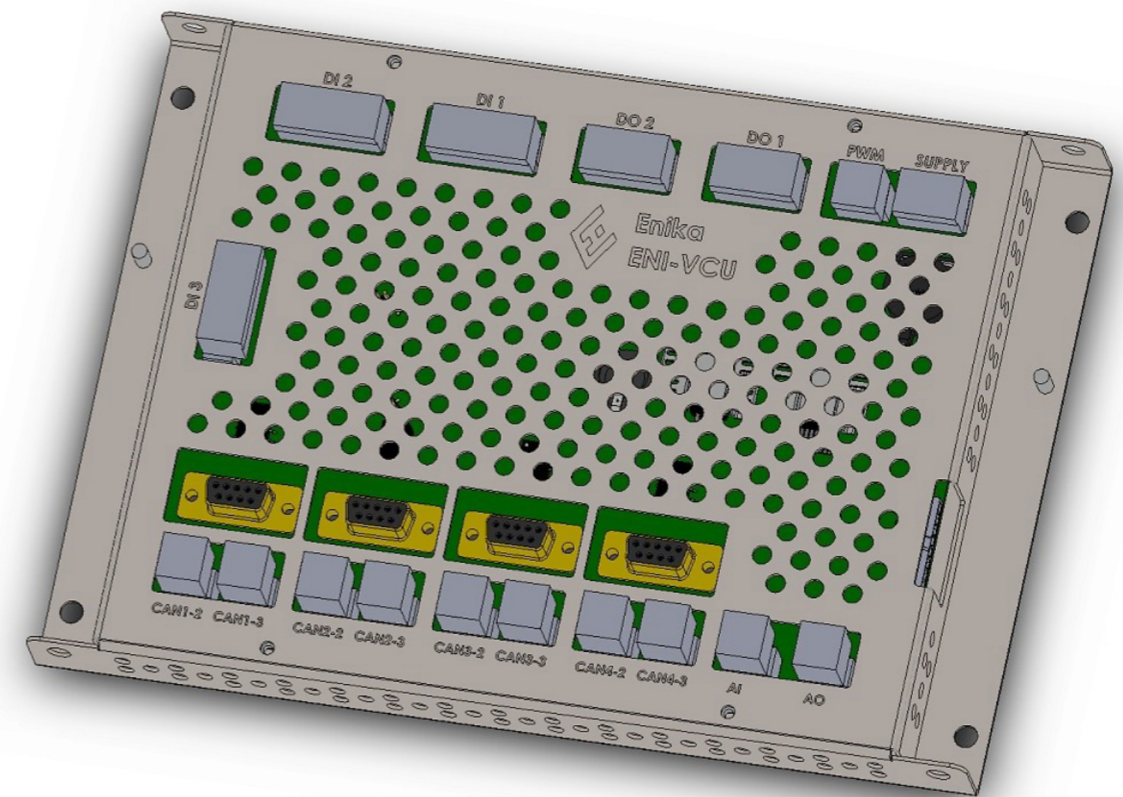


APPLICATION



The ENI-VCU Vehicle Control Unit provides motive control for electric rail vehicles. The VCU is a PCB assembly confined to a metal sheet enclosure. The VCU features 27 digital inputs, 2 analogue inputs, 16 digital outputs, 2 analogue outputs, 2 PWM outputs, one insulation strength meter control input, and 4 CAN interfaces. The VCU is driven by a Microchip DSPIC33EP512MU814-I/PL CPU. There is another microchip provided, DSPIC33EP512GP806-IPT, which handles the CAN communication and interfaces with the master control unit. The VCU is protected against reverse polarity of the power inputs and features thermal protection of the digital output.



SPECIFICATION

TYPE	ENI-VCU	
Nominal supply voltage	$V_{CC\ norm}$	24 V
Operating supply voltage variation	V_{CC}	16 ÷ 30 V
Nominal digital output supply voltage	24 $V_{CCD\ norm}$	
Operating supply voltage variation on digital outputs	V_{CCD}	16 ÷ 30 V
Analogue inputs	I_{AIN}	0 ÷ 20 mA
Analogue outputs	$I_{A\ OUT}$	0 ÷ 10 A
	$I_{A\ OUT\ MAX}$	25 mA
Digital inputs	Low threshold, "0"	≤ 10 V
	High threshold, "1"	≥ 14 V
	Transient state	10,1 ÷ 13,9 V
	Voltage variation range	0 ÷ 10 V
Digital outputs	$V_{D\ OUT}$	$V_{CCD} - 1\ V$
	$I_{D\ OUT\ MAX}$	0,7 A
PWM outputs	$V_{SUPPLY\ PWM}$	0 ÷ 30 V
	$V_{PWM\ OUT}$	~ $V_{SUPPLY\ PWM}$
	$I_{PWM\ OUT\ max}$	30 mA
	$f_{PWM\ max}$	
Data communication	CAN	2.0
Size	PCB	200 x 150 mm
	Obudowa	245 x 170 x 25,5 mm
Weight		T.B.D.