3.3.3 Control terminals electrical specification

This describes the electrical spec. of the control terminals. The function that each terminal has may depend on the programmed choice of the user. The units are shipped with a set of default terminal functions, which are described later. Although the function of the terminal may change its electrical specification does not.

	8 analogue inputs with up to 5mV + sign resolution (+/- 0.4%)	0V	1	
	4 input voltage ranges +/-5/10/20/30V on each input	UIP2	2	
UIP2 – UIP9	8 digital inputs with settable thresholds. Good noise immunity.	UIP3	3	
	Overvoltage protected to +/-50V	UIP4	4	
	Input impedance 100K for input scaling at 5 and 10V range	UIP5	5	
	Input impedance 50K for input scaling above 10V range	UIP6	6	0
		UIP7	7	
ANALOGUE OUTPUTS	4 analogue outputs (+/- 0.4%)	UIP8	8	
	3 programmable, 1 committed to output armature current signal	UIP9	9	
AOP1 AOP2 AOP3	2.5mV plus sign resolution	AOP1	10	
and IARM on T29	Short circuit protection to OV. Output current +/-5mA maximum	AOP2	11	
	Output range 0 to +/-11V.	AOP3	12	0
		0.4	10	
DIGITAL INPUTS	4 digital inputs		13	
	Logic low below 2V, Logic high above 4V. Low noise immunity.	DIP1	14	
DIP1 - DIP4	Overvoltage protection to +50V. Input impedance 10K Ohms	DIP2	15	
	DIP3 and DIP4 may also be used for encoder quadrature signals	DIP3	16	
	Encoder input freq. up to 100Khz on DIP3 and DIP4	DIP4	17	
DIGITAL IN/OUTPUTS	4 digital inputs. Also programmable as outputs (see digital outputs)	DIO1	18	
	Logic low below 6V. Logic high above 16V.	DIO2	19	
DIO1 – DIO4	Overvoltage protection to +50V. Input impedance 10K Ohms	DIO3	20	
	When used as digital outputs the spec. is the same as DOP1-3	DI04	21	
DIGITAL OUTPUTS	3 outputs (for 4 more outputs with this spec. use DI01/2/3/4)	DOP1	22	
	Short circuit protected. (Range 22 to 32 Volts for OP high)	DOP2	23	
DOP1 – DOP3	Over-temperature and over-voltage protected to +50V	<u>DOP3</u>	24	
	Each output can deliver up to 350mA. Total for all outputs of 350mA	А,		
	Inis spec. also applies to DIO 1/2/3/4 when they are programmed as	outputs	<u>.</u>	
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This connector is dove	This spec. also applies to DIO 1/2/3/4 when they are programmed as	outputs	25	0
This connector is devo	This spec. also applies to DIO $1/2/3/4$ when they are programmed as sted to essentially fixed function controls	OV	25	0
This connector is devo TACH INPUT	This spec. also applies to DIO 1/2/3/4 when they are programmed as ted to essentially fixed function controls +/- 200V range Input impedance 150K Ohms	OV TACH	25 26 27	0
This connector is devo TACH INPUT	This spec. also applies to DIO 1/2/3/4 when they are programmed as whether the second secon	OV TACH + 10	25 26 27 28	000
This connector is devo TACH INPUT REFERENCE OUTPUTS	This spec. also applies to DIO 1/2/3/4 when they are programmed as oted to essentially fixed function controls +/- 200V range Input impedance 150K Ohms $\frac{5}{2}$ +/-10.00V, 0.5%, 10mA max. Short circuit protection to 0V.	OV TACH + 10 -10	25 26 27 28	000
This connector is devo TACH INPUT REFERENCE OUTPUTS	This spec. also applies to DIO 1/2/3/4 when they are programmed as ted to essentially fixed function controls +/- 200V range Input impedance 150K Ohms $\frac{5}{2}$ +/-10.00V, 0.5%, 10mA max. Short circuit protection to 0V.	OV TACH + 10 -10 IARM THM	25 26 27 28 29	
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This connector is devo TACH INPUT REFERENCE OUTPUTS ARMATURE CURRENT IARM	<u>This spec. also applies to DiOT/2/3/4 when they are programmed as</u> ted to essentially fixed function controls +/- 200V range Input impedance 150K Ohms 5 +/-10.00V, 0.5%, 10mA max. Short circuit protection to 0V. +/-5V linear output for +/-100% model rating current. Output current capability 10mA max. Short circuit protection to 0V. Programmable Uni-polar or Bi-polar output mode (tolerance +/-5%). Motor temperature thermister. If unused then connect to 0V.	OV TACH + 10 -10 IARM THM RUN JOG START	25 26 27 28 29 30 31 32 33	
This connector is dever TACH INPUT REFERENCE OUTPUTS ARMATURE CURRENT IARM THERMISTOR INPUT	<u>This spec. also applies to DiOT/2/3/4 when they are programmed as</u> ted to essentially fixed function controls +/- 200V range Input impedance 150K Ohms 5 + /-10.00V, 0.5%, 10mA max. Short circuit protection to 0V. 1 + /-5V linear output for +/-100% model rating current. Output current capability 10mA max. Short circuit protection to 0V. Programmable Uni-polar or Bi-polar output mode (tolerance + /-5%). Motor temperature thermistor. If unused then connect to 0V. 0K < 200 Ohms. Overtemp > 2K Ohms. Connect from THM to 0V.	OV TACH + 10 -10 IARM THM RUN JOG START CSTOP + 24V	25 26 27 28 29 30 31 32 33 34 35	
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This connector is devo <u>TACH INPUT</u> <u>REFERENCE OUTPUTS</u> <u>ARMATURE CURRENT</u> <u>IARM</u> <u>THERMISTOR INPUT</u> <u>THM</u> <u>CONTACTOR control</u> <u>RUN</u> <u>JOG</u> <u>START</u> The drive will not start drop out_unless STAR	Inis spec. also applies to DIO1/2/3/4 when they are programmed asoted to essentially fixed function controls+/- 200V rangeInput impedance 150K Ohms5 +/-10.00V, 0.5%, 10mA max. Short circuit protection to 0V.+/-5V linear output for +/-100% model rating current.Output current capability 10mA max. Short circuit protection to 0V.Programmable Uni-polar or Bi-polar output mode (tolerance + /-5%).Motor temperature thermistor. If unused then connect to 0V.OK < 200 Ohms, Overtemp > 2K Ohms. Connect from THM to 0V24V Logic inputs. Logic low below 6V, logic high above 16VInput impedance. 10K Ohms. Overvoltage protection to +50VDrive enable.Electronic enable for current loop and contactor dropJog input with programmable contactor drop out delayStart/stop.Drops contactor out at zero speed.tunless all alarms are clear. The drive will not restart after alarm induT is removed for at least 50mS and re-applied	OV TACH + 10 -10 IARM THM RUN JOG START CSTOP + 24V OV out dela	25 26 27 28 29 30 31 32 33 34 35 36 34	00000000000000000000000000000000000000
This connector is devo <u>TACH INPUT</u> <u>REFERENCE OUTPUTS</u> <u>ARMATURE CURRENT</u> <u>IARM</u> <u>THERMISTOR INPUT</u> <u>THM</u> <u>CONTACTOR control</u> <u>RUN</u> <u>JOG</u> <u>START</u> The drive will not start drop out, unless STAR <u>CSTOP</u>	This spec. also applies to DIO1/2/3/4 when they are programmed as ted to essentially fixed function controls +/- 200V range Input impedance 150K Ohms 4 + -200V range Input impedance 150K Ohms 4 + -200V, 0.5%, 10mA max. Short circuit protection to 0V. 4 + -5V linear output for $+ -100%$ model rating current. Output current capability 10mA max. Short circuit protection to 0V. Programmable Uni-polar or Bi-polar output mode (tolerance $+ -5\%$). Motor temperature thermistor. If unused then connect to 0V. 0K < 200 Ohms, Overtemp $> 2K$ Ohms. Connect from THM to 0V 24V Logic inputs. Logic low below 6V, logic high above 16V Input impedance. 10K Ohms. Overvoltage protection to $+50V$ Drive enable. Electronic enable for current loop and contactor drop Jog input with programmable contactor drop out delay Start/stop. Drops contactor out at zero speed. tunless all alarms are clear. The drive will not restart after alarm indu T is removed for at least 50mS and re-applied. Coast stop. Drops contactor out immediately (100ms). Input impediately (100ms).	OV TACH + 10 -10 IARM THM RUN JOG START CSTOP + 24V OV out dela	25 26 27 28 29 30 31 32 33 34 35 36 xys	Image: state of the state o

Overvoltage protection to +50V. Shares total current capability of 'Digital Outputs' (350mA), plus extra 50mA of its own. Total maximum available 400mA.