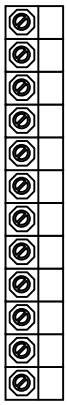
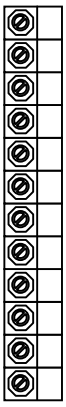
3.3.3 Control terminals electrical specification

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.

UNIVERSAL INPUTS	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
		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 0V. Output current +/-5mA maximum	AOP2	11
	Output range 0 to +/-11V.	AOP3	12
DIGITAL INPUTS	4 digital inputs	0V	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	DIO4	21
DIGITAL OUTPUTS	3 outputs (for 4 more outputs with this spec. use DIO1/2/3/4)	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	DOP3	24
	Each output can deliver up to 350mA. Total for all outputs of 350mA,		
	This spec. also applies to DIO1/2/3/4 when they are programmed as outputs		



This connector is devoted to essentially fixed function controls		0V	25
TACH INPUT	+/- 200V range Input impedance 150K Ohms	TACH	26
		+10	27
REFERENCE OUTPUTS	+/-10.00V, 0.5%, 10mA max. Short circuit protection to 0V.	-10	28
		IARM	29
ARMATURE CURRENT	+/-5V linear output for +/-100% **model** rating current.	THM	30
	Output current capability 10mA max. Short circuit protection to 0V.	RUN	31
IARM	Programmable Uni-polar or Bi-polar output mode (tolerance +/-5%).	JOG	32
		START	33
THERMISTOR INPUT	Motor temperature thermistor. If unused then connect to 0V.	CSTOP	34
THM	OK < 200 Ohms, Overtemp > 2K Ohms. Connect from THM to 0V	+24V	35
		0V	36



CONTACTOR control 24V Logic inputs**. Logic low below 6V, logic high above 16V**
Input impedance. 10K Ohms. Overvoltage protection to +50V

RUN Drive enable. Electronic enable for current loop and contactor drop out delays

JOG Jog input with programmable contactor drop out delay

START Start/stop. Drops contactor out at zero speed.

The drive will not start unless all alarms are clear. The drive will not restart after alarm induced contactor drop out, unless START is removed for at least 50mS and re-applied.

CSTOP Coast stop. Drops contactor out immediately (100ms). Input impedance 10K Ohms.

+24V +24V output for external logic **(Range 22 to 32 Volts).** Short circuit protected. Overvoltage protection to +50V. Shares total current capability of 'Digital Outputs' (350mA), plus extra 50mA of its own. Total maximum available 400mA.