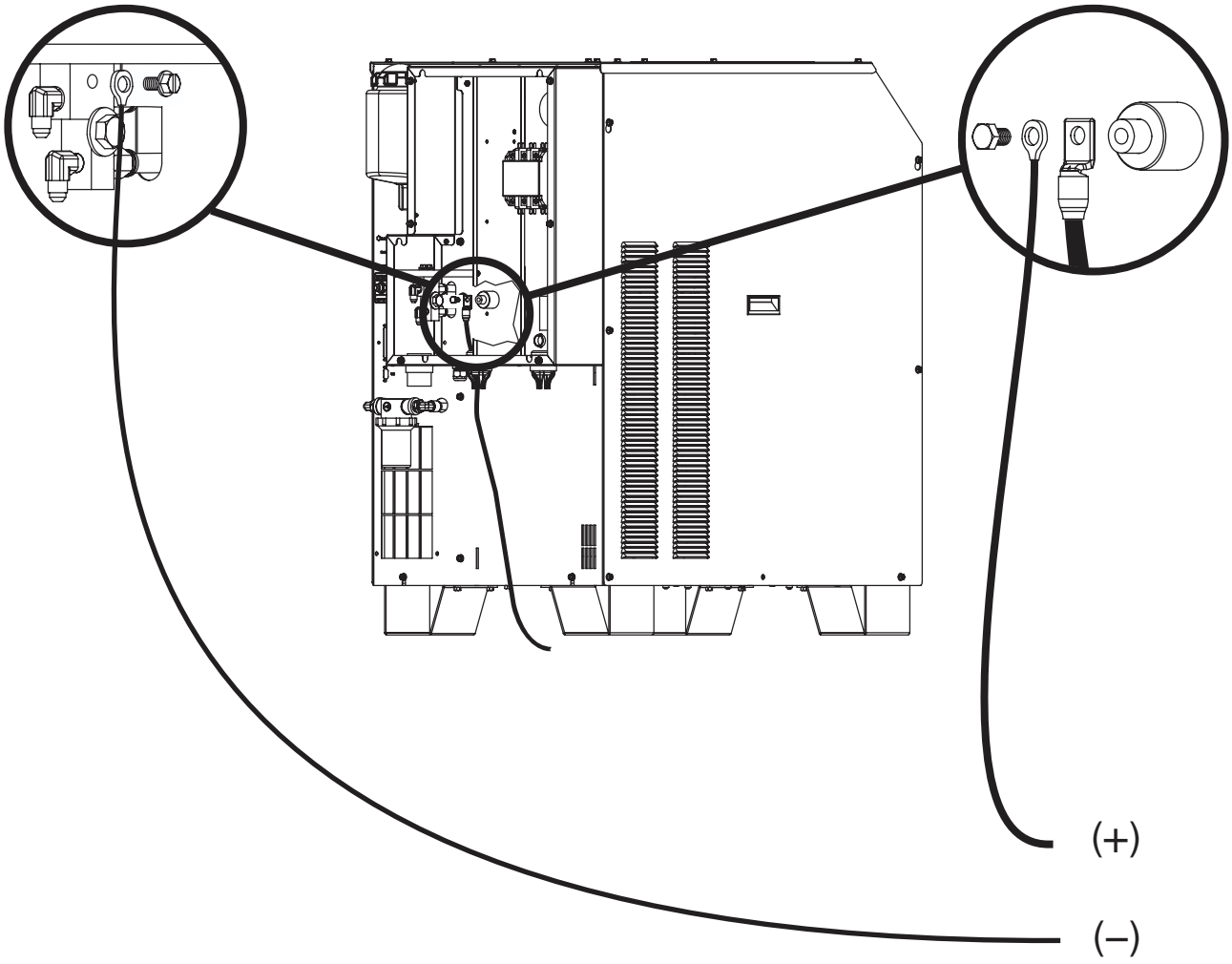
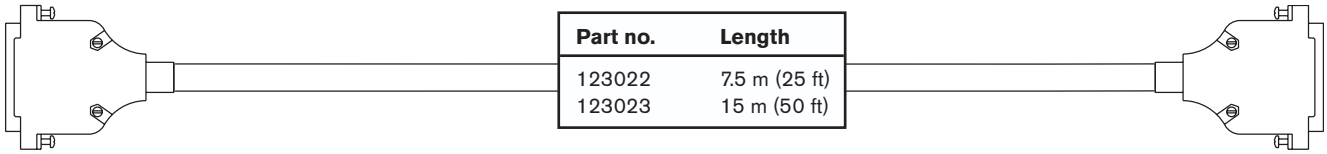
Arc voltage connection

If a torch height control is installed, and undivided arc voltage (0 to 311 VDC) is needed, it can be accessed by making the connections shown in the figure on this page. The cables in the figure terminate at a voltage divider (supplied by the torch height control manufacturer).



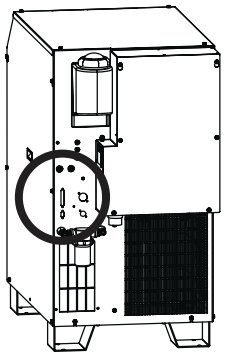
❹ Power supply to CNC interface cable

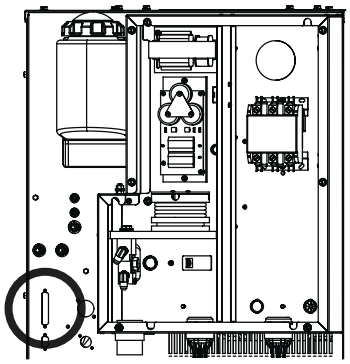


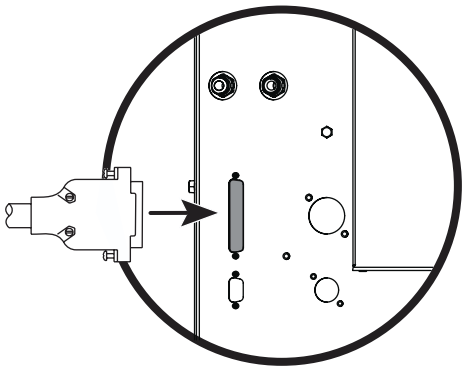
Part no.	Length
123022	7.5 m (25 ft)
123023	15 m (50 ft)

Power supply **CNC**

Wire color	Pin no.	Input/ Output	Signal name	Function	Input/ Output	Notes
Black Red	1 20	Input Input	None None	Not used Not used	Output Output	
Black Green	2 21	Output Output	None None	Not used Not used	Input Input	
Black Blue	3 22		None None	Not used Not used		
Black Yellow	4 23	Output Output	Motion E (-) Motion C (+)	Notifies the CNC that an arc transfer has occurred and to begin machine motion once the CNC's pierce delay has timed out.	Input Input	2
Black Brown	5 24	Output Output	None None	Not used Not used	Input Input	2
Black Orange	6 25	Output Output	Rampdown error E (-) Rampdown error C (+)	Notifies the CNC that a rampdown error has occurred	Input	2
Red White	7 26	Output Output	None None	Not used Not used	Input	2
Red Green	8 27	Output Output	None None	Not used Not used	Input Input	2
Red Blue	9 28	Output Output	None None	Not used Not used	Input Input	2
Red Yellow	10 29	Output Output	None None	Not used Not used	Input Input	2
Red Brown	11 30		None None	Not used Not used		
Red Orange	12 31	Input Input	Corner - Corner +	CNC Notifies the plasma system that a corner is approaching and to reduce cut current (Cut current is CNC selectable or defaults to 75%. of cut current)	Output Output	1
Green White	13 32	Input Input	Pierce - Pierce +	CNC Notifies the plasma system to maintain the shield preflow until the CNC releases the signal.	Output	1
Green Blue	14 33	Input Input	Hold - Hold +	Not required without Command THC. Command THC requires signal to preflow gases during IHS.	Output	1
Green Yellow	15 34	Input Input	Start - Start +	CNC initiates the plasma arc.	Output Output	1
Green Brown	16 35		None None	Not used Not used		
Green Orange	17 36		None Power ground	Not used Ground		
White Black	18 37		Power ground CNC +24 VDC	Ground Available 24 VDC (200 milliamps maximum) See notes		3
	19		CNC + 24 VDC	Not connected		







Notes to CNC interface cable run list

Note 1. Inputs are relay coils. They require 24 VDC at 8.3 mA, or dry-contact closure.

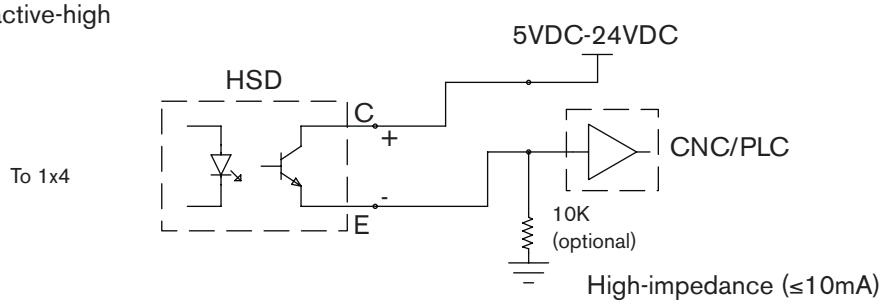
Note 2. Outputs are optically isolated, open-collector, transistors. The maximum rating is 24 VDC at 10 mA.

Note 3. CNC +24 VDC provides 24 VDC at 200 mA maximum. A jumper is required on J300 to use 24 V power.

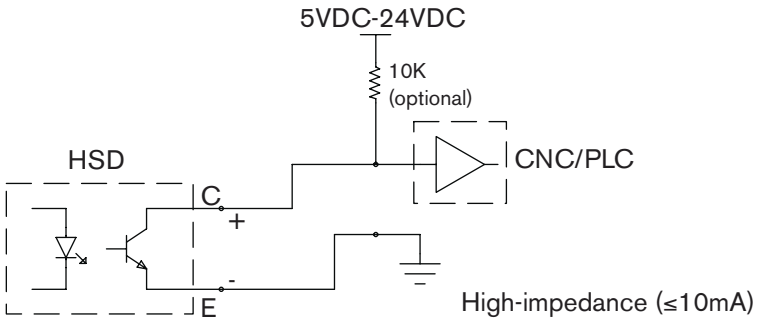
Caution: **The CNC cable must be constructed using cable with 360 degree shielding and metal housing connectors at each end. The shielding must be terminated to the metal housings at each end to ensure proper grounding and to provide the best shielding.**

Examples of output circuits

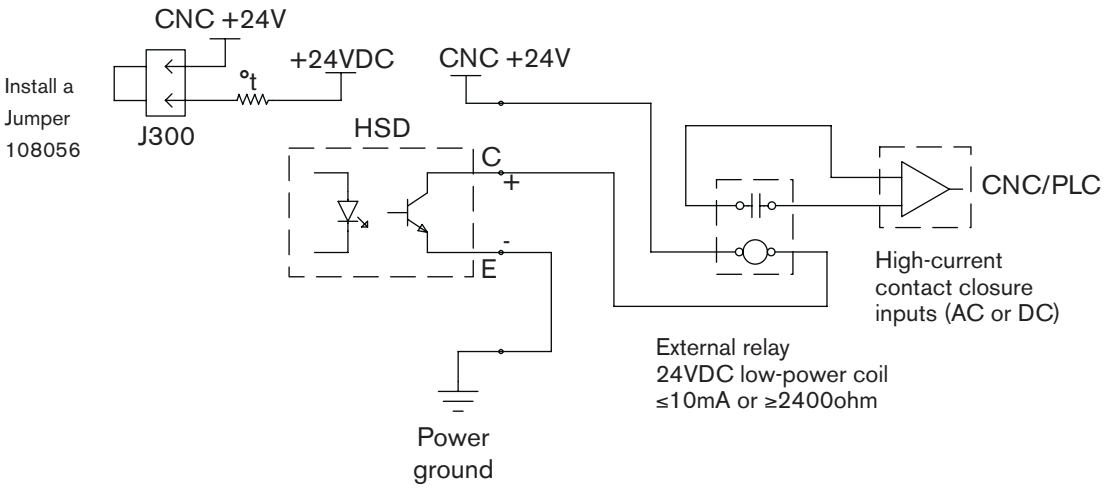
1. Logic interface, active-high



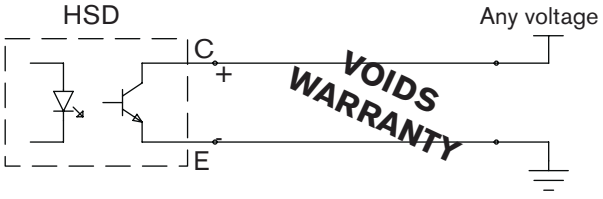
2. Logic interface, active-low



3. Relay interface

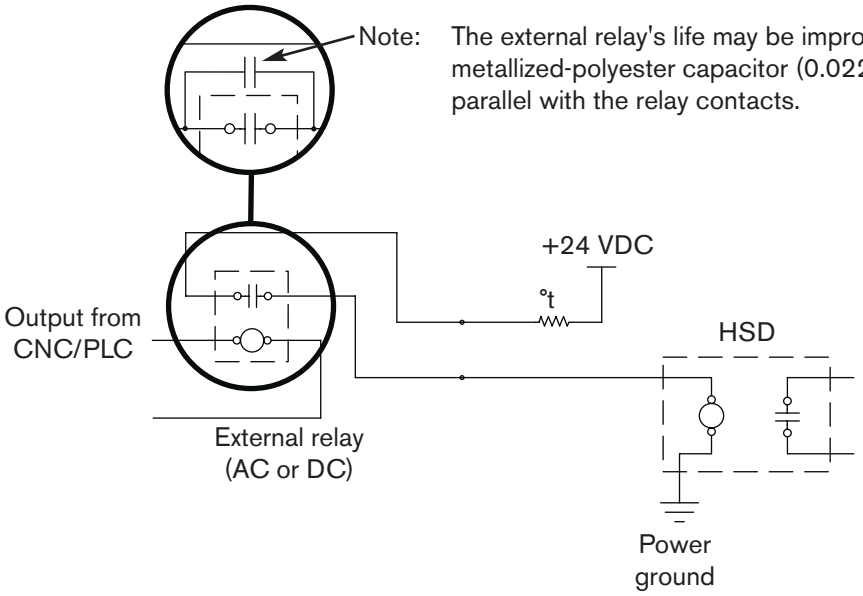


4. Do not use this configuration. Warranty will be void.

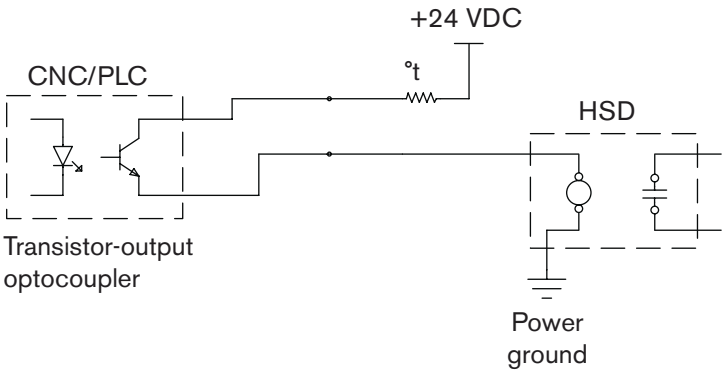


Examples of input circuits

1. Relay interface



2. Optocoupler interface



3. Amplified-output interface