How to solve the torch motor not up or down –Scout 2

➔ Problem : The torch motor not up or down of –Scout2

Solution overview: 1. Electronic limit damage in the lift;

2. The torch motor is bad;

3. The CNC system cannot send a down/up signal;

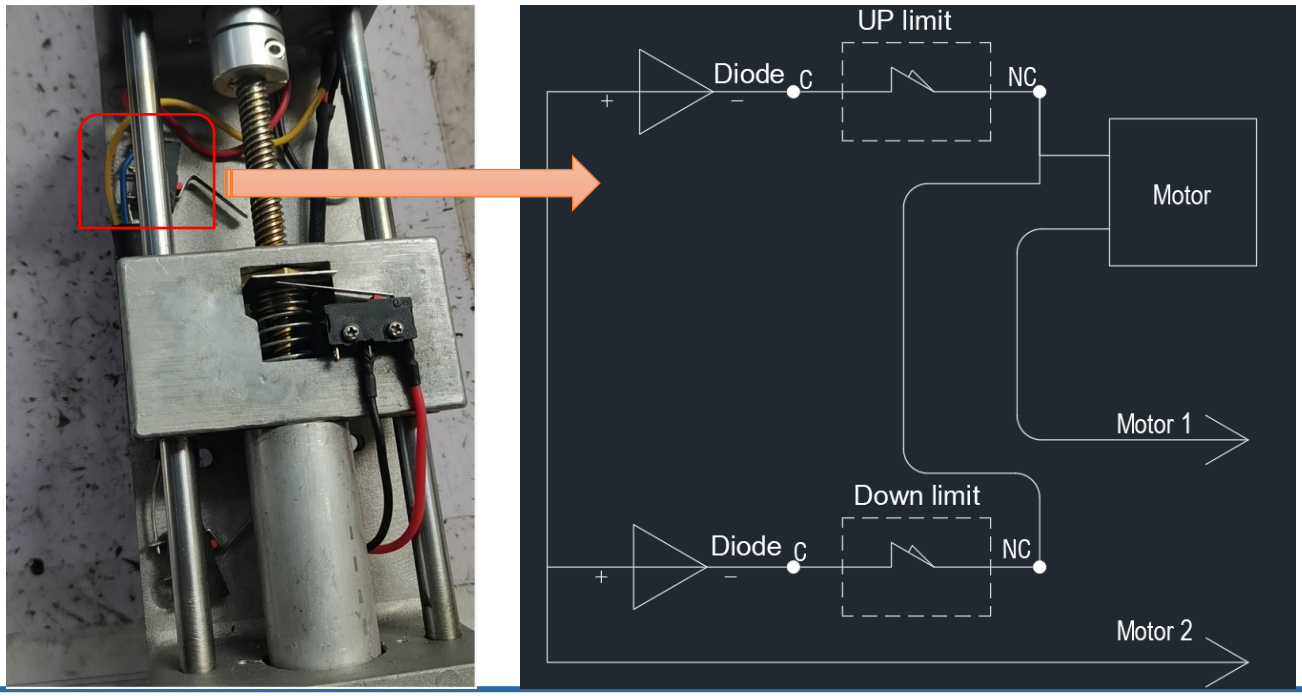
4. The THC cannot send a down/up signal;

5. Check the wiring between the system-THC-motor;

Problem analysis:

✵ Electronic limit damage in the lift; Press【S ↑ 】or【S ↓ 】key on the system keyboard. There is movement in only one direction, The limit switch has the greatest probability of damage, and the probability of two limit switches being damaged at the same time is very small.

Solution: Step1: Open the lifter cover; Check the limit with a multimeter. When the external force hits the limit, the NC and C are disconnected, and the natural state NC and C are connected.



Step2: Check the Up limit and DOWN limit with a multimeter, Make sure there is working with both limit switches.

NOTE: Open the lifting cover; The iron sheet on the limit switch is deformed, which can also cause problems with the limit.

Problem analysis:

❋ The torch motor is bad; Use DC24 to supply power to the motor and check the motor;

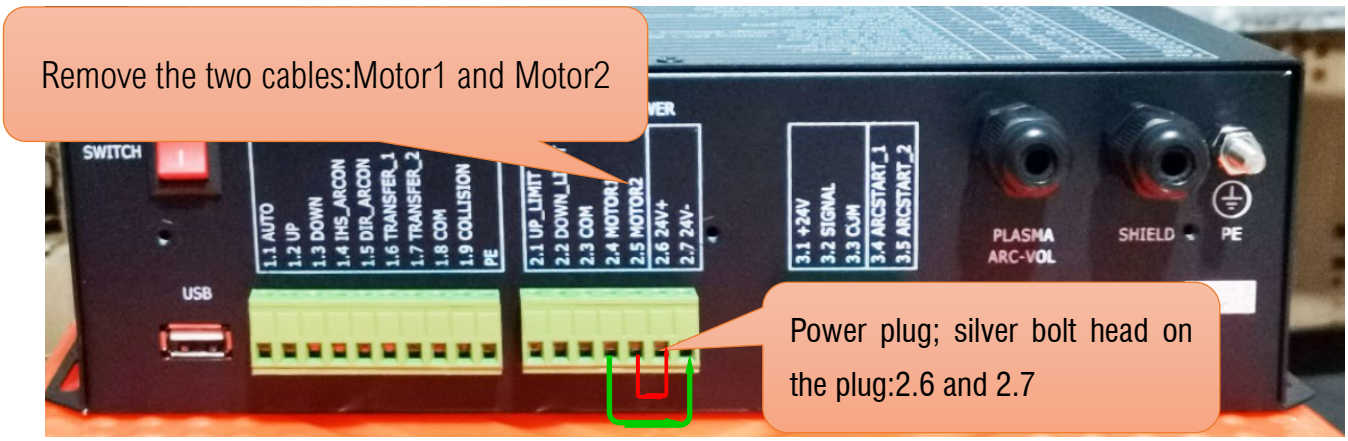
Solution: First remove the two cables [MOTOR1 and MOTOR2]from the green socket,→These two wires touch the silver bolt on the green socket; →Turn on the power;→Torch motor is up or down ;Exchange two cables;→Torch motor is Down ;

NOTE: 2.6 and 27 of the plug have DC24V power supply

If the torch motor is the same as described above, the motor is good; If the motor only moves in one direction, the motor damage needs to be replaced;

NOTE: The above test method is based on THC, and it can also be directly connected to DC24V test motor

【See photo below: inside of the yellow square】:



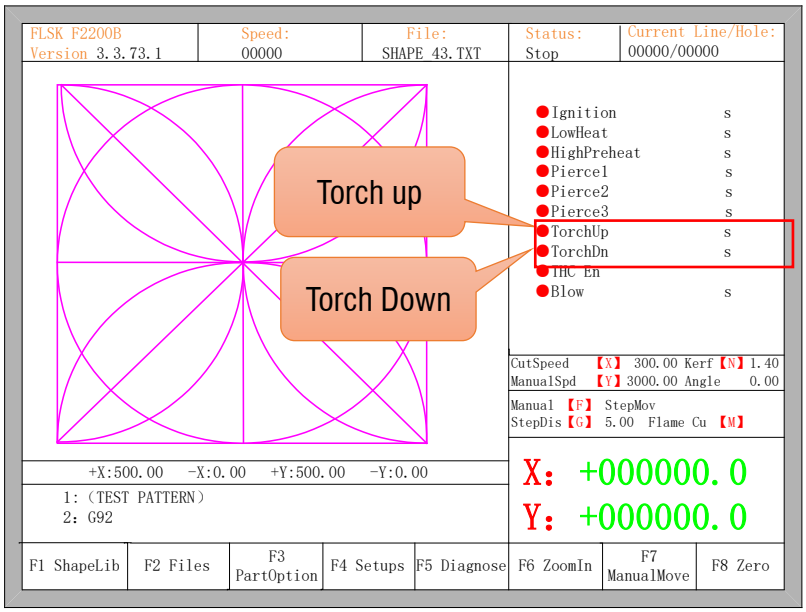
Pic1

Problem analysis:

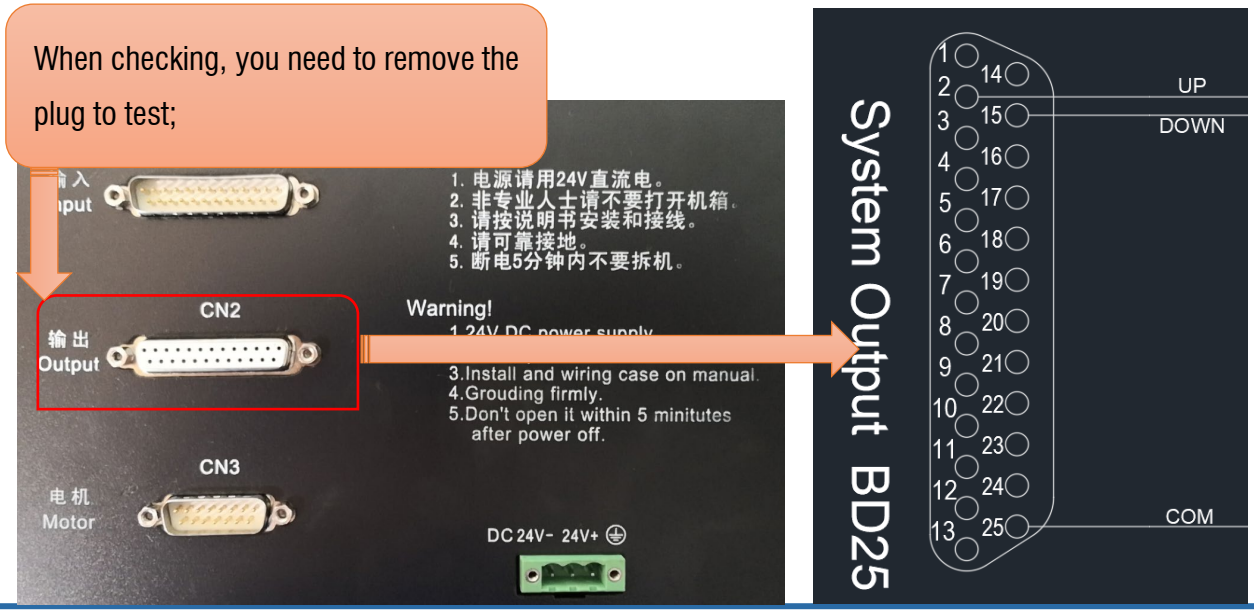
✵ The CNC system cannot send a down/up signal;

Solution: Press【S ↑ 】key, on the system keyboard--The torch up indicator on the system screen lights change green, and Measure the DB25 plug on the back of the system with a multimeter, and output about DC24V voltage between Pin2 and pin25 of the plug.

In the same way, measure the socket voltage when you press 【S ↓ 】key, Output DC24V voltage between Pin15 and pin25 of the plug.



When checking, you need to remove the plug to test;



If press 【S ↑ 】key or【S ↓ 】key ,the system socket has 24 voltages to prove that the system has no problem. Conversely The system is damaged and needs to be replaced.

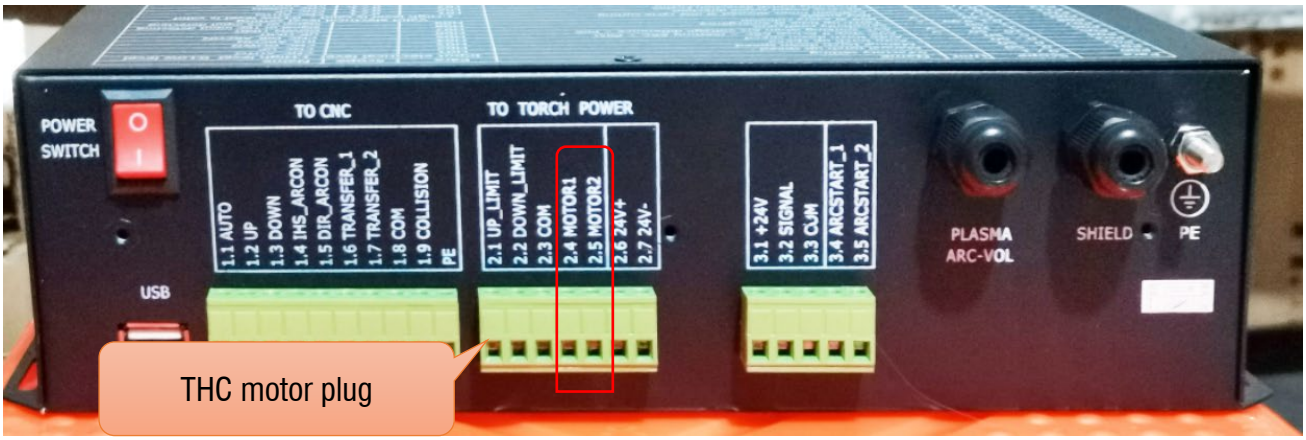
Problem analysis:

✵ The THC cannot send a down/up signal;

Solution: Press【S ↑ 】key on the THC keyboard-- Measure the THC MOTOR plug on the back of the system with a multimeter, and output about DC24V voltage between Pin2.4 and pin2.5 of the plug. In the same way, measure the socket voltage when you press 【S ↓ 】key, Output DC24V voltage between Pin2.4 and pin2.5 of the plug.

--If not, Prove THC is bad and need to be replaced.

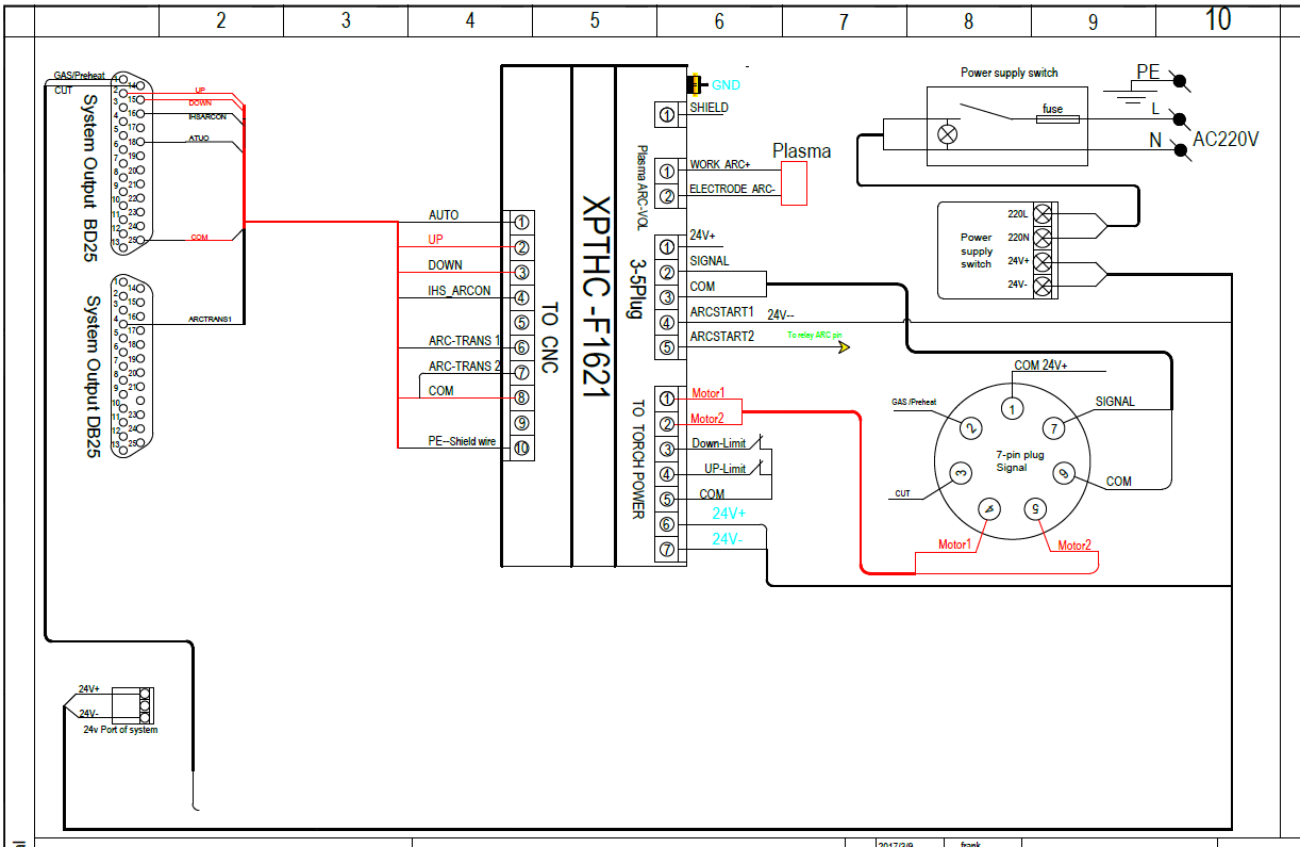
--If there is 24V, Prove THC is good;

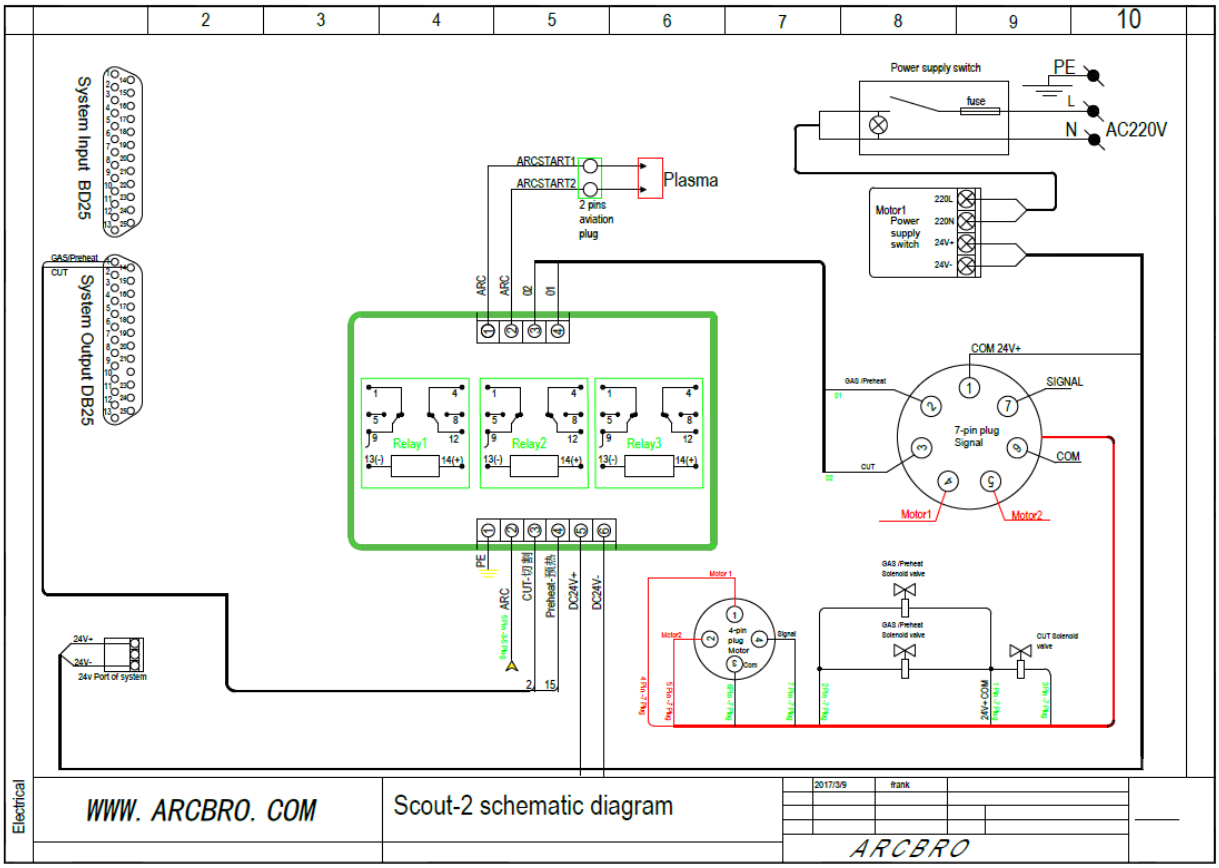


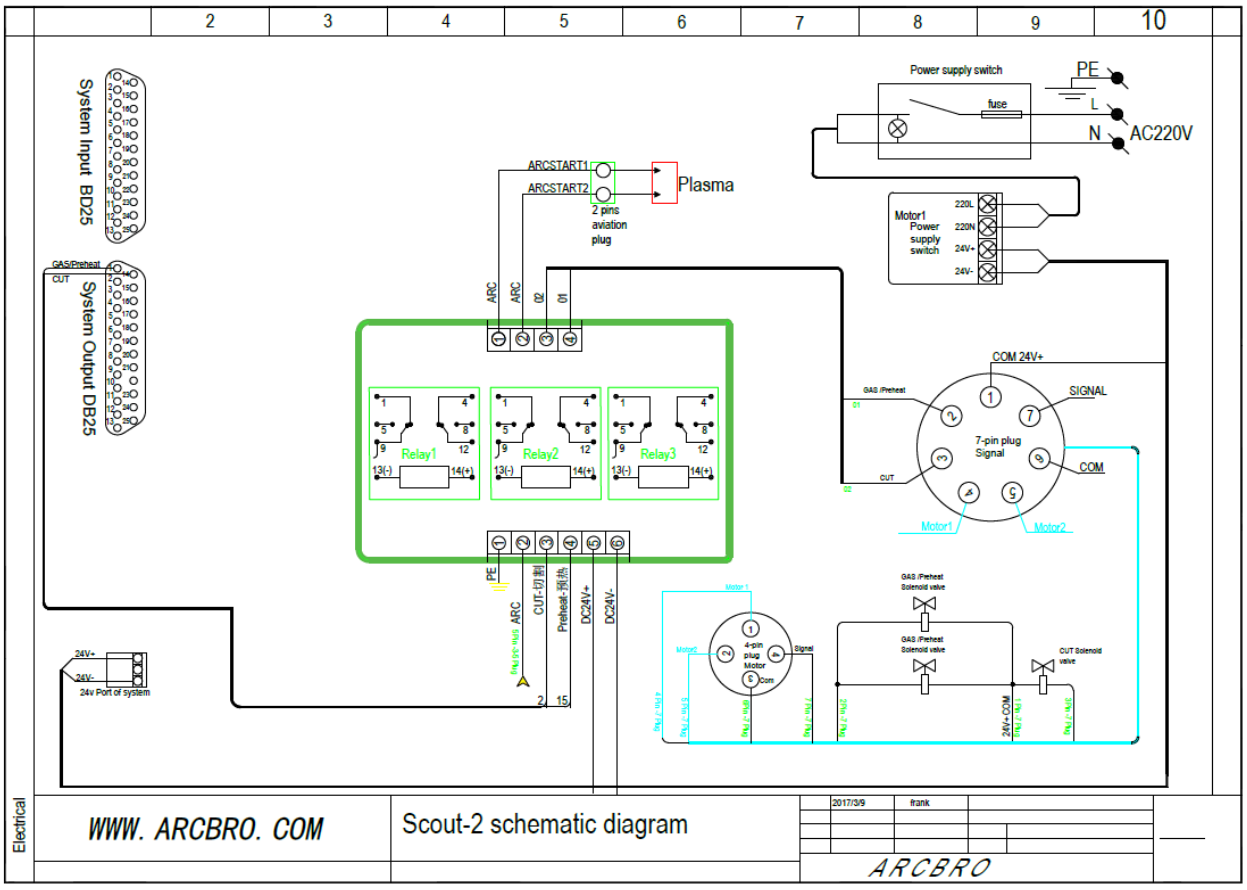
Problem analysis:

✵ Check the wiring between the system-THC-motor ;

Solution: Use a multimeter to check the wiring between the system and THC, and the wiring between THC and the motor. The lines are marked in red in the figure.


System Output BD25
System Output DB25
XPTHC-F1621
TO CNC
Plasma ARC-VOL
3-5Plug
TO TORCH POWER
AUTO
UP
DOWN
IHS_ARCON
ARC-TRANS 1
ARC-TRANS 2
COM
PE--Shield wire
GND
SHIELD
WORK ARC+
ELECTRODE ARC-
Plasma
24V+
SIGNAL
COM
ARCSTART1
ARCSTART2
24V--
Motor1
Motor2
Down-Limit
UP-Limit
24V+
24V-
Power supply switch
fuse
PE
L
N
AC220V
220L
220N
24V+
24V-
COM 24V+
SIGNAL
7-pin plug
Signal
CUT
24V Port of system


System Input BD25
System Output DB25
ARCSTART1
ARCSTART2
2 pins aviation plug
Plasma
Power supply switch
fuse
PE
L
N
AC220V
Motor1 Power supply switch
220L
220N
24V+
24V-
COM 24V+
SIGNAL
7-pin plug
Signal
CUT
COM
Motor1
Motor2
Relay1
Relay2
Relay3
ARC
CUT-切割
Preheat-预热
DC24V+
DC24V-
24V Port of system
WWW. ARCBRO. COM
Scout-2 schematic diagram
2017/3/9
frank
ARCBRO
Electrical


System Input BD25
System Output DB25
GAS/Preheat
CUT
Power supply switch
fuse
PE
L
N
AC220V
ARCSTART1
ARCSTART2
Plasma
2 pins aviation plug
Motor1
Power supply switch
220L
220N
24V+
24V-
ARC
02
01
Relay1
Relay2
Relay3
COM 24V+
SIGNAL
COM
7-pin plug Signal
Motor1
Motor2
PE
ARC
CUT-切割
Preheat-预热
DC24V+
DC24V-
24V+
24V-
24v Port of system
4-pin plug Motor
Signal
Com
GAS /Preheat Solenoid valve
CUT Solenoid valve
24V+COM
Electrical
WWW. ARCBRO. COM
Scout-2 schematic diagram
2017/3/9
frank
ARCBRO