



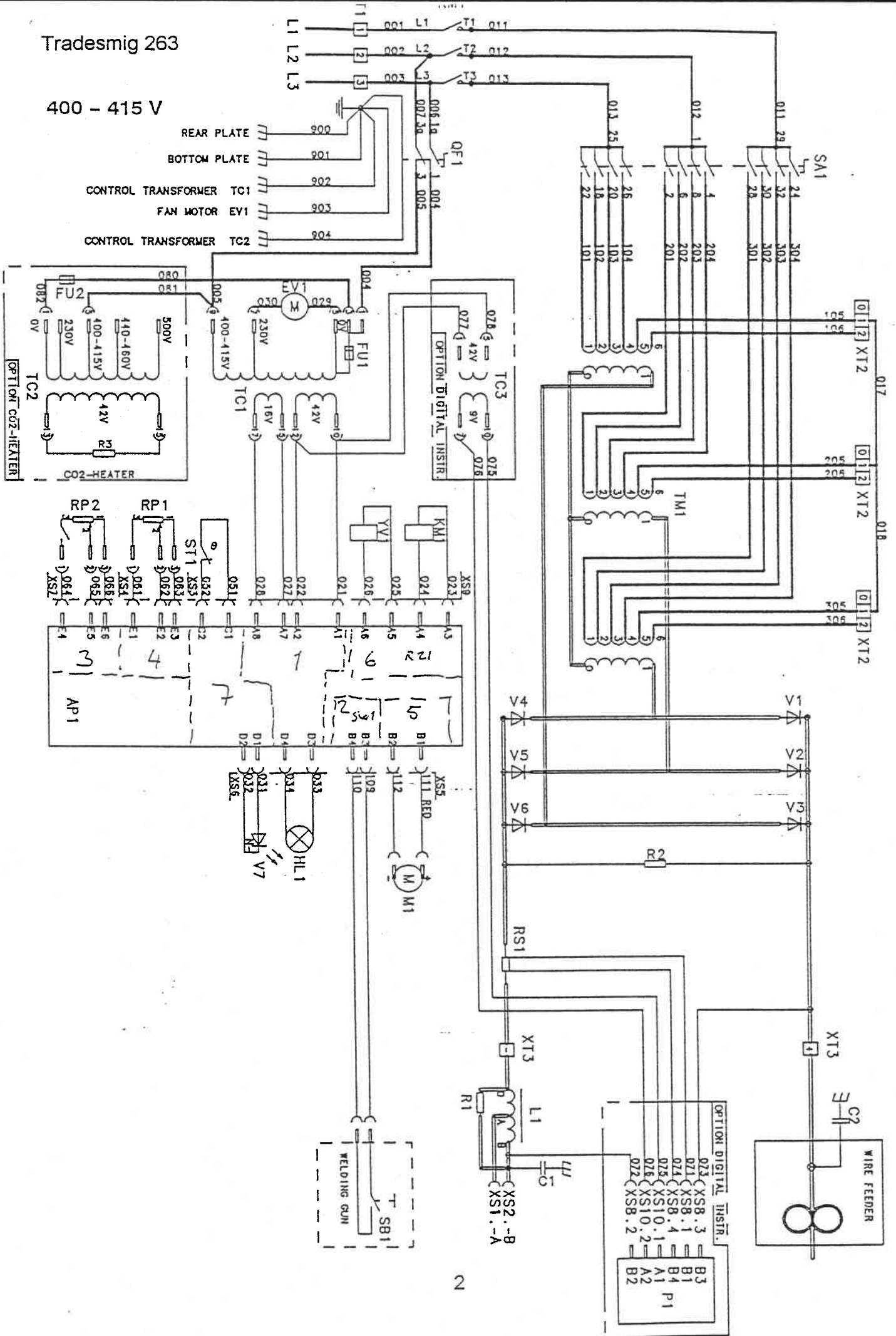
Tradesmig 263/303

COMPOSITE MIG
Welding Power Sources

SERVICE MANUAL

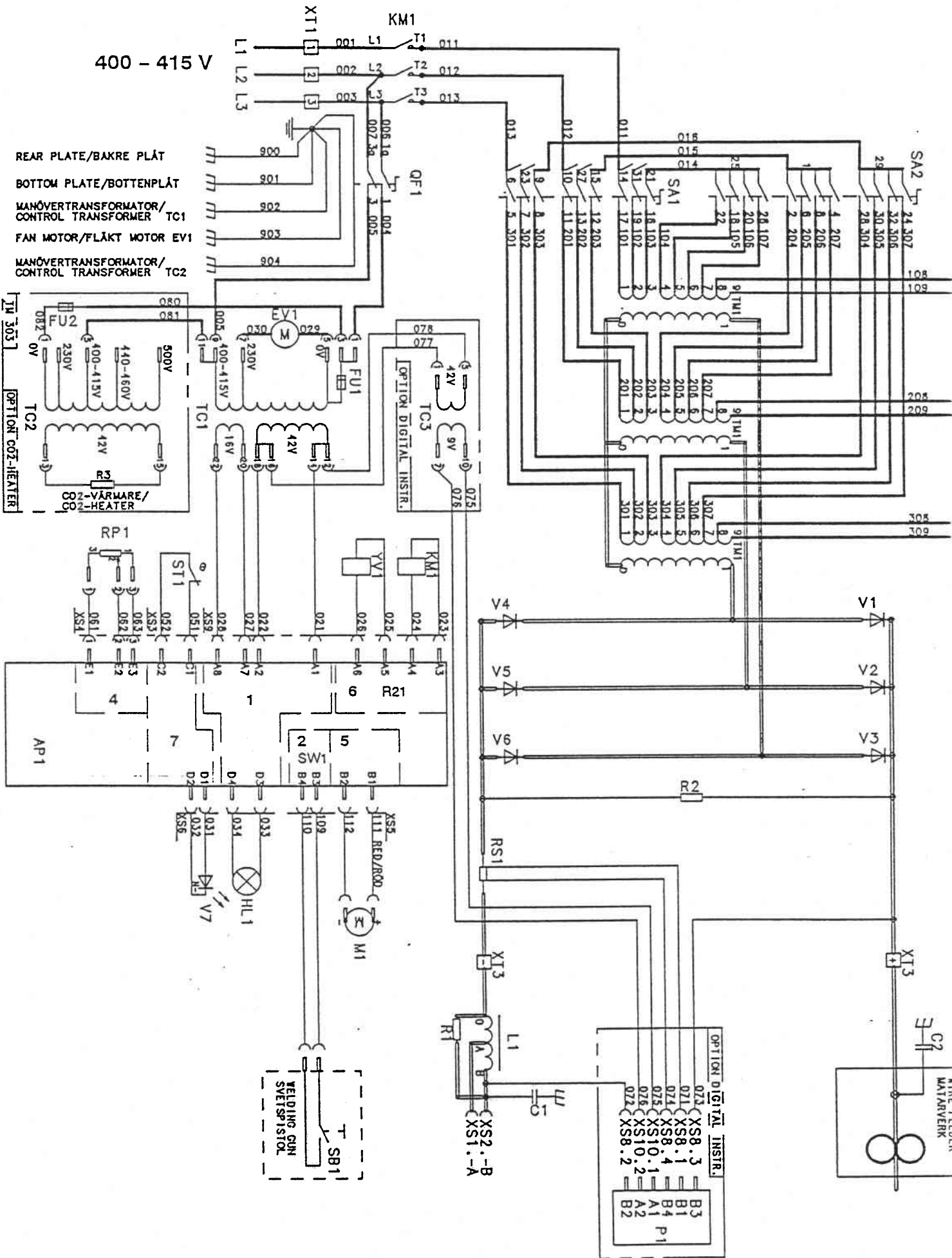
Tradesmig 263

400 - 415 V

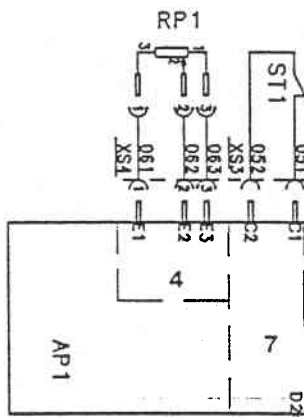
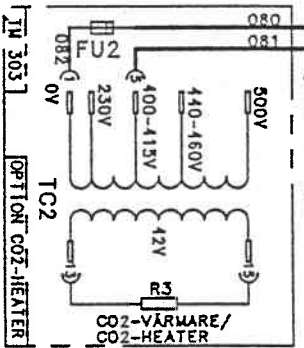


Tradesmig 303

400 - 415 V



- REAR PLATE/BAKRE PLÅT
- BOTTOM PLATE/BOTTENPLÅT
- MANÖVERTRANSFORMATOR/
CONTROL TRANSFORMER TC1
- FAN MOTOR/FLÄKT MOTOR EV1
- MANÖVERTRANSFORMATOR/
CONTROL TRANSFORMER TC2

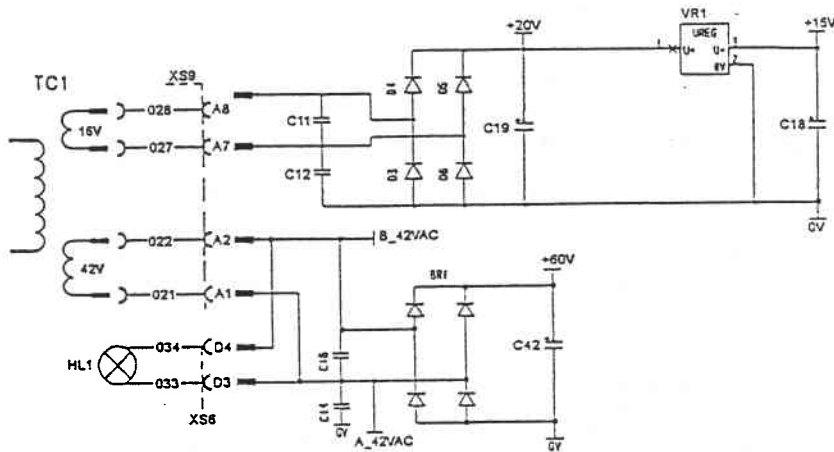


CIRCUIT DESCRIPTION: PCB AP1

Refer to the circuit diagrams for the Trademig 263 and 303, on pages 2 & 3.

1. POWER SUPPLY

Windings on the transformer TC1 supply 16Vac for the electronic circuits and 42Vac for the motor, contactor and gas valve.



- **Electronic Circuits**

Supplied by 16V, this is rectified by diodes D3-D6 and regulated to +15V by VR1.

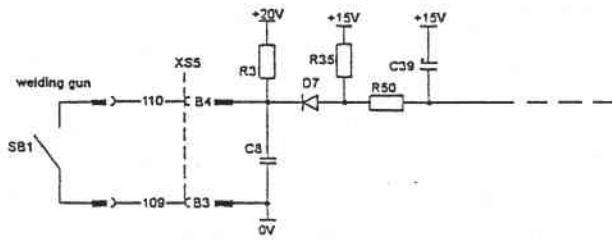
- **42Vac Supplies**

42V (A) and (B) control the contactor and gas valve circuits.

42V is also used to illuminate the indicator lamp HL1 when the power source is switched on.

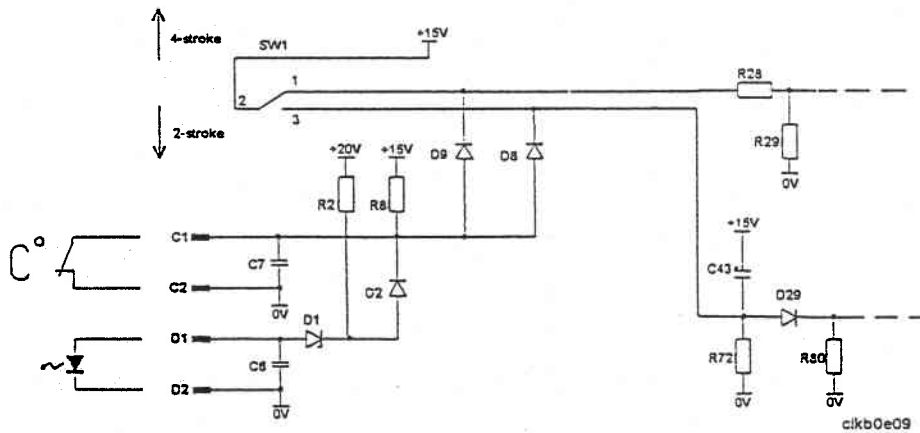
42V is also supplied to rectifier BR1. The resultant 60Vdc is used to supply the wire feed motor circuits.

2. START/STOP



Closing the torch switch SB1 starts the welding process. The Tradesmig 263 only has the 2 stroke function available, the Tradesmig 303 has 2 & 4 stroke function available.

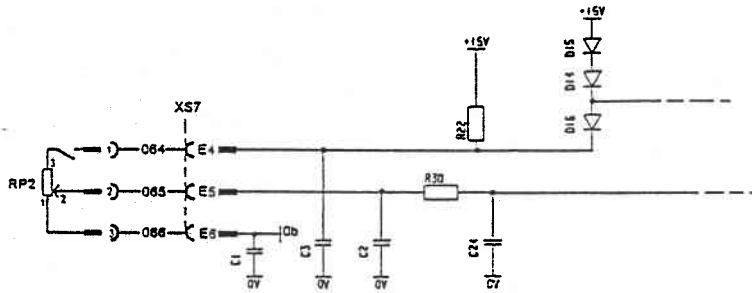
TRADESMIG 303 - with 2/4 Stroke Function



- In the 2 stroke position switch SW1 connects 2 & 3
- In the 4 stroke position switch SW1 connects 2 & 1

Note: the thermostat circuit is described in block 7 on page 5.

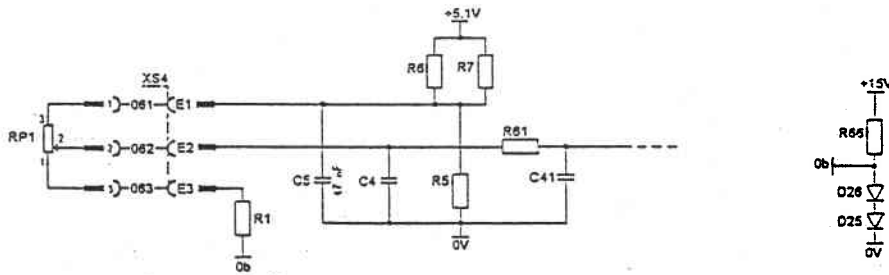
3. SPOT WELD: Fitted only to Tradesmig 263



Spot weld is controlled by potentiometer RP2 and is variable between 0.2 - 2.5 seconds.

4. WIRE FEED SPEED CONTROL

This is variable between 1.9 - 19 meters per minute



A reference of voltage of +5.1V ($\pm 1\%$) supplies the PWM circuit. This in turn ultimately controls the gate pulses to the drive transistor Q5.