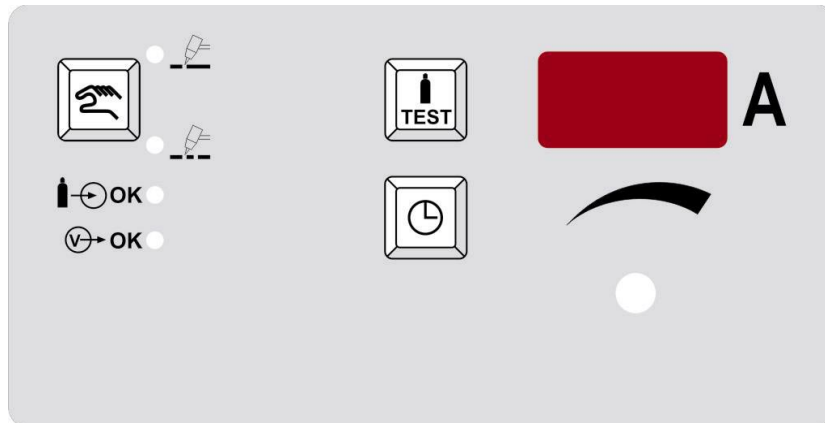# WS40i Plasma cut machine

Quick user guide

Front panel description:

Mode selection button

Standard cutting mode – arc is reestablished after 2 seconds if the trigger switch was not released after   cutting was finished or arc was lost

Quick start cutting mode – arc is reestablished immediately (in tens of milliseconds) if the trigger switch was not released after cutting was finished or arc was lost – used for example for grid cutting
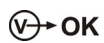
Gas test button – pressing the button gas starts to flow, second press of the button will stop the gas flow, gas flow can be stopped also by short pressing of trigger button on the torch.

Timers button – described below

Gas OK indicator – LED is lightning if the gas pressure reaches the minimum level usable for cutting

Output voltage indicator – LED is lightning if there is output power circuit active

Rotary encoder – adjusting the cutting current, selection of timers

Hints for cutting:

Before the cutting is started, it must be adjusted gas pressure as follows:

- Press the gas button on the panel to start gas flow
- Adjust the pressure to the range 0.45 – 0.55Mpa, optimum is 0.5Mpa (5Bar)
- Press the gas button on the panel again or press the trigger button on the torch shortly to stop gas flow

Start the pilot arc by pressing the trigger button on the torch, move torch to the work piece, cutting arc will start automatically.
Pilot arc will stop automatically after 2 seconds if cutting is not started.
After cutting is finished, post gas flows and will be switched off automatically after 30 seconds.

Timers:

There are four timers implemented in front panel firmware, which are intended for measuring cutting time or total working time of the machine.

TIMER1 - Total working time of the machine (not clearable)
TIMER2 - Total cutting time of the machine (not clearable)
TIMER3 - Working time of the machine (clearable)
TIMER4 - Cutting time of the machine (clearable)

After pressing "timers" button, you can manipulate (read/clear) with selected timer - "Display Timers" mode is started. Due to there is only one display (3 digits) on the panel, all timers are displayed partially, in display sequences.

"Display Sequence" description:

dx - > DDD -> Hx -> HHH -> Mx -> MMM

d - means that count of days follows
H - means that count of hours follows
M - means that count of minutes follows
x - number of timer
DDD - count of days
HHH - count of hours
MMM - count of minutes

After "Display sequence" is finished, the next one is started.

Selection of the timer is possible by turning rotary encoder.

Clearing of clearable timers (timer3, timer4) is possible by long press (10s) of "timers" button.

To exit from "Display timers" mode, use again (short press) the "timers" button.

Error messages:

If any of the error messages appear on the display, the cutting process blocked until the error is removed.

Er1 – Input voltage is not in the range
Er2 – Internal temperature exceeds normal limits
Er4 – Gas pressure is not adequate
Er5-Er7 – combination of above described errors.