

Permanova MTSU Motorized Twin Spot Unit

The Permanova MTSU is developed for applications where a second focus spot gives advantages, such as a preheating/cleaning focus spot before the main focus spot in a brazing application. The master spot is fix and and the second spot can rotate around the master spot in the focus plane. The energy distribution can be varied from 50/50% to 0/100% for the master spot/second spot. Spot separation can also be varied, so finding your process window is easy

- Completely compatible with the WT⁰³ series tools
- Fix master spot with 50-100% of the laser energy
- Slave spot with 50-0% of the laser energy, rotates 0-360° around the master spot
- Programmable from a computer or a robot controller
- Spot separation is adjustable from 0 to 3 mm in all directions in the focal (xy) plane (with F200 mm focus length)
- Fully motorized operation
- User friendly interface
- Repeatability +/- 0,1 mm for F200
- Temperature supervision



User Interface

The User interface is friendly and easy to use.



External Interface

The Motorized Twin Spot Unit can be controlled via an external interface over a fieldbus, like Profibus or Interbus etc.

Busdata in	Bit nr	Description
Reset	0	Resets the system, should give "System ready" as response
Trigger movement	1	Trigger a movement to new position
Spare	2-15	
Spot separation (µm)	16-31	Separation between spots, 0-3530 μm for F200.
Power distribution (%)	32-47	Power in secondary spot, 0-50 percent. Only integer numbers
Rotation angle (deg)	48-63	Rotation angle of secondary spot, 0-360 deg. Only integer numbers

Busdata out	Bit nr	Description
System ready	0	System ready for operation. Given in response to "Reset" signal in.
Handshake	1	Response to trigger signal. Goes low again when new position is reached
Critical alarm	2	Critical alarm from MTSU. Abort processing!
Temperature warning	3	Temperature warning limit exceeded.
Temperature alarm	4	Temperature alarm limit exceeded
Spare	5-15	
Alarm nr	16-31	Alarm nr when critical alarm is high.

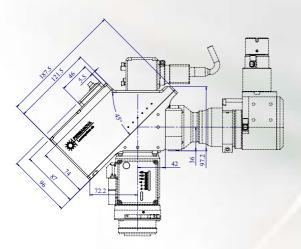
Technical Data, Permanova MTSU Motorized Twin Spot Unit

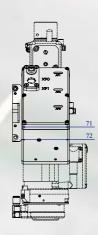
Laser wave length 1030-1070 nm Laser Power max 4 kW

Following data apply for focus length 200 mm, lens diameter 50 mm, and

max collimated beam diameter ≤ 40 mm 0-3 mm Spot separation 50-100 % 50-0 % Master spot power range Slave spot power range Slave spot angular position 0-360°

Data may be changed without notice





PERMANOVA Lasersystem ab Laser is our passion