

TBi Syntronic



The TBi Syntronic is responsible for the perfect synchronization of wire feeding speed between the main wire feeder of the power source (master) and the compact planetary drive in the handheld torch (slave). Even the most complicated wire speed profiles will be precisely replicated in the torch (including the pull-back of the wire with the Syntronic Reverse).

Function principle

The Syntronic measures the voltage applied to the main feeder motor. From this value, the optimized output voltage for the push-pull motor is calculated, and the motor is energized by means of the integrated power amplifier. The measurement port of the Syntronic has a high internal resistance in order to eliminate any influence on the behavior of the power source controller. Additionally, the push-pull motor is protected by specially dimensioned safety circuits.

Technical Data

TBi Syntronic

Function	Electronic adaptation of the characteristics of main feeder and TBi Planetary Push-Pull system. The power amplifier for the push-pull motor is integrated with the unit.
Supply voltage	24 V, 42 V, 115 V, 230 V AC, 50/60 Hz, see ordering information
Power consumption	max. 45 W
Output voltage	0 – 42 V DC
- Syntronic Standard	0 – 42 V DC
- Syntronic Reverse	-42 – 42 V DC
Control voltage	0 – 42 V, $R_i = 100 \text{ k}\Omega$
- Syntronic Standard	0 – 42 V, $R_i = 100 \text{ k}\Omega$
- Syntronic Reverse	-42 – 42 V, $R_i = 100 \text{ k}\Omega$
Operating temperature	0 – 40 °C, the device automatically switches off when overheated
Status display	Ready, Running, Fault, Motor current
Compatible drive systems (master)	all known drive systems with a motor voltage of max. 42 V
Dimensions	200 x 56 x 110 mm (l x w x h)
Weight	1.5 kg
Technical specification	conform with CE regulations

Applications

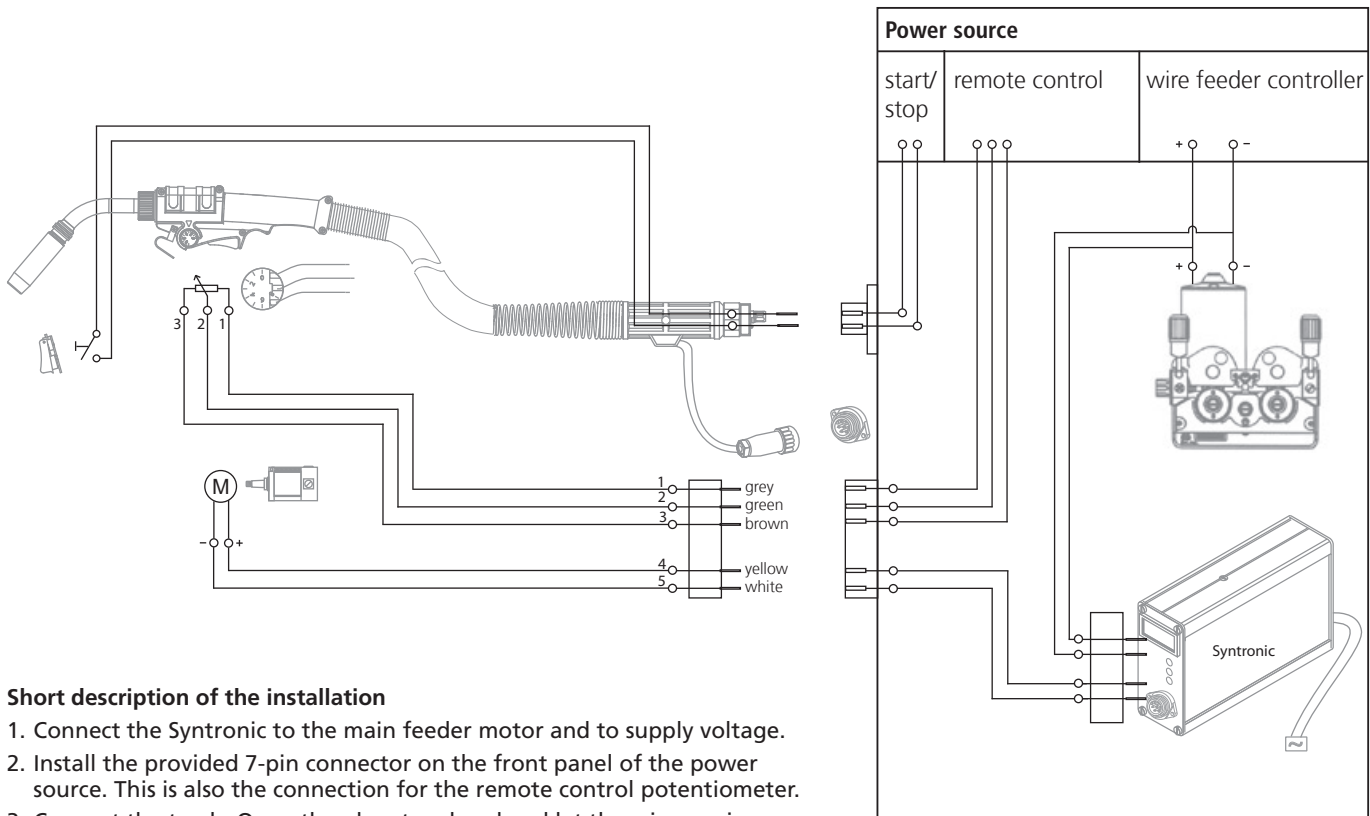


The maximum cable length of 25 m allows for comfortable and efficient work even in hard to reach places. The TBi PowerPull torches are used in railroad car, ship and container production.

Ordering Information

Supply voltage (50/60 Hz)	24 V AC	42 V AC	115 V AC	230 V AC (Standard)
TBi Syntronic Standard, incl. cable connections	590P101005	590P101010	590P101004	590P101011
TBi Syntronic Reverse, incl. cable connections	590P101165	590P101160	590P101155	590P101150

Connection diagram



Short description of the installation

1. Connect the Syntronic to the main feeder motor and to supply voltage.
2. Install the provided 7-pin connector on the front panel of the power source. This is also the connection for the remote control potentiometer.
3. Connect the torch. Open the planetary head and let the wire run in.
4. Adjust the motor characteristics on two set-points:
 - Choose a low wire speed, adjust the Syntronic with the help of the built-in LCD-meter, while the wire is running (see detailed manual for more information).
 - Choose a high wire speed, adjust the Syntronic on the second set-point as before.

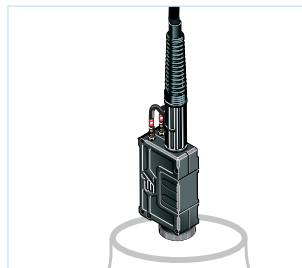
Other system modules



TBi PowerPull
Intermediate drive



TBi PowerPull Box



TBi PowerPull
Barrel feeder

The TBi PowerPull system can be used for many applications, e.g. as very lightweight intermediate drive and for robot installations.