



METER
ENVIRONMENT

HOW TO USE THE T8 WITH THE EM50

1. CONNECTION

The [Em50](#) uses the SDI-12 bus to communicate with the T8. To connect the T8 to the Em50, an adapter cable with stereo jack and 8pol female M12 connector is available from METER.

Wiring:

Em50:



Figure 1. Pigtail vs. stereo

SENSOR CONNECTOR WIRING

| SIGNAL | COLOR | PIN | FUNKTION |
|-----------------|-------|-----|---------------------------|
| V _{cc} | White | 1 | PowerVDC+ |
| GND | Brown | 2 | Ground |
| A-OUT+1 | Grün | 3 | Analog output+ (pressure) |
| A-OUT- | Gelb | 4 | Analog ground |
| Digital OUT | Grau | 5 | Status |
| RS485-A | Rosa | 6 | RS485-A Zwiendraht |
| RS485-B | Blau | 7 | RS485-B Zwiendraht |
| A-OUT+2/SDI12 | Red | 8 | SDI12 (Data) |

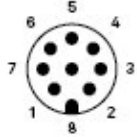
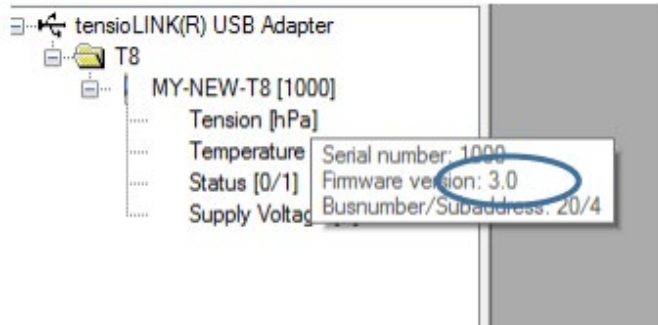


Table 1. Sensor connector wiring

2. T8 CONFIGURATION SETTINGS

In order to use the T8 with the Em50, some configurations have to be changed from the default settings. If the T8 is shipped together with the Em50, this is already done. Use [tensioVIEW](#) (Version 1.30 or higher) and the tensioLINK USB-converter to change the settings of the T8. The T8 needs to run FW 3.0 or higher.



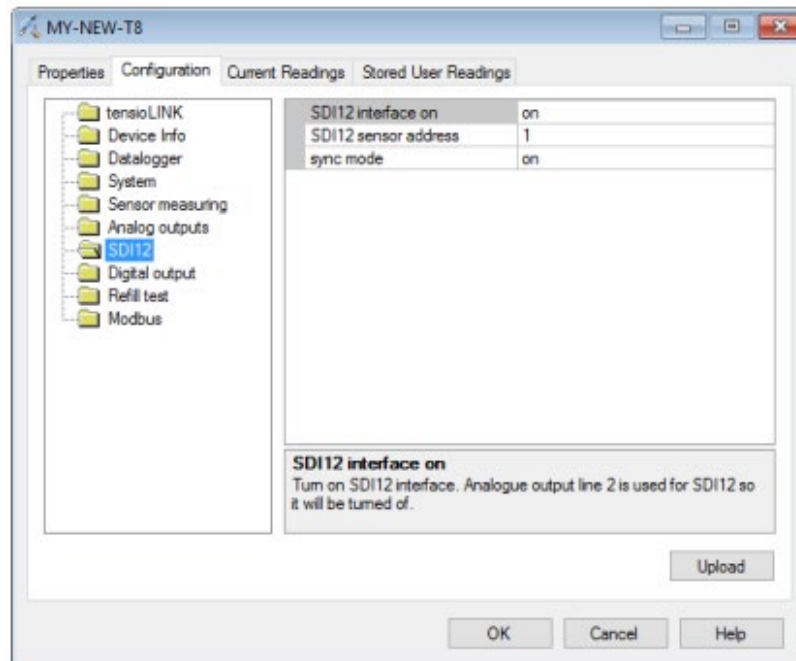
You'll need to set to Power access mode to change these settings.



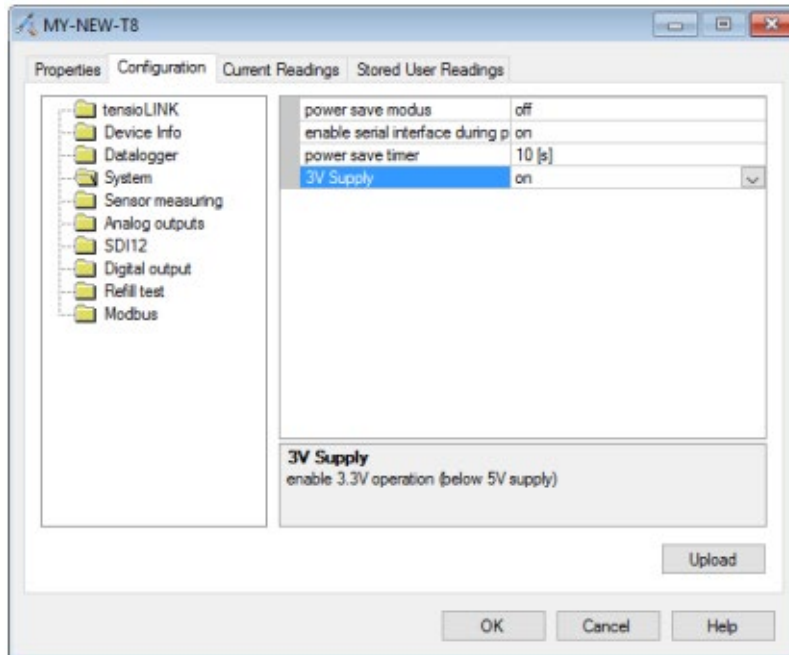
Change the following settings to “on”:

SDI/SDI12 interface on→on

System/3V supply→on



The sensor address and the sync mode has no influence on the behavior since the Em50 powers the T8 only on request and uses a broadcast address.



All other settings are not important for the Em50 usage.

3. EM50 SETUP

The Em50 needs to run FW 2.23 or higher. Use the latest ECH20 utility for the setup. You can use any of the five ports to connect a T8. Choose “UMS T8 Tensiometer” for the port you connected to the T8. If you run a scan, it should deliver water tension and temperature as values.

ECH2O Utility

File Edit Data Actions Window Help

Connected to Em50:
EM20291
 01.04.2016 11:13:38

Connect Via:
 Direct on COM5 Decag

Disconnect Download Scan

Em50 Identity

Name: EM20291
 Device ID: EM20291
 Firmware Version: Em50 2.23

Device Location

Site Name:
 Latitude: ° ' "
 Longitude: ° ' "
 Time Zone: UTC+02

Communication Hardware Options

Communications configured with these settings

Sensor Measurement

Measurement Interval: 1 minute
 Data Storage: 0,0% in use
 26 days until overwriting oldest stored data

Port 1 Sensor: UMS T8 Tensiometer
 Port 2 Sensor: STE Moisture/Temp/EC
 GS1 Soil and Media Moisture
 GS3 Moisture/Temp/EC
Water Potential
 MPS-2 Water Potential/Temp
 MPS-6 Water Potential/Temp
 UMS T8 Tensiometer
 Port 3 Sensor: **Environmental**
 LWS Leaf Wetness
 ECT/RT-1 Temperature
 ECRN-50 Precipitation
 ECRN-100 Precipitation
 REC-1 Precipitation/EC
 VP-3 Humidity/Temp
 VP-4 Humidity/Temp/Barometer
 EHT RH/Temp
 PYR Solar Radiation
 QSO-S PAR Photon Flux
 DS-2 Sonic Anemometer

Em50 Port Scan

Port 1
 UMS T8 Tensiometer -38,11 kPa, 23,7 °C

Port 2
 None Selected

Port 3
 None Selected

Port 4
 None Selected

Port 5
 None Selected