

Monitor unit T2S

The T2S monitors max 32 inverters in one bus

The T2S provides

- Alarm monitoring
- Record the latest 200 events. Fi-Fo
- 3 outgoing alarms
- 2 digital input
- MOD bus
- CAN bus
- USB front connector



Remote Monitoring and Control

Basic monitoring with T1S when 110VDC

TSI Monitoring of BRAVO 110Vdc inverters is done by "T1S" model (from S/N: T3217500010001 to ...)

	TSI monitoring	
	T1S (110Vdc)	T2S (48Vdc)
Alarm contacts	2	3
	UR + NUR	UR + NUR + prog.
Alarm lights	2	3
	UR + NUR	UR + NUR + prog.
Communication	NO	USB
	manufacture std configuration simple via dipswitch	config. + trouble shooting extended via USB
Add. configuration	(1) Alarm polarity (NC or NO) (2) Redundancy (Yes present or No)	
Log file	NO	YES 200 messages
Extended monitor	NO	Possible
	no connections possible	(display + TCP/IP)



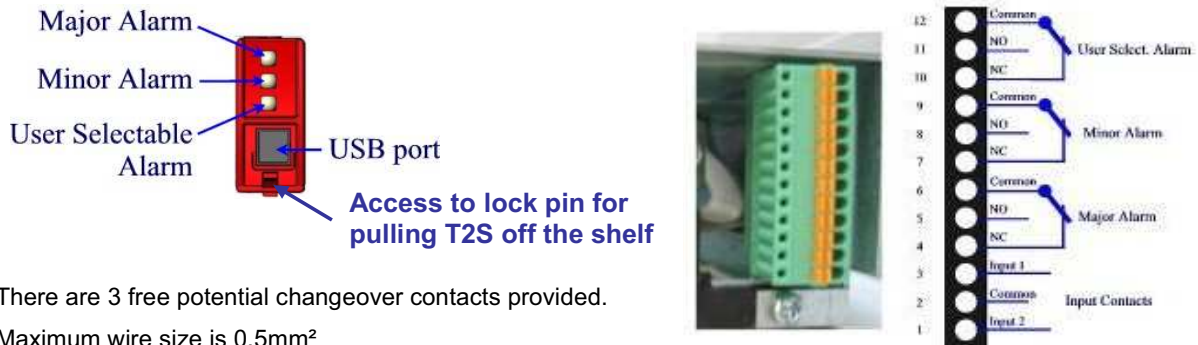
Basic monitoring with T2S when 48VDC

TSI systems are equipped with relays outputs for remote alarms:

- › Major Alarm (contact 5-6 closed when **No** alarm)
- › Minor Alarm (contact 8-9 closed when **No** alarm)
- › User selectable Alarm

All alarms are qualified in Minor alarm except those configurable by T2S. These configurable alarms are identified by the ID601 to 900. Refer to list of factory settings here after.

Those alarms are available on the main shelf. They are reported on the front through the T2S.



There are 3 free potential changeover contacts provided.
Maximum wire size is 0,5mm²

NB: Relays are energized while idle (i.e. relays de-energized when event occur).

When TSI system consists in several shelves, the alarm must be connected on the shelf where T2S is located.

A) Digital input

Two external input contacts can be monitored through the T2S. They can be used for rack alarms such as “Door Opening”, “Temperature too high”, “Fan status” ...

The voltage present on terminal 1 and 3 is +5V (galvanically insulated). Care should be taken to avoid connecting any external voltage on terminal 1 to 3.

External signals should be applied to these terminals via Volt-free contacts.

The function is activated when the 2 terminals concerned are short-circuited (i.e. when the external Volt-free contact is closed)

B) Digital output

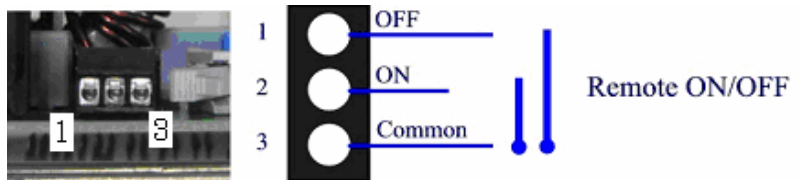
MAJOR, MINOR and selectable relay provide an open or close free potential contact

Relay characteristics:

- Maximum switching capacity: 2A @ 30VDC or 1A @ 60VDC
- Maximum switching power: 60W
- Maximum voltage: 60VDC SELV
- Maximum switching current: 2A

Remote ON/OFF

TSI system can be remotely activated or stopped (stand-by mode).



Changeover contacts must be used. For transition the TSI checks actually that one input is released whilst the other is short circuited.
If both transitions are not picked up the inverter does not change its operating status.



When TSI system consists in several shelves, the remote ON/OFF can be connected on any shelf.

The voltage present on terminal 1 and 3 is +5V (galvanically insulated). Care should be taken to avoid connecting any external voltage on terminal 1 to 3. Maximum wire size is 1 mm²

Functional table for remote ON/OFF function

States	Pin 1-3	Pin 2-3	
1	Open	Open	System working normally
2	Close	Open	TSI output switched off DC - AC LED off DC - DC LED solid green AC - DC LED solid green
3	Open	Close	System working normally
4	Close	Close	System working normally

The 3 wires must be used for the redundancy on the remote ON/OFF. Use NO/NC relay contact.

State #3 should be implemented by default.
NB: Changing status of these inputs (State #3 → State #2 → State #3) forces the TSI modules to start running without T2S

Monitoring by CanBus (in option)

CanBus protocol is available on the port “User Bus” located on the back of shelf. For pin out information and conversion table ask file “MODBUS_protocol_for_T2S”.
The CANBUS can supply an optional CANDIS. See chapter 3.5
Other application shall be defined later on request.
Available since software version 2.0 on T2S

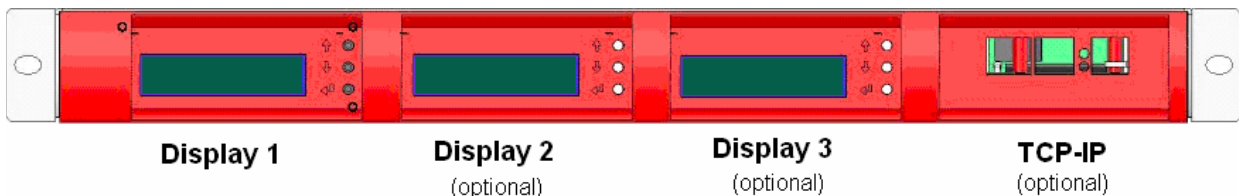
Monitoring by MODBUS (in option)

The Modbus protocol is available on the port “User Bus” located on the back of shelf. For pin out information and conversion table ask word file “MODBUS_protocol_for_T2S.doc”.
Available since software version 2.0 on T2S

Monitoring by optional CANDIS (in option) ONLY with T2S Monitoring

This CANDIS allows information on display(s) and by TCP/IP interface. Following the requirement le CANDIS should be provide with one, two or three displays. The last slot is use to include the TCP/IP interface.
The variables available on CANDIS are voltages, currents, frequency, inverter configured.

Refer to the specific operating manual for detail.



Monitoring by TCP/IP (in option) ONLY with T2S Monitoring

The TCP/IP interface can be mounting on the extension CanDis.

Refer to the specific operating manual for detail.