

# TSL MDU 12 Driver

*tsl\_mdu.exe*

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# 1 Overview

## 1.1 Description

This driver communicates via SNMP with the TSL MDU, to switch the mains outlets (optional) and monitor the fuses. There are also 16 GPI inputs and temperature monitoring.

The driver expects a command line parameter, this is the number of the infodriver that it will hook into as an external. All configuration is done in the infodriver's ini file.

## 1.2 Device firmware version

This software has been tested with the following versions of the TSL MDU

- MDU12-3E V3.00
- MDU12-3ES V3.51
- MDU12-3PM V5.08

## 1.3 BNCS configuration

Supports the BBC\_COPYDATA method, i.e. v2.50.xx or v3.50.xx, or later.

## 1.4 Driver PC requirements

Windows 2000 or newer with SNMP support installed.

To install this tick "Management and Monitoring tool" under "Add/Remove Windows Components" in "Add/Remove Software".

## 1.5 Device limitations

The device does not behave well if it is polled too quickly; polling at speed can cause the unit to crash.

If the web interface is used to switch on/off outputs or change the temperature alarm point it is believed that BNCS will not indicate this new state until the device is polled.

# 2 Driver setup

## 2.1 Ini file settings

Item	Value	Comment
[tsl_mdu]		
DebugMode	Default: 1 On = 1 Off = 0	Turn Debug messages On or Off

Item	Value	Comment
LogMode	Default: 0 On = 1 Off = 0	Turn Logging On or Off
PollDelay	Default: 5000	If set to below 2000 with v.1.14 causes problems
<b>[TSL_MDU_nn]</b>	TSL_MDU_1 to TSL_MDU_40	
SNMPAddress	xxx.xxx.xxx.xxx	IP address of the MDU.
SNMPCommunity	public	SNMP Community name of the MDU

At the time of writing v1.14 and v1.15 beta both have a problem if the polling rate is below 2000mS, they stop any trap messages being sent until polling stops, i.e. when the driver is shut down. These versions also have a delay between telling an outlet to switch, and getting a response, the more you switch the bigger the delay, this also blocks traps until it has caught up.

## 2.2 Sample Ini

```
[tsl_mdu]
DebugMode=1
LogMode=0
PollDelay=5000

[TSL_MDU_1]
SNMPAddress=192.168.0.149
SNMPCommunity=public
```

## 3 Infodriver

### 3.1 Usage

The slots are arranged in groups of 100, allowing up to 40 MDUs to be controlled.

Slot Number	R R/W	Use	Information and Values of Slot
1-16	R/W	GPI States	1=Inactive 2=Active
21-36	R/W	GPI Polarity	1=Not Applicable 2=Normally Open 3=Normally Closed
41-52	R/W	Output switches <b>NOTE</b> - once locked it cannot be unlocked via SNMP - use the webpage.	1=Off 2=On 3=Locked-off <b>see Note</b> 4=Locked-on <b>see Note</b>
61-72	R/W	Output fuse alarms	1=Inactive 2=Active
81-92	R/W	Output delay	
	R/W		
78	R/W	Startup mode	1=Simultaneous 2=Sequential 3=Delayed
79	R/W	Sequential Delay	0-2550ms in 10ms increments. Actual delay time is number in slot multiplied by 10ms.
	R/W		
94	R	Temp. alarm active	1=Inactive 2=Active
95	R/W	Current temperature	In degrees celsius

Slot Number	R R/W	Use	Information and Values of Slot
96	R/W	Temp. alarm point	0-128 degrees celsius
97	R	Power status	1=Total Loss 2=Input 1 OK 3=Input 2 OK 4=All OK
98	R/W	Location	
99	R	Comms	0=OK 1=Fail
4094	R/W	Loopback / Response	Any text written in 4094 will appear in slot 4095 and visa-versa.  This is to test that the driver is running, and you are not just bouncing messages off the infodriver.
4095	R/W	Loopback / Response	

## 4 Notes

### 4.1 Firewall Settings

If you have a firewall you will need to open port 161 and 162 for UDP traffic.

Note that Traps will not work if port 162 is not opened.

### 4.2 MDU Defaults

From the factory the unit will have an IP address of 192.168.100.235. When logging on to the webpage the default user name is "root" and the password is "telsys". You will need to use the webpage to set the community name and trap destination addresses if you do not want to use the serial port to do this. It is necessary to use the serial port to set/change the IP address.

## 5 Version history

### 5.1 Driver version

Version No	Date	Details	Name
1.00	14/11/2003	Initial release	Mark Baldry

1.01	13/1/2004	Bug fix to for more multiple units Retransmission policy changed to avoid flooding MDU buffer	Mark Baldry
1.02	15/1/2004	De-threaded setting infodriver slots	Mark Baldry
1.03	2/2/2004	Added queue to SNMP output	Mark Baldry
1.04	8/3/2004	If available now looks at v4 directory structure for configuration file.	Mark Baldry
1.05	10/3/2004	V4 config. directory now config/system	Mark Baldry
1.06	30/3/2004	Problem with threads causing crash, sorted with semaphores round the GPI and outlet maps.	Mark Baldry
1.06.2	15/4/2004	Added and crash measures and logging of errors as there was still the odd crash.	Mark Baldry
1.06.3	23/8/2004	Further logging added, including the address of the crash being written to file. Log file is flushed each time it is written.	Mark Baldry
1.06.4	23/8/2004	Recompiled using multithreaded libraries!	Mark Baldry
1.0.7.2	10/8/2006	Recompiled from CVS with libraries in CVS	Mark Baldry
1.0.7.3		Added v3 path compatibility	Mark Baldry
1.0.7.4	11/5/2007	Fix so that when power-cycled driver does a full re-poll	Mark Baldry
1.0.7.5	16/09/2008	New Template Added	Simon Armstrong
1.0.7.6	27/11/2008	Indicated Windows 2000 or newer. Added words under the Device limitation section.	Andrew Prince
1.1.1.1	4/4/2013	Fixed to work with recent device firmware. Added duplicate instance detection/rejection. Made main window resizable, with horizontal scroll bars.	Richard Kerry

## 5.2 Document version

Version No	Date	Details	Name
1.0.7.7	19/02/ 09	Updated template	Amanda Atkin
1.0.7.8	23/2/09	Clarified MDU factory defaults	Andrew Prince
1.1.1.1	4/4/13	Updated following latest changes, and rebranded.	Richard Kerry

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