

## Twido Information sheet

Nb:37

Version :1.0

Product : Twido	Protocol : Ethernet / Modbus
Software : Twido Soft	Version : V1.0

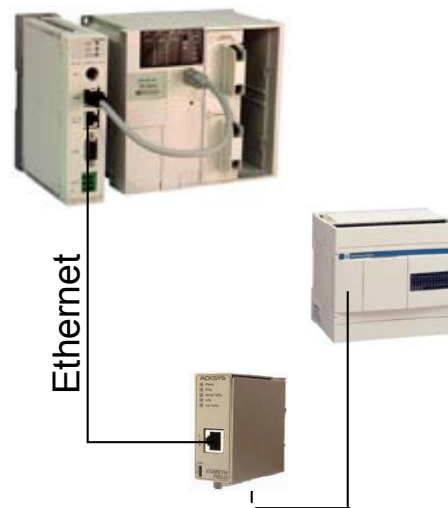
Application type : TSX37 + TSXETZ + Cometh + 1 slave Twido Mod. connection

Application short wording : Twido & TSX37 connection via Ethernet

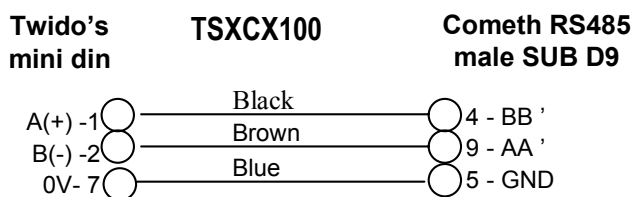
**List of items :**

- TSX3722001 V5.0
- TSXETZ510
- ACKSYS's Cometh-Field, **Modbus/TCP V1.4**
- TWDLCAA24DRF
- 1 Ethernet cross cable
- 1 +24VDC power supply for COMETH gateway

**Functional diagram :**



**Cabling diagram :**



**Twido configuration :**

Taking into account the wiring on the Twido's mini din (no 5-DPT/7-0V connection), communication parameters are fixed to **19200 bps**, 8 bits, no parity, 1 stop , **@ Modbus = 1**. In that case, Port 1 tab parameters of TwidoSoft are without effect. It can be left to its default parameters (remote connection @1)

In order to work with other Modbus parameters, connect pin 5/7 of the Twido's mini din and configure the required parameters in the TwidoSoft Port 1 tab, then configure the gateway accordingly. This is applicable only when using the built-in link of the Twido (console port UC=Port 1)

The internal words of the Twido aimed at read and write requests must be used in the Twido program. Record in the Twido a program containing at least one line in which the higher ranked word +1 used in request is allocated to a value or define these words in the I/O transfer instructions of the Twido which will be raised to Ethernet.

**Example :**

```
RUNG 0 DÉFINIT LES MOTS MÉMOIRES %MWO À %MW11 EN MÉMOIRE ACCESSIBLE ET IMPOSE %MW11=0
```

%MW11 := 0

**TSXETZ configuration :**

**IP configuration :**

**Ethernet Interface IP Address**

Configured     Automatic configuration

IP address :   

Subnetwork mask :   

Gateway address :

**XWAY Address**

Network :     Station :

**Network Connection**

Ethernet     Modem

**Ethernet configuration**

Ethernet II     802.3

**IP configuration :**

**Configuration of Connections**

Connections :      Access Control

Xway Address :    IP Address :    Protocol :    Access :    Mode :

1	101	139	160	86	75	MODBUS	☑	MULTI
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XWay	IP Address	Protocol	Access	Mode	
1	1.101	139.160.86.75	MODBUS	Allowed	MULTI

**Unitelway configuration :**

Ad0 Number :

Address Number :

Baud Rate :

Parity :

Timeout (s) :

Note : Unitelway address is fixed to 4 by default. If an XBT connection is required to the console connector of the TSX37, you have to modify the address of the Unitelway gateway TSXETZ and to change @ destination codes in send\_reg requests accordingly (Send\_req(adr#0.0.4,16#.…….))

### ACKSYS COMETH-FIELD gateway configuration :

Application requires the MODBUS/TCP version **V1.4** to be installed in the ACKSYS gateway. With this version, the **net slaveid** field is configurable in order to address the Modbus equipment behind the gateway at slave address 1.

Parameters in **bold** must be configured using the Set param command according to the documentation of the COMETH-FIELD.

Configuration can be achieved by using Hyperterminal and a serial cable or with Telnet and a cross Ethernet cable.

```
root> COMETH MODBUS version 1.4.0.0, Administration mode ready
```

```
root> show net ip
```

```
139.160.86.75
```

```
root> show net mask
```

```
255.255.252.0
```

```
root> show serial interface
```

```
Electrical interface: 2wires noecho
```

```
root> show serial baudrate
```

```
19200 bps
```

```
root> show serial format
```

```
data bits: 8, parity: none, stop bits: 1
```

```
root> show serial mode
```

```
Modbus Slave RTU
```

```
root> show net tcpto
```

```
500
```

```
root> show net slaveid
```

```
ID fixed : 1
```

```
root> show serial stout
```

```
time out = 50
```

```
root> show net authip
```

```
1 - 0.0.0.0
```

```
2 - 0.0.0.0
```

```
3 - 0.0.0.0
```

```
4 - 0.0.0.0
```

```
root> show net mdbport
```

```
502
```

### Application operation :

Exchanges are achieved by send\_reg requests with code 16#36 for reading 10 words and code 16#37 for writing 10 words (%mw0 to %mw9 in the Twido)

Read values are recovered and formatted in words %mw25 to %mw34 (see animated read table) and are cadenced by the %S6 bit

Value to be wrote must be filled in words %mw45 to %mw54 (see animated write table) and are controlled by the %M3 bit (edge).

Attached file : twido\_etz\_cometh.stx