Programmable controllers
Twido
Compact, simple and *communicative!*

Telemecanique

Twido:
The tailor-made small automation system controller

Designed for simple installations and small compact machines, Twido covers standard applications comprising 10 to 100 I/O (252 I/O maximum). Available in compact or modular version, they share the same options, I/O expansions and programming software.

The Twido programmable controller has already displayed its capability for providing improved compactness, simplicity and flexibility. Now, it can also communicate on CANopen, Modbus and Ethernet.

Wide range of Twido bases

Twido Compact
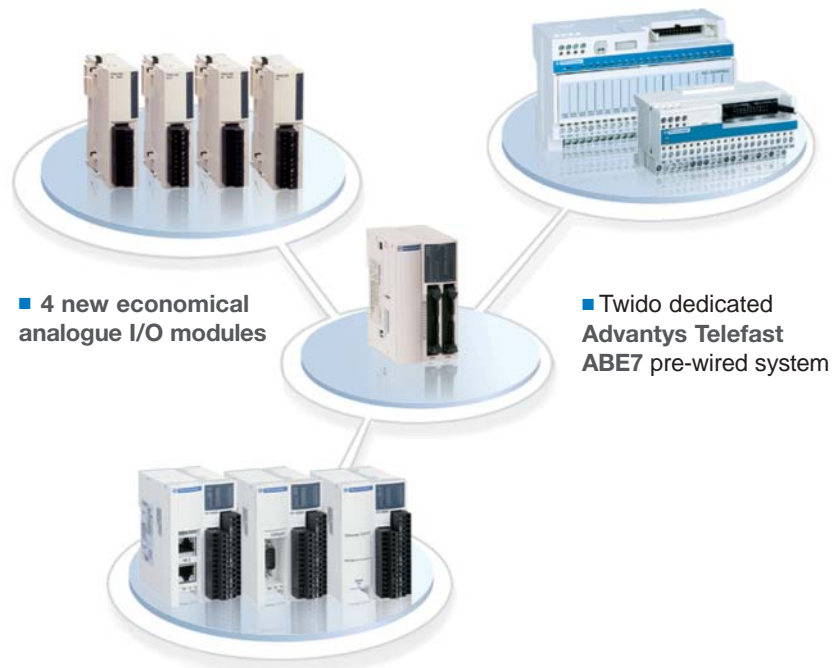- New 40 I/O bases with or without built-in Ethernet
- Choice of supply voltage: 100…240 V AC or 19.2…30 V DC
- Traditional screw terminal connections

Twido Modular
- Very small: imagine 40 I/O and an expansion module with 16 transistor I/Os just 18 mm wide!
- Quick and reliable HE10 connection

An improved catalogue of inputs/outputs to help reduce your costs

- **4 new economical analogue I/O modules**

- Twido dedicated **Advantys Telefast ABE7** pre-wired system

- Optimised and economical **Advantys OTB** IP20 distributed input/output system that shares the same range of I/O expansions as Twido. 3 communication base modules: Modbus, CANopen, Ethernet

The new features of Twido:
communication, flexibility, simplicity and competitiveness

Ethernet communication

- 1 product with 1 optimised solution for the compact 40 I/O with built-in Ethernet
- An Ethernet bridge that enables connection of any Twido on Ethernet

Measurement and regulation

- 4 new Analogue I/O modules
- Addition of auto-tuning function on PID

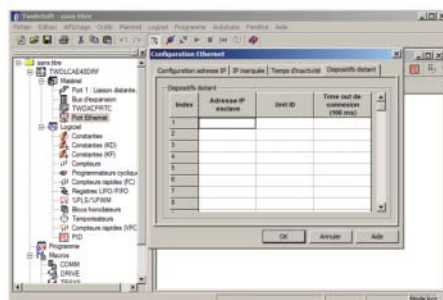## CANopen master module

- Performance and openness for controlling equipment such as motor starters, drives, etc.

Setting-up and adjustment

- Adjustment tool on Pocket PC
- More modifications in connected mode

Bluetooth®

Programming connectivity

- Multipoint connection
- Programming via Ethernet
- Programming via Bluetooth (standard wire-free connection)

Extended functions

- Additions to ASCII protocol
- Data and programming modification while connected
- New macros system for management of Modbus and CANopen slaves

Counting

- Operating ranges increased (double word, PLS, VFC, FC…)

Twido synergy for
for optimising your costs

Twido, in complete synergy with its associated Telemecanique products, enables you to combine **compactness, performance, flexibility and competitiveness.**

①

Magelis compact display units XBT-N

No power supply required
For easier usage

- Display unit with alphanumeric screen, 2 lines of 20 characters **XBT-N200**
- Display unit with matrix screen, 1 to 4 lines from 5 to 20 characters **XBT-N400**

②

Distributed I/O Advantys OTB

A common range of I/O expansions
For optimising costs!

Communication interface modules (with 20 I/O integrated)

- CANopen **OTB1C0DM9LP**
- Ethernet **OTB1E0DM9LP**
- Modbus **OTB1S0DM9LP**

④

Altivar 31 variable speed drive

Modbus and CANopen integrated as standard
For performance at very low cost!

- **ATV31H•••** (refer to the ATV31 catalogue)

CANopen   **MODBUS**

Pre-wired system Advantys Telefast

Pre-wired system specifically for Twido
For quick and reliable connection

For Twido bases **TWDLMDA•0DTK:**	For I/O modules Twido **TWDDDI••DK**
■ 12 I / 8 O **ABE7B20MPN20**	■ 16 I: **ABE7E16PN20**
■ 12 I / 8 O 6 relay outputs, EM, 3 A / 2 solid-state outputs, 2 A **ABE7B20MRM20**	For I/O modules Twido **TWDDDO••K**
	■ 16 O: **ABE7E16SPN20**
	■ 16 O with LED/channel and fuse/output channel: **ABE7E16SPN22**
■ Connecting cables: **ABFT26B0••***	■ 16 O, EM relay, 3 A: **ABE7E16SRM20**
	■ Connecting cables: **ABE7FT20E0••***

③

TeSys Model U starter-controllers

Simplified communication
For power control!

TeSys Model U communication modules

- Modbus **LULCO31**
- AS-Interface **ASILUFC5**
- CANopen **LULC08**

* Replace the •• by: 50 for a 0.5 m long cable, 100 for a 1 m long cable or 200 for a 2 m long cable.

Bases

Base type	Number of I/O	Number & type of inputs (1)	Number & type of outputs
Compact bases	10	6 I --- 24 V	4 O relay (2 A)
	16	9 I --- 4 V	7 O relay (2 A)
	24	14 I --- 24 V	10 O relay (2 A)
	10	6 I --- 24 V	4 O relay (2 A)
	16	9 I --- 24 V	7 O relay (2 A)
	24	14 I --- 24 V	10 O relay (2 A)
	40	24 I --- 24 V	14 O relay and 2 O source transistor
	40 with Ethernet	24 I --- 24 V	14 O relay and 2 O source transistor
Modular bases	20	12 I --- 24 V	8 O transistor (0.3 A), sink or source dep
	20	12 I --- 24 V	6 O relay (2 A) and 2 O source trans
	40	24 I --- 24 V	16 O transistor (0.3 A), sink or source

(1) All the inputs are sink/source. All of these compact or modular bases
* Replace the • by the letter **U** for sink transistor outputs (example: TWD

Analogue expansion modules

Type of connection	Number & type of inputs	
Removable screw terminals	2 I 12 bits	K, J, T thermocouple, PT100 temperature resistance
	2 I 12 bits	Voltage: 0…10 V, Current: 4…20 mA
	2 I 12 bits	Voltage: 0…10 V, Current: 4…20 mA
	-	
	4 I 12 bits	Voltage: 0…10 V, Current: 0…20 mA, PT100 and NI100/100
	-	
	8 I 10 bits	Voltage: 0…10 V, Current: 0…20 mA
	8 I 10 bits	

Digital expansion modules

Type of connection	Number & type of inputs	Number & type of outputs
Removable screw terminals	8 I --- 24 V sink or source	-
	16 I --- 24 V sink or source	-
	-	8 O --- 24 V sink or source transistor depending
	-	8 O relay
	4 I --- 24 V sink or source	4 O relay
	-	16 O relay
	8 I ∿ 120 V sink or source	-
HE10 connectors	16 I --- 24 V sink or source	-
	32 I --- 24 V sink or source	-
	-	16 O --- 24 V sink or source transistor depending
	-	32 O --- 24 V sink or source transistor depending
Spring terminals	16 I --- 24 V sink or source	8 O relay

* Replace the • by the letter **U** for sink transistor outputs (example: TWDDD08UT) or by **T** for sour

AS-Interface master	M3 profile master module (S-7.4 analogue slaves not supported)

Communication

Type	Compatibility	Physical layer
CANopen master module	Modular and Compact bases, 24 or 40 I/O	
Ethernet bridge	All Twido controllers with an RS485 interface	
Serial interface adaptors	Compact bases, 16/24 I/O	RS485
	Compact bases, 16/24 I/O	RS485
	Compact bases, 16/24 I/O	RS232C
Serial interface modules	Modular bases, 20/40 I/O	RS485
	Modular bases, 20/40 I/O	RS485
	Modular bases, 20/40 I/O	RS232C

Phaseo power supplies

Input voltage	Output voltage	Power / Nominal current
∿ 100...240 V, --- 110…220 V (compatible)	--- 24 V	15 W / 0.3 A
∿ 100...240 V, --- 110…220 V (compatible)	--- 24 V	15 W / 0.6 A
∿ 100...240 V, --- 110…220 V (compatible)	--- 24 V	15 W / 1.25 A

Power supply	Rapid counting	Number of possible expansions	Type of connection	References
∼ 100...240 V		-	Screw terminal	**TWDLCAA10DRF**
∼ 100...240 V		-	Screw terminal	**TWDLCAA16DRF**
∼ 100...240 V	3x5 kHz	4	Screw terminal	**TWDLCAA24DRF**
⎓ 19,2...30 V	1x20 kHz	-	Screw terminal	**TWDLCDA10DRF**
⎓ 19,2...30 V		-	Screw terminal	**TWDLCDA16DRF**
⎓ 19,2...30 V		4	Screw terminal	**TWDLCDA24DRF**
r (1 A) ∼ 100...240 V	4x5 kHz	7	Screw terminal	**TWDLCAA40DRF**
r (1 A) ∼ 100...240 V	2x20 kHz	7	Screw terminal	**TWDLCAE40DRF**
pending on ref. ⎓ 24 V	2x5 kHz	4	HE10 connectors	**TWDLMDA20D·K ***
sistor (0.3 A) ⎓ 24 V	2x20 kHz	7	Removable screw terminals	**TWDLMDA20DRT**
e depending on ref. ⎓ 24 V		7	HE10 connectors	**TWDLMDA40D·K ***

have one RS485 communication port with an optional 2nd serial port RS232 or RS485 (except base TWDLCAA10DRF).
L MDA20UDK) or by **T** for source transistor outputs (example: TWDLMDA20DTK)

	Number & type of outputs		References
	1 O 12 bits	Voltage: 0…10 V, Current: 4…20 mA	**TWDALM3LT**
	1 O 12 bits	Voltage: 0…10 V, Current: 4…20 mA	**TWDAMM3HT**
	-		**TWDAMI2HT**
	1 O 12 bits	Voltage: 0…10 V, Current: 4…20 mA	**TWDAMO1HT**
00 temperature resistance	-		**TWDAMI4LT**
	2 O 10 bits	Voltage: +/-10 V	**TWDAVO2HT**
	-		**TWDAMI8HT**
	PTC/NTC	-	**TWDARI8HT**

	Current per I/O	References
	7 mA	**TWDDDI8DT**
	7 mA	**TWDDDI16DT**
on ref.	0.1 A	**TWDDD08·T ***
	2 A	**TWDDRA8RT**
	2 A	**TWDDMM8RT**
	2 A	**TWDDRA16RT**
	7 mA	**TWDDAI8DT**
	5 mA	**TWDDDI16DK**
	5 mA	**TWDDDI32DK**
g on ref.	0.1 A	**TWDDD016·T ***
g on ref.	0.1 A	**TWDDD032·T ***
	2 A	**TWDDMM24DRF**

ce transistor outputs (example: TWDDD08TT)

TWDNOI10M3

Connection	References
	TWDNCO1M
	499TWD01100
MiniDIN type connector	**TWDNAC485D**
Screw terminals	**TWDNAC485T**
MiniDIN type connector	**TWDNAC232D**
MiniDIN type connector	**TWDNOZ485D**
Screw terminals	**TWDNOZ485T**
MiniDIN type connector	**TWDNOZ232D**

References
ABL7CEM24003
ABL7CEM24006
ABL7CEM24012

Separate components

Type	Compatibility	References
Digital display units	Compact bases	**TWDXCPODC**
	Modular bases (module with integrated display)	**TWDXCPODM**
Real-time clock cartridge	Compact and Modular bases: time stamping and programming	**TWDXCPRTC**
32 Kb memory cartridge	Compact and Modular bases: application backup and programme transfer	**TWDXCPMFK32**
64 Kb memory cartridge	Compact and Modular bases: application backup and programme transfer	**TWDXCPMFK34**

Twido Soft

Type		References
With cable	1 programming software (compatible with Windows 98SE, 2000 and XP), 1 documentation and 1 programming cable TSXPCX1031	**TWDSPU1001V10M**
	1 programming software (compatible with Windows 98SE, 2000 and XP),1 documentation and 1 programming cable TSXPCX3030	**TWD SPU1003V10M**
	1 programming software (compatible with Windows 98SE, 2000 and XP), 1 documentation and 1 Bluetooth connection equipment VW3 A8114	**TWD SPU1004V10M**
Without cable	1 programming software (compatible with Windows 98SE, 2000 and XP) and 1 documentation	**TWDSPU1002V10M**

Openness

**Monitor and control remotely
by communicating
on industrial networks**

Bluetooth

Ethernet

Modbus

CANopen

Flexibility

**Build the controller best suited
to your needs**

■ **Multiple assembly
possibilities**
commencing
with 13 compact
and modular base
models.

■ **Wide variety of
expansion modules
and options**
for keeping as close
as possible
to your needs.

Simplicity

Save time and improve reliability

Easy to cable
■ **Wide variety
of wiring methods:**
screw terminal and
HE10 connector solu-
tions, remote solutions
for locating I/O or other
controllers up to 200 m
away, new spring
terminals, AS-Interface
master solution,
Twido dedicated
Advantys Telefast
pre-wired solution.

Easy to integrate
■ **Extreme
compactness**
simplifies integration
in your installations.

Easy to assemble
■ **Assembly achieved
in a few clicks** when
adding expansions
or options.

The efficiency of Telemecanique branded *solutions*

The combining of Telemecanique products provides you with quality solutions for all Control and Automation functions of your applications.

Discover Twido
for your application
with the starter packs!

Included in each pack:
a product,
programming software,
e-training software.

- Twido Compact pack 10 I/O
TWDXDPPAK1F

- Twido Modular pack 20 I/O
TWDXDPPAK2F

Operator dialog — Software tools — Motion control — Networks & Communication — MODBUS Ethernet CANopen — Interfaces & I/O — Automation — Motor control — Detection — Power supplies — Mounting systems

A unique partner,
a worldwide presence

Constantly available
- More than 5,000 points of sale in 130 countries.
- You can be sure to find the range of products that meets your needs and complies fully with the standards in the country in which they will be used.

Technical assistance wherever you are
- Our technicians are at your disposal to assist you in finding the optimum solution for your particular needs.
- Schneider Electric provides you with all necessary technical assistance throughout the world.

Simply Smart!

ART. 802831

09/ 2004

DIA3ED1040705EN