Twido®
Programmable Controllers

Compact, simple and *connected!*

a brand of
Schneider
Electric

Telemecanique

Twido®:
The tailor-made small automation system controller

Designed for simple installations and small compact machines, Twido programmable controllers cover standard applications comprising 10 to 100 I/O (252 I/O maximum). Available in compact or modular versions, 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.
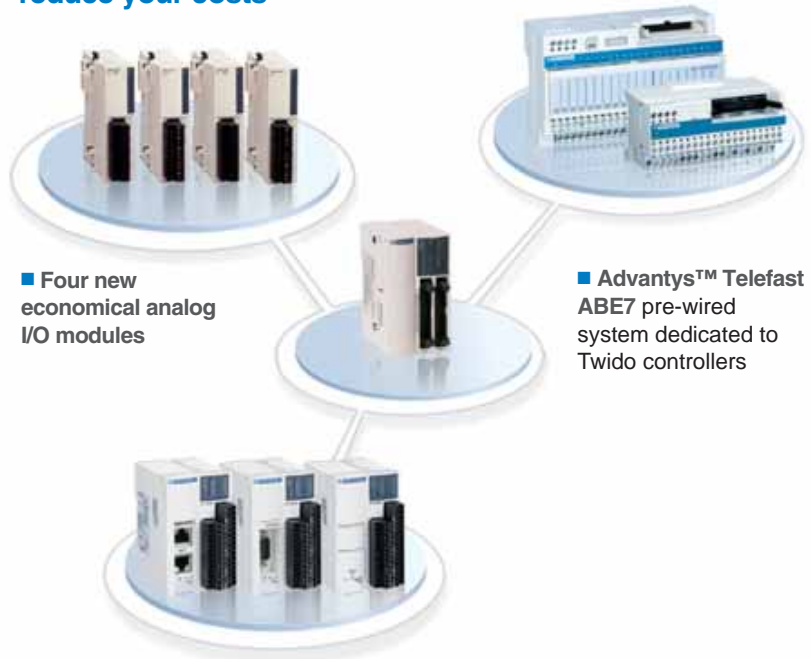
Wide range of Twido controller bases

Twido Compact

■ New 40 I/O bases with or without built-in Ethernet

■ Choice of supply voltage: 100…240 VAC or 19.2…30 VDC

■ Traditional screw terminal connections

Twido Modular

■ Very small footprint: imagine 40 I/O and an expansion module with 16 transistor I/Os just 18 mm (0.71 in.) wide!

■ Quick and reliable HE10 connection or removable terminal blocks

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

■ **Four new economical analog I/O modules**

■ **Advantys™ Telefast ABE7** pre-wired system dedicated to Twido controllers

■ Optimized and economical Advantys OTB IP20 distributed input/output system that shares the same range of I/O expansions as Twido controllers. Three communication base modules: Modbus® CANopen and Ethernet

2

More flexibility, simplicity and communications with Twido programmable controllers

Ethernet communications

- An optimized solution with a Compact 40 I/O CPU with built-in Ethernet
- An Ethernet bridge that enables connection of any Twido processor on Ethernet

Set-up and adjustment

- Adjustment tool on Pocket PC
- Enhanced online programming

Extended functions

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

Measurement and regulation

- Four new analog I/O modules
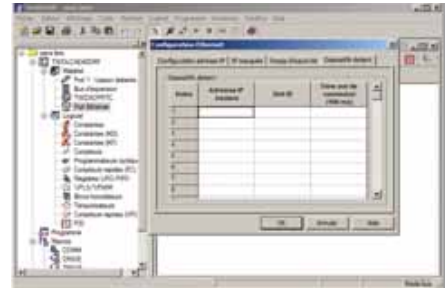- Addition of auto-tuning function on PID

CANopen master module

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

Programming connectivity

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

Counting

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

3

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 (1 A)
	40 with Ethernet	24 I ⎓ 24 V	14 O relay and 2 O source transistor (1 A)
Modular bases	20	12 I ⎓ 24 V	8 O transistor (0.3 A), sink or source dependin...
	20	12 I ⎓ 24 V	6 O relay (2 A) and 2 O source transistor
	40	24 I ⎓ 24 V	16 O transistor (0.3 A), sink or source depe...

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

Analog 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 NI100/1000 ter...
	-	
	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 on re...
	-	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 on r...
	-	32 O ⎓ 24 V sink or source transistor depending on r...
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 source tran...

| **AS-Interface master** | M3 profile master module (S-7.4 analog slaves not supported) | |

Communication

Type	Compatibility	Physical layer	Con...
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	Min...
	Compact bases, 16/24 I/O	RS485	Scre...
	Compact bases, 16/24 I/O	RS232C	Min...
Serial interface modules	Modular bases, 20/40 I/O	RS485	Min...
	Modular bases, 20/40 I/O	RS485	Scre...
	Modular bases, 20/40 I/O	RS232C	Min...

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

4

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
tor (1 A) ∿ 100...240 V	4x5 kHz	7	Screw terminal	TWDLCAA40DRF
tor (1 A) ∿ 100...240 V	2x20 kHz	7	Screw terminal	TWDLCAE40DRF
depending on ref. ⎓ 24 V	2x5 kHz	4	HE10 connectors	TWDLMDA20D•K *
ansistor (0.3 A) ⎓ 24 V		7	Removable screw terminals	TWDLMDA20DRT
rce depending on ref. ⎓ 24 V	2x20 kHz	7	HE10 connectors	TWDLMDA40D•K *

…es have one RS485 communication port with an optional 2nd serial port RS232 or RS485 (except base TWDLCAA10DRF).
…VDL 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
…1000 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
…ng 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
…ling on ref.	0.1 A	TWDDD016•T *
…ling on ref.	0.1 A	TWDDD032•T *
	2 A	TWDDMM24DRF

…ource 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 program transfer	TWDXCPMFK32
64 Kb memory cartridge	Compact and Modular bases: application backup and program transfer	TWDXCPMFK34

TwidoSoft™ software

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

5

Product synergy
for optimizing your costs

Twido controllers, in complete synergy with associated Telemecanique products, enable you to combine **compactness, performance, flexibility and connectivity.**

❶

Magelis® XBT-N compact display units

No power supply required
For easier connectivity

■ 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**

❷

Advantys OTB distributed I/O

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

Communication interface modules (with 20 I/O integrated)

■ CANopen **OTB1C0DM9LP**

■ Ethernet **OTB1E0DM9LP**

■ Modbus® **OTB1S0DM9LP**

❹

Altivar® 31 variable speed drive

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

■ ATV31H••• (refer to the ATV31 catalog)

Advantys Telefast pre-wired system

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

For Twido controller bases TWDLMDA•0DTK:

■ 12 I / 8 O **ABE7B20MPN20**

■ 12 I / 8 O 6 EM relay, 2 solid-state, (3 A) **ABE7B20MRM20**

■ Connecting cables:

ABFT26B0••*

For Twido I/O modules TWDDDI••DK

■ 16 I: **ABE7E16PN20**
For Twido I/O modules TWDDDO••K

■ 16 O: **ABE7E16SPN20**

■ 16 O with LED/channel and fuse/output channel: **ABE7E16SPN22**

■ 16 O, EM relay, 3 A: **ABE7E16SRM20**

■ Connecting cables: **ABE7FT20E0••***

❸

TeSys™ U-Line starter-controllers

Simplified communication
For power control!

TeSys U-Line communication modules

■ Modbus **LULCO31**

■ AS-Interface **ASILUFC5**

* 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.

6

Openness

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

Bluetooth

Flexibility

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

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

■ **Wide variety of
expansion modules
and options** to build a
system to closely
match your needs.

Simplicity

Save time and improve reliability

Easy to cable
■ **Wide variety of
wiring methods:**
screw terminal and
HE10 connector
solutions, remote
solutions for locating
I/O or other controllers
up to 200 m (656.17 ft.)
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.

7

The efficiency of Telemecanique® brand *solutions*

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

Discover Twido® solutions for your application – try these starter packs!

Included in each pack: a controller, programming software and serial cable, and e-training software.

■ Twido compact pack 10 I/O
TWDXDPPAK1E

■ Twido modular pack 20 I/O
TWDXDPPAK2E

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Owing to changes in standards and equipment, the characteristics given in the text and images in this document are not binding until they have been confirmed with us.

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