Twido®

Programmable Controllers

Compact, simple and *connected!*

a brand of Schneider Electric

Telemecanique

Simply Smart

More **ingenuity** and intelligence for continually improving **ease of use.**

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

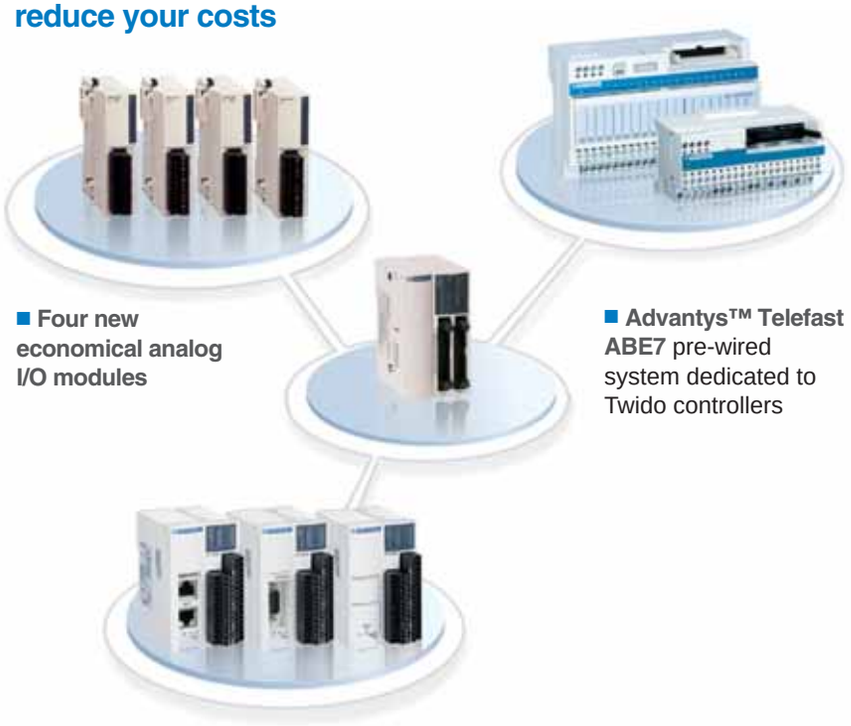
Twido Compact

- 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

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

Measurement and regulation

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

CANopen master module

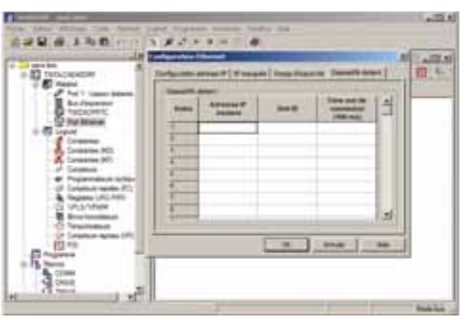
- Performance and openness for controlling equipment such as motor starters, drives, etc.

Set-up and adjustment

- Adjustment tool on Pocket PC
- Enhanced online programming

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 online
- New macros system for management of Modbus and CANopen slaves

Counting

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

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 depe
	20	12 I ⎓ 24 V	6 O relay (2 A) and 2 O source transis
	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 ha

* Replace the • by the letter **U** for sink transistor outputs (example: TWDL

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
	-	
	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 o
	-	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 source

AS-Interface master	M3 profile master module (S-7.4 analog 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**
(1 A)	~ 100...240 V	4x5 kHz	7	Screw terminal	**TWDLCAA40DRF**
(1 A)	~ 100...240 V	2x20 kHz	7	Screw terminal	**TWDLCAE40DRF**
ending on ref.	⎓ 24 V	2x5 kHz	4	HE10 connectors	**TWDLMDA20D•K ***
stor (0.3 A)	⎓ 24 V	2x20 kHz	7	Removable screw terminals	**TWDLMDA20DRT**
depending on ref.	⎓ 24 V		7	HE10 connectors	**TWDLMDA40D•K ***

ave one RS485 communication port with an optional 2nd serial port RS232 or RS485 (except base TWDLCAA10DRF).
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**
0 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**
on ref.	0.1 A	**TWDDD016•T ***
on ref.	0.1 A	**TWDDD032•T ***
	2 A	**TWDDMM24DRF**

e transistor outputs (example: TWDDD08TT)

TWDNOI10M3

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**

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**

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**

	References
	ABL7CEM24003
	ABL7CEM24006
	ABL7CEM24012

Product synergy for optimizing your costs

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

1 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

2 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

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••*

* 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.

3 TeSys™ U-Line starter-controllers

Simplified communication
For power control!

TeSys U-Line communication modules

- Modbus
  LULCO31
- AS-Interface
  ASILUFC5

4 Altivar® 31 variable speed drive

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

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

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.

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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