

Twido®
Programmable Controllers
Compact, simple and
connected!



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



Set-up and adjustment

- Adjustment tool on Pocket PC
- Enhanced online programming



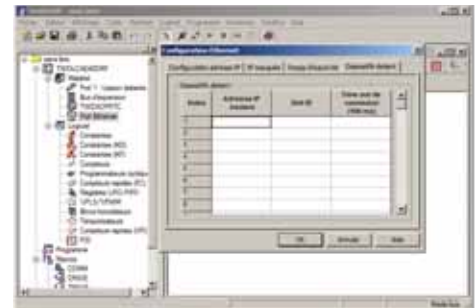
CANopen master module

- 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)



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 \equiv 24 V	4 O relay (2 A)
	16	9 I \equiv 4 V	7 O relay (2 A)
	24	14 I \equiv 24 V	10 O relay (2 A)
	10	6 I \equiv 24 V	4 O relay (2 A)
	16	9 I \equiv 24 V	7 O relay (2 A)
	24	14 I \equiv 24 V	10 O relay (2 A)
	40	24 I \equiv 24 V	14 O relay and 2 O source transistor
40 with Ethernet	24 I \equiv 24 V	14 O relay and 2 O source transistor	
Modular bases	20	12 I \equiv 24 V	8 O transistor (0.3 A), sink or source depending on configuration
	20	12 I \equiv 24 V	6 O relay (2 A) and 2 O source transistor
	40	24 I \equiv 24 V	16 O transistor (0.3 A), sink or source depending on configuration

(1) All the inputs are sink/source. All of these compact or modular bases have a 24 V supply.
* Replace the ● by the letter **U** for sink transistor outputs (example: TWDL).

Analog expansion modules

Type of connection	Number & type of inputs	Number & type of outputs
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 \equiv 24 V sink or source	-
	16 I \equiv 24 V sink or source	-
	-	8 O \equiv 24 V sink or source transistor depending on configuration
	4 I \equiv 24 V sink or source	4 O relay
	-	16 O relay
	8 I \sim 120 V sink or source	-
HE10 connectors	16 I \equiv 24 V sink or source	-
	32 I \equiv 24 V sink or source	-
	-	16 O \equiv 24 V sink or source transistor depending on configuration
	-	32 O \equiv 24 V sink or source transistor depending on configuration
Spring terminals	16 I \equiv 24 V sink or source	8 O relay
AS-Interface master	M3 profile master module (S-7.4 analog slaves not supported)	

* Replace the ● by the letter **U** for sink transistor outputs (example: TWDDD08UT) or by **T** for source transistor outputs (example: TWDDD08UT).

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
\sim 100...240 V, \equiv 110...220 V (compatible)	\equiv 24 V	15 W / 0.3 A
\sim 100...240 V, \equiv 110...220 V (compatible)	\equiv 24 V	15 W / 0.6 A
\sim 100...240 V, \equiv 110...220 V (compatible)	\equiv 24 V	15 W / 1.25 A

Power supply	Rapid counting	Number of possible expansions	Type of connection	References
~ 100...240 V	} 3x5 kHz } 1x20 kHz	-	Screw terminal	TWDLCAA10DRF
~ 100...240 V		-	Screw terminal	TWDLCAA16DRF
~ 100...240 V		4	Screw terminal	TWDLCAA24DRF
≡ 19,2...30 V		-	Screw terminal	TWDLCAA10DRF
≡ 19,2...30 V		-	Screw terminal	TWDLCAA16DRF
≡ 19,2...30 V		4	Screw terminal	TWDLCAA24DRF
(1 A) ~ 100...240 V	} 4x5 kHz } 2x20 kHz	7	Screw terminal	TWDLCAA40DRF
(1 A) ~ 100...240 V		7	Screw terminal	TWDLCAA40DRF
depending on ref.	} 2x5 kHz } 2x20 kHz	4	HE10 connectors	TWDLMDA20D•K *
source (0.3 A) ≡ 24 V		7	Removable screw terminals	TWDLMDA20DRT
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).
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
0 temperature resistance	1 O 12 bits	Voltage: 0...10 V, Current: 4...20 mA	TWDAMO1HT
	-		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
source 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)	TWDXCPDM
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		References
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

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**

4 Altivar® 31 variable speed drive

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

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

3 TeSys™ U-Line starter-controllers

Simplified communication
For power control!

TeSys U-Line communication modules

- Modbus **LULCO31**
- AS-Interface **ASILUFC5**

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.

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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Schneider Electric - North American Operating Division

1415 S. Roselle Road
Palatine, IL 60067
Tel: 847-397-2600
Fax: 847-925-7500

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