



Main

Range of Product	Twido
Product or Component Type	Modular base controller
Discrete I/O number	40
Discrete input number	24
Discrete input logic	Sink or source
Discrete input voltage	24 V
Discrete input voltage type	DC
Discrete output number	16 transistor source)
[Us] rated supply voltage	24 V DC
Maximum number of I/O expansion module	7
Free slots	2
Use of slot	32 K or 64 K memory cartridge and 1 realtime clock

Complementary

Input voltage limits	20.4...26.4 V
Discrete input current	5 MA I0.0 to I0.1 5 MA I0.6 to I0.7 7 MA I0.2 to I0.5 7 mA I0.8 to I0.23
Input impedance	4700 Ohm I0.2 to I0.5 4700 Ohm I0.8 to I0.23 5700 Ohm I0.0 to I0.1 5700 Ohm I0.6 to I0.7
Filter time	150 µs for I0.2 to I0.5 at state 0 150 µs for I0.8 to I0.23 at state 0 35 µs for I0.0 to I0.1 at state 1 35 µs for I0.6 to I0.7 at state 1 40 µs for I0.2 to I0.5 at state 1 40 µs for I0.8 to I0.23 at state 1 45 µs for I0.0 to I0.1 at state 0 45 µs for I0.6 to I0.7 at state 0
Insulation between channel and internal logic	1500 Vrms for 1 minute
Insulation resistance between channel	None
Discrete output voltage	24 V
Output voltage limits	20.4...28.8 V
Current per channel	0.36 A transistor output
Maximum current per output common	1 A transistor output
Response Time	300 µs for Q0.2 to Q0.15 at state 0 300 µs for Q0.2 to Q0.15 at state 1 5 µs for Q0.0 to Q0.1 at state 0 5 µs for Q0.0 to Q0.1 at state 1
[Ures] residual voltage	1 V at state 1
Maximum leakage current	0.1 mA
Output overvoltage protection	39 V
Maximum tungsten load	8 W
Discrete output current	300 mA
I/O connection	HE-10 connector
Maximum input/output number	152 removable screw terminal block with I/O expansion module 208 spring terminal block with I/O expansion module 264 HE-10 connector with I/O expansion module

Supply voltage limits	20.4...26.4 V
Protection type	Power protection internal fuse
Maximum power consumption in W	19 W base + 4 expansion module
Inrush current	1 A transistor output 50 A power supply
Insulation resistance	> 10 MOhm at 500 V, between I/O and earth terminals > 10 MOhm at 500 V, between supply and earth terminals
Program memory	3000 instructions 6000 instructions with 64 K memory cartridge
Exact time for 1 Kinstruction	1 ms
System overhead	0.5 ms
Memory description	Internal RAM, 128 counters, no floating, no trigonometrical Internal RAM, 128 timers, no floating, no trigonometrical Internal RAM, 256 internal bits, no floating, no trigonometrical Internal RAM, 3000 internal words, no floating, no trigonometrical Internal RAM, double words, no floating, no trigonometrical Internal RAM, floating, trigonometrical
Battery type	Lithium internal RAM 30 days 15 h 10 year(s)
Integrated connection type	Power supply Non isolated serial link mini DIN, Modbus/character mode master/slave RTU/ ASCII RS485) half duplex, 38.4 kbit/s
Counting input number	2 20000 Hz 32 bits 2 5000 Hz 16 bits
Positioning functions	PWM/PLS 2 7 kHz
Analogue input number	1
Analogue input range	0...10 V
Analogue input resolution	9 bits
Input impedance	100000 Ohm
Complementary function	Event processing PID
Analogue adjustment points	1 point adjustable from 0...1023
Status LED	ERR 1 LED STAT 1 LED PWR 1 LED Green) RUN 1 LED Green) I/O status 1 LED per channel
Net Weight	0.40 lb(US) (0.18 kg)

Environment

Immunity to microbreaks	10 ms
Dielectric strength	1500 V for 1 minute, between I/O and earth terminals 500 V for 1 minute, between supply and earth terminals
Product certifications	UL CSA
Marking	CE
Ambient Air Temperature for Storage	-13...158 °F (-25...70 °C)
Ambient Air Temperature for Operation	32...131 °F (0...55 °C)
Relative humidity	30...95 % without condensation
IP Degree of Protection	IP20
Operating altitude	0...6561.68 ft (0...2000 m)
Storage altitude	0.00...9842.52 ft (0...3000 m)
Vibration resistance	0.075 mm 10...57 Hz 35 mm symmetrical DIN rail 1 gn 57...150 Hz 35 mm symmetrical DIN rail 1.6 mm 2...25 Hz plate or panel with fixing kit 4 gn 25...100 Hz plate or panel with fixing kit
Shock resistance	15 gn 11 ms

Ordering and shipping details

Category	22531-PLCS, TWIDO, TWD
Discount Schedule	PC12
GTIN	3595862044714
Nbr. of units in pkg.	1
Package weight(Lbs)	9.91 oz (281.0 g)
Returnability	No
Country of origin	JP

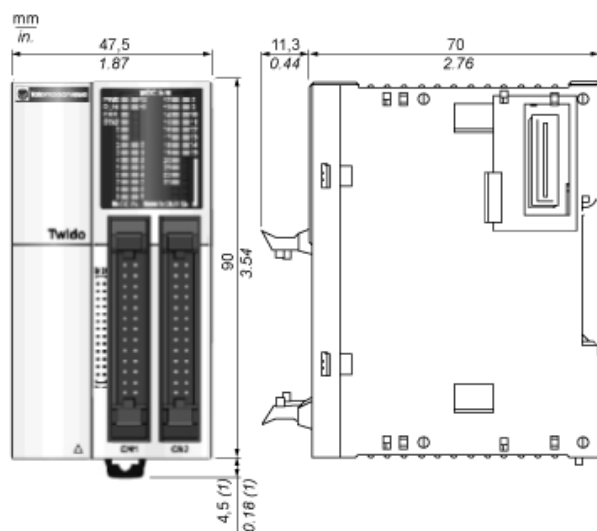
Packing Units

Unit Type of Package 1	PCE
Package 1 Height	2.95 in (7.5 cm)
Package 1 width	4.13 in (10.5 cm)
Package 1 Length	4.92 in (12.5 cm)
Unit Type of Package 2	S04
Number of Units in Package 2	30
Package 2 Weight	30.97 lb(US) (14.05 kg)
Package 2 Height	11.81 in (30 cm)
Package 2 width	15.75 in (40 cm)
Package 2 Length	23.62 in (60 cm)
Unit Type of Package 3	S01
Number of Units in Package 3	6
Package 3 Weight	4.32 lb(US) (1.959 kg)
Package 3 Height	5.91 in (15 cm)
Package 3 width	5.91 in (15 cm)
Package 3 Length	15.75 in (40 cm)

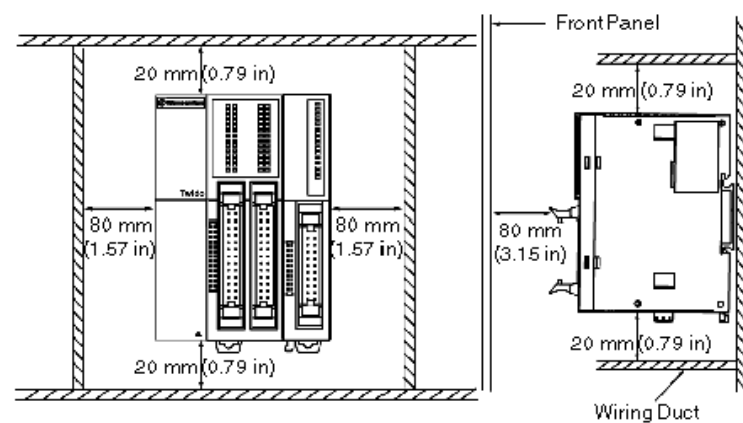
Contractual warranty

Warranty	18 months
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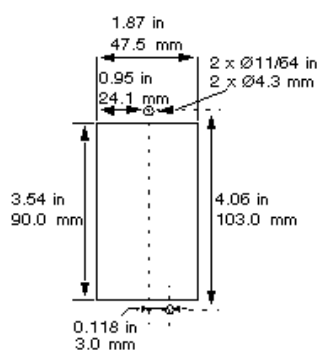
Dimensions



(1) 8.5 mm (0.33 in) when the clamp is pulled out.



Mounting Hole Layout



The figure contains two schematic diagrams of recording systems. The top diagram is for a two-channel system, and the bottom diagram is for a four-channel system. Both systems use two 8255 PPI chips (labeled C M1 and C M2) connected to an 8085 microprocessor. The power supply section at the bottom of each diagram shows a +5V and -5V regulator circuit.

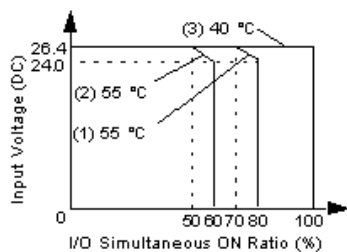
Two-channel system (top diagram):

- 8085 Microprocessor:**
 - Pin 1 (V_{CC}): +5V
 - Pin 16 (GND): -5V
 - Pin 40 (V_{CC}): +5V
 - Pin 20 (GND): -5V
- 8255 PPI Chip C M1:**
 - Pin 1 (A₀): 01
 - Pin 2 (A₁): 02
 - Pin 3 (A₂): 03
 - Pin 4 (A₃): 04
 - Pin 5 (A₄): 05
 - Pin 6 (A₅): 06
 - Pin 7 (A₆): 07
 - Pin 8 (A₇): 08
 - Pin 9 (A₈): 09
 - Pin 10 (A₉): 10
 - Pin 11 (A₁₀): 11
 - Pin 12 (A₁₁): 12
 - Pin 13 (A₁₂): 13
 - Pin 14 (A₁₃): 14
 - Pin 15 (A₁₄): 15
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 - Pin 19 (A₁₈): 19
 - Pin 20 (A₁₉): 20
 - Pin 21 (A₂₀): 21
 - Pin 22 (A₂₁): 22
 - Pin 23 (A₂₂): 23
 - Pin 24 (A₂₃): 24
 - Pin 25 (A₂₄): 25
 - Pin 26 (A₂₅): 26
 - Pin 27 (A₂₆): 27
 - Pin 28 (A₂₇): 28
 - Pin 29 (A₂₈): 29
 - Pin 30 (A₂₉): 30
 - Pin 31 (A₃₀): 31
 - Pin 32 (A₃₁): 32
 - Pin 33 (A₃₂): 33
 - Pin 34 (A₃₃): 34
 - Pin 35 (A₃₄): 35
 - Pin 36 (A₃₅): 36
 - Pin 37 (A₃₆): 37
 - Pin 38 (A₃₇): 38
 - Pin 39 (A₃₈): 39
 - Pin 40 (A₃₉): 40
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 - Pin 43 (A₄₂): 43
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 - Pin 150 (A₁₄₉): 150
 - Pin 151 (A₁₅₀): 151
 - Pin 152 (A₁₅₁): 152
 - Pin 153 (A₁₅₂): 153
 - Pin 154 (A₁₅₃): 154
 - Pin 155 (A₁₅₄): 155
 - Pin 156 (A₁₅₅): 156
 - Pin 157

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Performance Curves

I/O Usage Limits



- (1) Limit for TWDLMDA20DUK and TWDLMDA20DTK
- (2) Limit for TWDLMDA40DUK and TWDLMDA40DTK
- (3) All modular bases

Mouser Electronics

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