Product data sheet
Characteristics

TWDLMDA20DRT
extendable PLC base Twido 24 V - 12 I 24 V DC - 8 O solid state and relay

Product availability: Non-Stock - Not normally stocked in distribution facility

Main

Range of product	Twido
Product or component type	Modular base controller
Discrete I/O number	20
Discrete input number	12
Discrete input logic	Sink or source
Discrete input voltage	24 V
Discrete input voltage type	DC
Discrete output number	2 transistor source) 6 relay
[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 I0.11
Input impedance	4700 Ohm I0.2 to I0.5 4700 Ohm I0.8 to I0.11 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 I0.11 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 I0.11 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	2 A relay output 0.36 A transistor output
Maximum current per output common	1 A transistor output 8 A relay output
Response time	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
Surge current	5 A relay output
Discrete output current	300 mA
Minimum load	0.1 mA

Contact resistance	40000 µOhm
Load current	2 A 240 V AC inductive 30 cyc/mn relay output 2 A 240 V AC resistive 30 cyc/mn relay output 2 A 30 V DC inductive 30 cyc/mn relay output 2 A 30 V DC resistive 30 cyc/mn relay output
Mechanical durability	20000000 cycles relay output
Electrical durability	100000 cycles relay output
Current consumption	30 mA 5 V DC at state 1 40 mA 24 V DC at state 1 5 mA 5 V DC at state 0
I/O connection	Removable screw terminal block
Maximum input/output number	132 removable screw terminal block with I/O expansion module 188 spring terminal block with I/O expansion module 244 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 expension 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
CAD overall width	1.89 in (48 mm)
CAD overall height	3.74 in (95 mm)
CAD overall depth	2.76 in (70 mm)

Terminals description PLC n°1	(6)IN_DIS#6 (5)IN_DIS#5 (2)IN_DIS#2 (3)IN_DIS#3 TB_1 (9)IN_DIS#9 ALT (11)IN_DIS#11 (10)IN_DIS#10 (8)IN_DIS#8 (COM)COM_NEG#0-11 (7)IN_DIS#7 (0)IN_DIS#0 (4)IN_DIS#4 (1)IN_DIS#1
Terminals description PLC n°2	(11)IN_DIS#11 (5)IN_DIS#5 (4)IN_DIS#4 ALT_1 (1)IN_DIS#1 (2)IN_DIS#2 (9)IN_DIS#9 (7)IN_DIS#7 (6)IN_DIS#6 (8)IN_DIS#8 (10)IN_DIS#10 TB_1 (0)IN_DIS#0 (3)IN_DIS#3 (COM)COM_POS#0-11
Terminals description PLC n°3	(3)OUT_DIS#3 (1)OUT_DIS#1 (V-)PW_NEG TB_2 (4)OUT_DIS#4 (COM0)COM0_POS#0-1 (5)OUT_DIS#5 (7)OUT_DIS#7 (6)OUT_DIS#6 (0)OUT_DIS#0 (COM1)COM1#2-4 (2)OUT_DIS#2 (NC)UNUSED (COM2)COM2#5-6 (COM3)COM3#7
Product weight	0.41 lb(US) (0.185 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

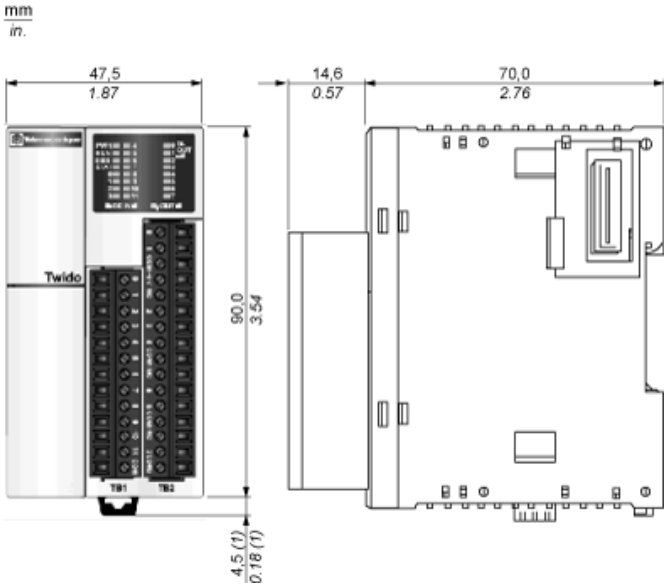
Ordering and shipping details

Category	22531 - PLCS, TWIDO, TWD
Discount Schedule	PC12
GTIN	00785901292487
Package weight(Lbs)	0.32 kg (0.71 lb(US))
Returnability	No
Country of origin	JP

Contractual warranty

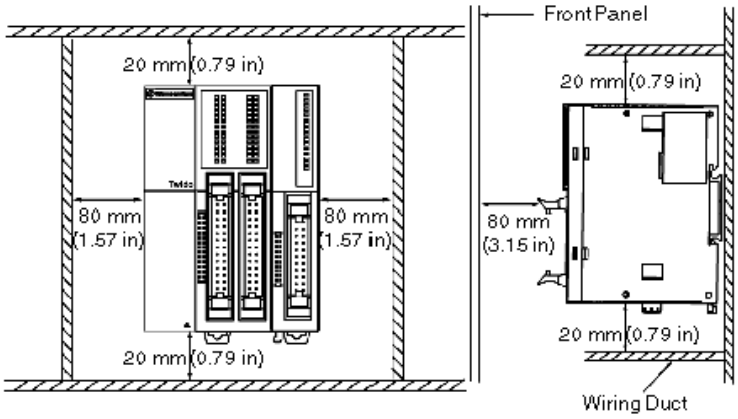
Warranty	18 months

Dimensions

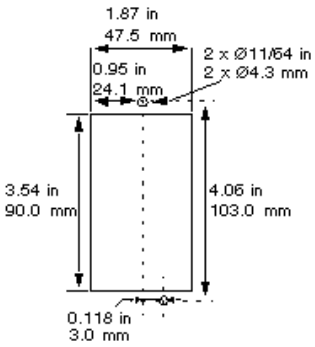


(1) 8.5 mm (0.33 in) when the clamp is pulled out.

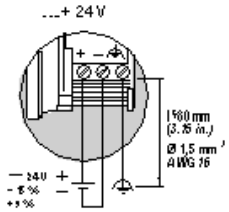
Minimum Clearances for a Modular Base and Expansion I/O Modules



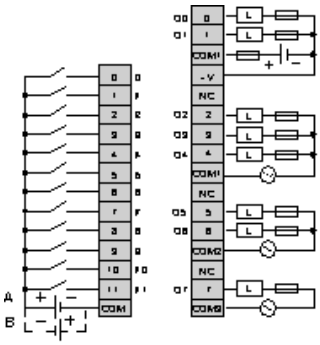
Mounting Hole Layout



DC Power Supply Wiring



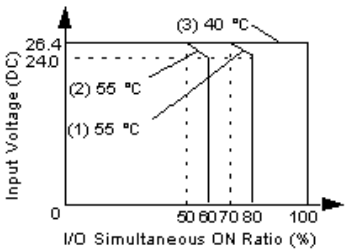
Wiring Diagram



A Positive logic.
B Negative logic.

Performance Curves

I/O Usage Limits



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