Product data sheet
Characteristics

TWDLMDA20DRT
Modular base controller, Twido, 24VDC supply, 20 discrete I/O, 19W, 9 bits resolution



⚠ End of Commercialisation

Commercial status
End of Commercialisation : DEC 31, 2016

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 for transistor (source) 6 for 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 for I0.0 to I0.1 5 MA for I0.6 to I0.7 7 MA for I0.2 to I0.5 7 MA for I0.8 to I0.11
Input impedance	4700 Ohm for I0.2 to I0.5 4700 Ohm for I0.8 to I0.11 5700 Ohm for I0.0 to I0.1 5700 Ohm for 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 for relay output 0.36 A for transistor output
Maximum current per output common	1 A for transistor output 8 A for 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 for relay output
Discrete output current	300 mA
Minimum load	0.1 MA
Contact resistance	40000 MOhm
Load current	2 A at 240 V AC inductive load, operating rate <30 cyc/mn for relay output 2 A at 240 V AC resistive load, operating rate <30 cyc/mn for relay output 2 A at 30 V DC inductive load, operating rate <30 cyc/mn for relay output 2 A at 30 V DC resistive load, operating rate <30 cyc/mn for relay output
Mechanical durability	20000000 Cycles for relay output
Electrical durability	100000 Cycles for relay output
Current consumption	30 mA at 5 V DC at state 1 40 mA at 24 V DC at state 1 5 mA at 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 by internal fuse
Maximum power consumption in W	19 W base + 4 expension module
Inrush current	1 A for transistor output 50 A for 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 battery for internal RAM, autonomy: 30 days, charging time = 15 h, battery life = 10 year(s)
Integrated connection type	Power supply Non isolated serial link mini DIN, Modbus/character mode master/slave RTU/ASCII (RS485) half d
Counting input number	2 counting input(s) at 20000 Hz 32 bits 2 counting input(s) at 5000 Hz 16 bits
Positioning functions	PWM/PLS 2 channel(s) at 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	1 LED ERR 1 LED STAT 1 LED (green) PWR 1 LED (green) RUN 1 LED per channel I/O status
CAD overall width	48 Mm
CAD overall height	95 Mm
CAD overall depth	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
Net weight	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[RETURN]CSA
Marking	CE
Ambient air temperature for storage	-25…70 °C
Ambient air temperature for operation	0…55 °C
Relative humidity	30…95 % without condensation
IP degree of protection	IP20
Operating altitude	0...2000 m
Storage altitude	0…3000 M
Vibration resistance	0.075 mm at 10…57 Hz on 35 mm symmetrical DIN rail 1 gn at 57…150 Hz on 35 mm symmetrical DIN rail 1.6 mm at 2…25 Hz on plate or panel with fixing kit 4 gn at 25…100 Hz on plate or panel with fixing kit
Shock resistance	15 gn for 11 ms

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	7.5 Cm
Package 1 Width	10.5 Cm
Package 1 Length	13 Cm
Package 1 Weight	400 G
Unit Type of Package 2	S01
Number of Units in Package 2	6
Package 2 Height	15 Cm
Package 2 Width	15 Cm
Package 2 Length	40 Cm
Package 2 Weight	2.201 Kg

Offer Sustainability

Sustainable packaging	No

Contractual warranty

Warranty (in months)	18

Product Life Status : Post commercialisation

TWDLMDA20DRT may be replaced by any of the following products:



TM221M16R

logic controller, Modicon M221, 16 IO, relay

Qty 1

Substitution date: |



TM3DI8

discrete input module, Modicon TM3, 8 inputs, screw, 24V DC

Qty 1

Substitution date: |



TM221M16T

logic controller, Modicon M221, 16 IO, 8 DI, 8 DO, transistor, PNP

Qty 1

Substitution date: |



TM3DI8

discrete input module, Modicon TM3, 8 inputs, screw, 24V DC

Qty 1

Substitution date: |



TM221M16T

logic controller, Modicon M221, 16 IO, 8 DI, 8 DO, transistor, PNP

Qty 1

Substitution date: |