TWDLCAA24DRF
extendable PLC base Twido - 100..240 V AC supply - 14 I 24 V DC - 10 O relay

Commercial status

Discontinued on: 31 December 2016

To be end-of-service on: 31 December 2021

⊘ Restricted Sales for Services

Main

Range of product	Twido
Product or component type	Compact base controller
Discrete I/O number	24
Discrete input number	14
Discrete input voltage	24 V
Discrete input voltage type	DC
Discrete output number	10 for relay
[Us] rated supply voltage	100...240 V AC
Maximum number of I/O expansion module	4
Use of slot	Memory cartridge or realtime clock cartridge
Data backed up	Internal RAM lithium, 30 days autonomy, charging time: 10 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 duplex, 38.4 kbit/s Serial link interface adaptor (RS232C/RS485)
Complementary function	Event processing PID

Complementary

Discrete input logic	Sink or source
Input voltage limits	20.4...28.8 V
Discrete input current	11 mA for I0.0 to I0.1 7 mA for I0.2 to I0.13
Input impedance	2100 Ohm for I0.0 to I0.1 3400 Ohm for I0.2 to I0.13
Filter time	150 µs + programmed filter time for I0.6 to I0.13 at state 0 35 µs + programmed filter time for I0.0 to I0.5 at state 1 40 µs + programmed filter time for I0.6 to I0.13 at state 1 45 µs + programmed filter time for I0.0 to I0.5 at state 0
Insulation between channel and internal logic	1500 Vrms for 1 minute
Insulation resistance between channel	None
Minimum load	0.1 mA

Contact resistance	30000 µOhm
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	36 mA at 5 V DC at state 1 5 mA at 5 V DC at state 0 55 mA at 24 V DC at state 1
I/O connection	Non-removable screw terminal block
Maximum input/output number	120 spring terminal block with I/O expansion module 152 HE-10 connector with I/O expansion module 88 removable screw terminal block with I/O expansion module
Network frequency	50/60 Hz
Supply voltage limits	85…264 V
Network frequency limits	47…63 Hz
Power supply output current	0.25 A for 24 V DC sensors
Input current	450 mA
Inrush current	40 A
Protection type	Power protection by internal fuse
Power consumption in VA	33 VA at 100 V 40 VA at 264 V
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
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
Free slots	1
Realtime clock	Without clock
Counting input number	1 counting input(s) at 20000 Hz 32 bits 3 counting input(s) at 5000 Hz 16 bits
Analogue adjustment points	1 point adjustable from 0 to 511 points 1 point adjustable from 0...1023
Status LED	1 LED (green)PWR 1 LED (green)RUN 1 LED per channel (green)I/O status 1 LED (red)module error (ERR) 1 LEDuser pilot light (STAT)
Depth	70 mm
Height	95 mm
Width	90 mm
Terminals description PLC n°1	(6)IN_DIS#6 COM_NEG#0-13 (-)PW_OUT_NEG (4)IN_DIS#4 ALT (0)IN_DIS#0 (13)IN_DIS#13 (5)IN_DIS#5 (8)IN_DIS#8 (10)IN_DIS#10 (11)IN_DIS#11 TB_TOP (+)PW_OUT_POS (9)IN_DIS#9 (3)IN_DIS#3 (7)IN_DIS#7

	(12)IN_DIS#12
	(1)IN_DIS#1
	(2)IN_DIS#2
Terminals description PLC n°2	(11)IN_DIS#10
	(9)IN_DIS#9
	(2)IN_DIS#2
	(1)IN_DIS#1
	(7)IN_DIS#7
	(3)IN_DIS#3
	(8)IN_DIS#8
	(+)PW_OUT_POS
	ALT_1
	COM_POS#0-13
	(12)IN_DIS#12
	(-)PW_OUT_NEG
	(4)IN_DIS#4
	(13)IN_DIS#13
	TB_TOP
	(6)IN_DIS#6
	(10)IN_DIS#10
	(0)IN_DIS#0
	(5)IN_DIS#5
Terminals description PLC n°3	(COM0)COM#0-3
	(9)OUT_DIS#9
	(7)OUT_DIS#7
	(3)OUT_DIS#3
	(1)OUT_DIS#1
	(GND)GROUND
	(6)OUT_DIS#6
	(-)PW_NEG
	(COM2)COM#8
	TB_BOTTOM
	(COM1)COM#4-7
	(8)OUT_DIS#8
	(COM3)COM#9
	(5)OUT_DIS#5
	(4)OUT_DIS#4
	(2)OUT_DIS#2
	(0)OUT_DIS#0
	(+)PW_POS
Net weight	0.305 kg

Environment

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Immunity to microbreaks	10 ms
Dielectric strength	1500 V for 1 minute, between I/O and earth terminals 1500 V for 1 minute, between supply and earth terminals
Product certifications	UL CSA
Marking	CE
Ambient air temperature for operation	0…55 °C
Ambient air temperature for storage	-25…70 °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

Package 1 Weight	0.443 kg
Package 1 Height	105.000 mm
Package 1 width	120.000 mm

Package 1 Length	125.000 mm

Contractual warranty

Warranty	18 months

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TWDLCAA24DRF
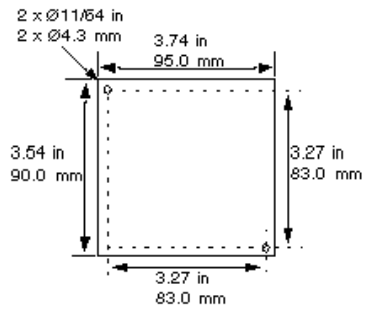
Dimensions
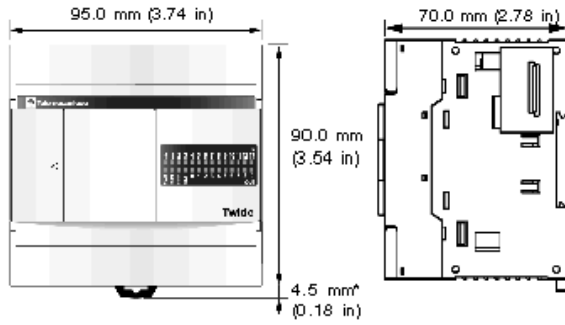
*   8.5 mm (0.33 in) when the clamp is pulled out.

Minimum Clearances for a Compact Base and Expansion I/O Modules
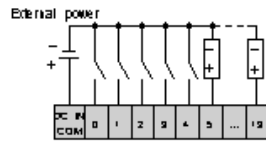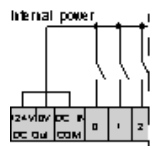
Mounting Hole Layout

2 x Ø11/64 in
2 x Ø4.3 mm

3.74 in
95.0 mm

3.54 in
90.0 mm

3.27 in
83.0 mm

3.27 in
83.0 mm
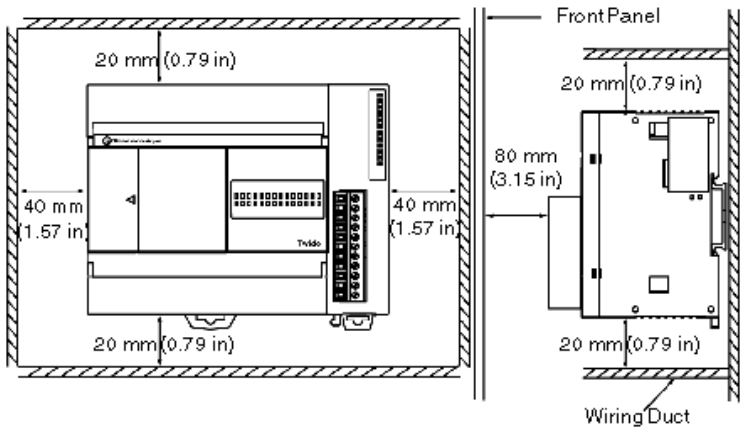
AC Power Supply Wiring Diagram
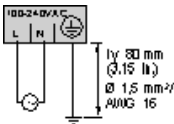
DC Source Inputs Wiring Diagrams

External Power

Internal Power

Max current: 250mA.
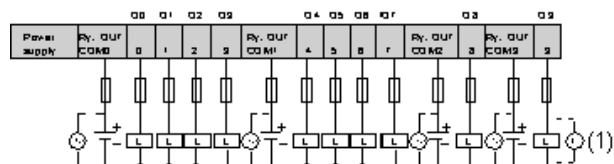
DC Sink Inputs Wiring Diagrams

External Power
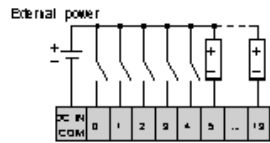
Internal Power
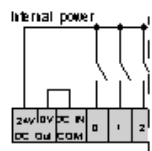
Max current: 250mA.

TWDLCAA24DRF

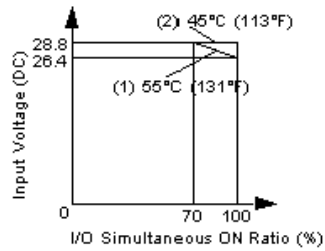## Relay and Transistor Outputs Wiring Diagram

Performance Curves

I/O Usage Limits

(1)   Limit for TWDLC•AA16DRF, TWDLC•A24DRF, TWDLCA•40DRF and TWDLD•40DRF
(2)   All compact bases

TWDLCAA24DRF is replaced by the following group of products:

Logic Controllers TM241C24R

Logic controller, Modicon M241, 24 IO relay

Qty 1

Digital I/Os TM3DM8R

Discrete I/O module, Modicon TM3, 8 IO (4 inputs, 4 relay outputs, screw) 24 VDC

Qty 1

Or TWDLCAA24DRF is replaced by:

Logic Controllers TM221C24R

Logic controller, Modicon M221, 24 IO relay

Qty 1