



### 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	10
Discrete input number	6
Discrete input voltage	24 V
Discrete input voltage type	DC
Discrete output number	4 for relay
[Us] rated supply voltage	24 V DC
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

### 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 I0.5
Input impedance	2100 Ohm for I0.0 to I0.1 3400 Ohm for I0.2 to I0.5
Filter time	35 μs + programmed filter time for I0.0 to I0.5 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

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Electrical durability	100000 cycles for relay output
Current consumption	24 mA at 5 V DC at state 1 26 mA at 24 V DC at state 1 5 mA at 5 V DC at state 0
I/O connection	Non-removable screw terminal block
Supply voltage limits	20.4...28.8 V
Inrush current	35 A
Protection type	Power protection by internal fuse
Maximum power consumption in W	3.9 W
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	700 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 internal bits, no floating, no trigonometrical Internal RAM, 3000 internal words, no floating, no trigonometrical Internal RAM, 64 timers, 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...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
Net weight	0.23 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	CSA UL
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	0.354 kg
Package 1 Height	105.000 mm
Package 1 width	110.000 mm
Package 1 Length	125.000 mm

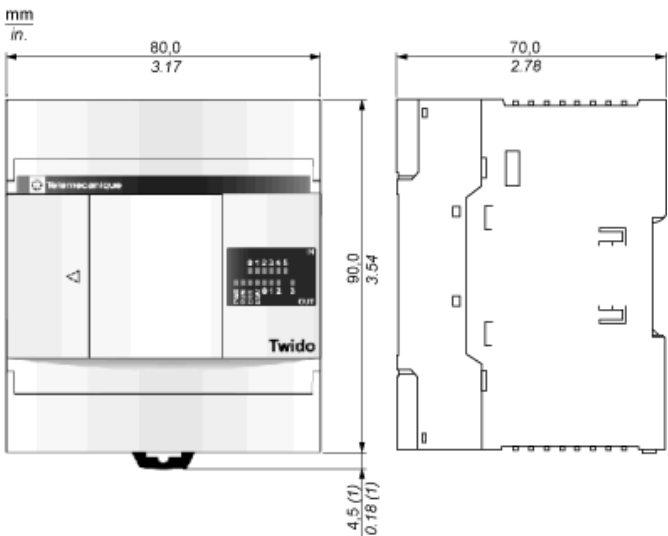
## Contractual warranty

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Warranty	18 months
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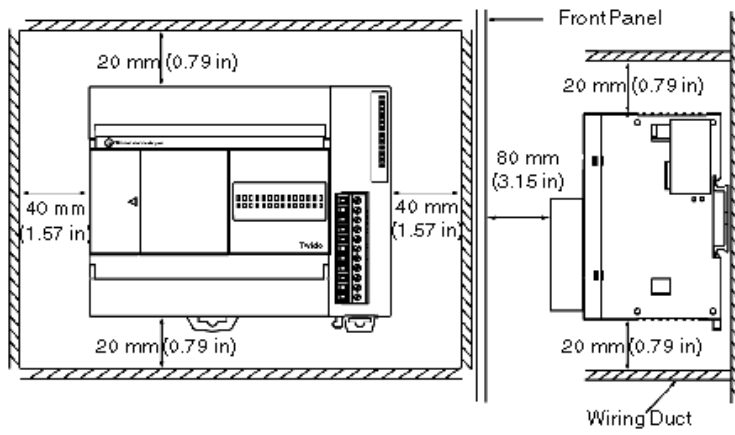
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Dimensions

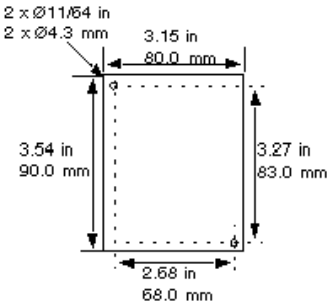


(1) 8.5 mm (0.33 in) when the clamp is pulled out.

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



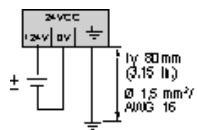
Mounting Hole Layout



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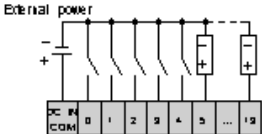
## DC Power Supply Wiring Diagram

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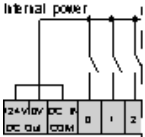


DC Source Inputs Wiring Diagrams

External Power



Internal Power

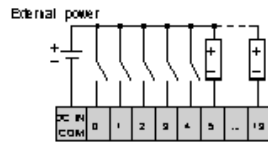


Max current: 250mA.

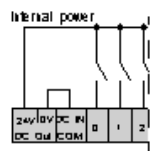


## DC Sink Inputs Wiring Diagrams

### External Power

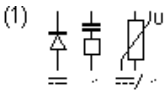
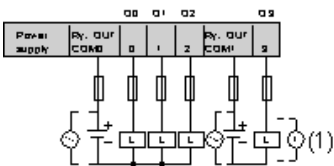


### Internal Power



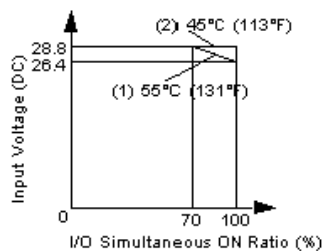
Max current: 250mA.

Relay and Transistor Outputs Wiring Diagram



## Performance Curves

### I/O Usage Limits



- (1) Limit for TWDLCA10DRF, TWDLCA16DRF, TWDLCA24DRF, TWDLCA40DRF and TWDLCA40DRF
- (2) All compact bases

TWDLCA10DRF may be replaced by any of the following products:



Logic Controllers TM221M16R  
Logic controller, Modicon M221, 16 IO relay  
Qty 1



Logic Controllers TM221C16R  
Logic controller, Modicon M221, 16 inputs/outputs, 7 relay outputs, 100...240 V AC  
Qty 1