

## 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	40
Discrete input number	24
Discrete input voltage	24 V
Discrete input voltage type	DC
Discrete output number	14 for relay 2 for transistor
[Us] rated supply voltage	24 V DC
Maximum number of I/O expansion module	7
Use of slot	Memory 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	PID Event processing

## Complementary

Discrete input logic	Sink or source
Input voltage limits	20.4...26.4 V
Discrete input current	11 mA for I0.0 to I0.1 11 mA for I0.6 to I0.7 7 mA for I0.2 to I0.5 7 mA for I0.8 to I0.23
Input impedance	2100 Ohm for I0.0 to I0.1 2100 Ohm for I0.6 to I0.7 3400 Ohm for I0.2 to I0.5 3400 Ohm for I0.8 to I0.23
Filter time	150 µs + programmed filter time for I0.6 to I0.23 at state 0 35 µs + programmed filter time for I0.0 to I0.5 at state 1 40 µs + programmed filter time for I0.0 to I0.5 at state 0 40 µs + programmed filter time for I0.6 to I0.23 at state 1

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	128 mA at 24 V DC at state 1 128 mA at 24 V DC state 1 + input ON 140 mA at 5 V DC state 1 + input ON 5 mA at 24 V DC at state 0 70 mA at 5 V DC at state 0 90 mA at 5 V DC at state 1
I/O connection	Non-removable screw terminal block
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...28.8 V
Inrush current	35 A
Protection type	Power protection by internal fuse
Maximum power consumption in W	17.2 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	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 Internal RAM, floating, trigonometrical
Free slots	1
Realtime clock	With clock, clock drift <= 30 s/month, operating time: 30 days
Positioning functions	PWM/PLS 2 channel(s) at 7 kHz
Counting input number	2 counting input(s) at 20000 Hz 32 bits 4 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
Net weight	0.525 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

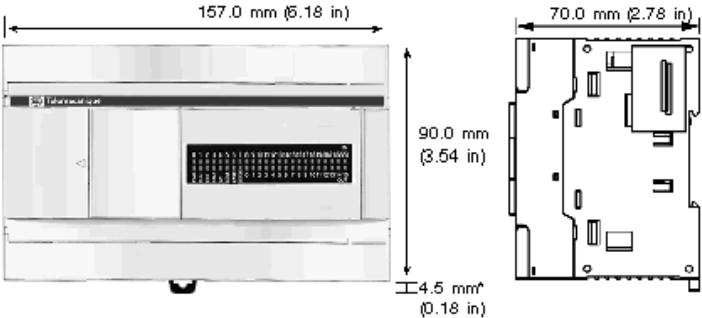
### Packing Units

Package 1 Weight	0.699 kg
Package 1 Height	105.000 mm
Package 1 width	120.000 mm
Package 1 Length	185.000 mm

### Contractual warranty

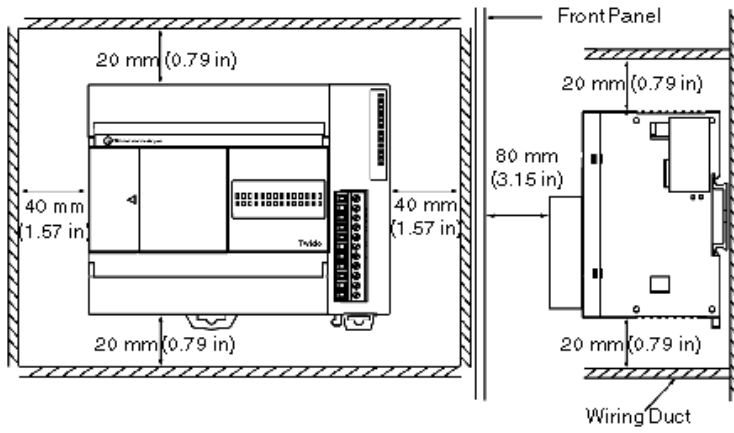
Warranty	18 months
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Dimensions

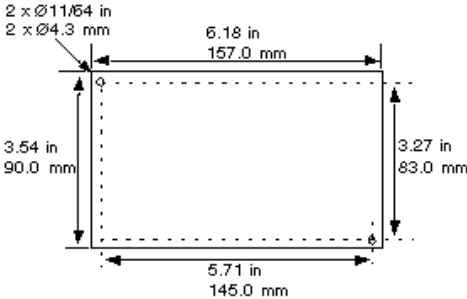


\* 8.5 mm (0.33 in) when the clamp is pulled out.

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



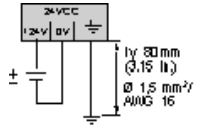
Mounting Hole Layout



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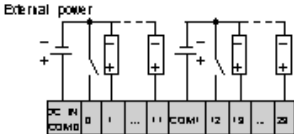
## DC Power Supply Wiring Diagram

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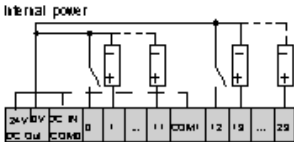


DC Source Inputs Wiring Diagrams

External Power



Internal Power

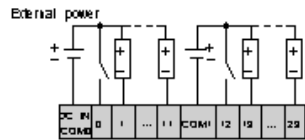


Max current: 400mA.

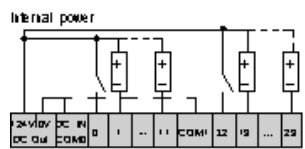


## DC Sink Inputs Wiring Diagrams

### External Power

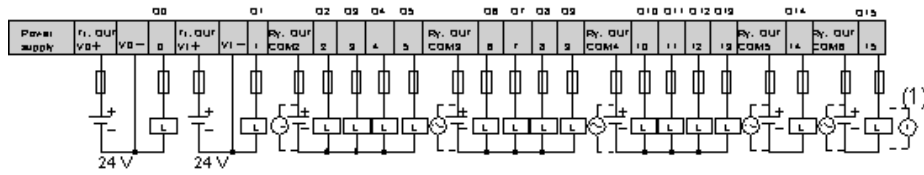


### Internal Power



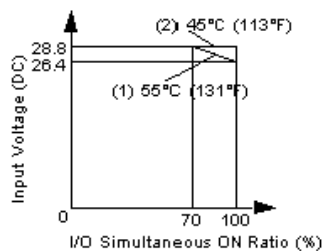
Max current: 400mA.

Relay and Transistor Outputs Wiring Diagram



## Performance Curves

### I/O Usage Limits



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

TWDLCA40DRF is replaced by the following group of products:



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



Digital I/Os TM3DM24R  
Discrete I/O module, Modicon TM3, 24 IO (16 inputs, 8 relay outputs, screw) 24 VDC  
Qty 1

Or TWDLCA40DRF is replaced by:



Logic Controllers TM221C40T  
Logic controller, Modicon M221, 40 IO transistor PNP  
Qty 1