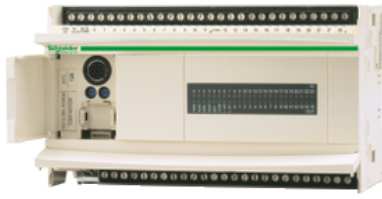


# Product data sheet

Specifications



Compact base controller, Twido, 24VDC supply, compact, 24 inputs with 24VDC, 16 output relays, transparent ready

TWDLCE40DRF

⚠ Discontinued - Service only

⚠ Discontinued on: 31 December 2016

⚠ End-of-service on: 31 December 2021

## Main

Range of product	Twido
Product or component type	Compact base controller
Concept	Transparent Ready
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) Ethernet TCP/IP RJ45, , 10/100 Mbit/s, 1 twisted pair transparent ready class A10
Complementary function	Event processing PID

## 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

<b>Insulation between channel and internal logic</b>	1500 Vrms for 1 minute
<b>Insulation resistance between channel</b>	None
<b>Minimum load</b>	0.1 mA
<b>Contact resistance</b>	30000 µOhm
<b>Load current</b>	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
<b>Mechanical durability</b>	20000000 cycles for relay output
<b>Electrical durability</b>	100000 cycles for relay output
<b>Current consumption</b>	128 mA at 24 V DC at state 1 128 mA at 24 V DC state 1 + input ON 170 mA at 5 V DC at state 0 240 mA at 5 V DC state 1 + input ON 5 mA at 24 V DC at state 0 90 mA at 5 V DC at state 1
<b>I/O connection</b>	Non-removable screw terminal block
<b>Maximum input/output number</b>	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
<b>Supply voltage limits</b>	20.4...28.8 V
<b>Inrush current</b>	35 A
<b>Protection type</b>	Power protection by internal fuse
<b>Power consumption in W</b>	17.2 W
<b>Insulation resistance</b>	> 10 MOhm at 500 V, between I/O and earth terminals > 10 MOhm at 500 V, between supply and earth terminals
<b>Program memory</b>	3000 instructions
<b>Exact time for 1 Kinstruction</b>	1 ms
<b>System overhead</b>	0.5 ms
<b>Memory description</b>	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
<b>Free slots</b>	1
<b>Realtime clock</b>	With clock, clock drift <= 30 s/month, operating time: 30 days
<b>Port Ethernet</b>	10BASE-T/100BASE-TX
<b>Communication service</b>	BOOTP client, Ethernet TCP/IP Modbus messaging, Ethernet TCP/IP
<b>Positioning functions</b>	PWM/PLS 2 channel(s) at 7 kHz
<b>Counting input number</b>	2 counting input(s) at 20000 Hz 32 bits 4 counting input(s) at 5000 Hz 16 bits
<b>Analogue adjustment points</b>	1 point adjustable from 0 to 511 points 1 point adjustable from 0...1023
<b>Status LED</b>	1 LED (green) PWR 1 LED (green) RUN 1 LED per channel (green) I/O status 1 LED (red) module error (ERR) 1 LED user pilot light (STAT) 1 LED 10 or 100 Mbit/s rate (LACT) 1 LED Ethernet status (LAN ST)
<b>Depth</b>	70 mm
<b>Height</b>	95 mm
<b>Width</b>	90 mm

Net weight	0.525 kg
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## 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 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

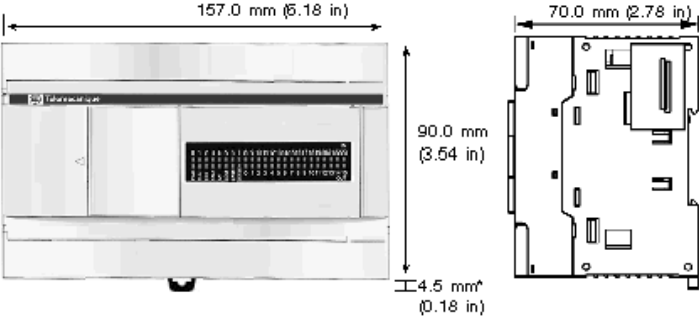
## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	10.5 cm
Package 1 Width	12.0 cm
Package 1 Length	18.0 cm
Package 1 Weight	712.0 g

## Contractual warranty

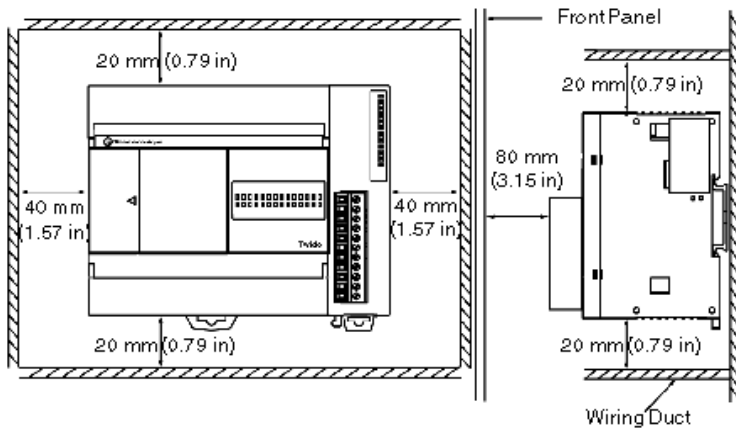
Warranty	18 months
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Dimensions



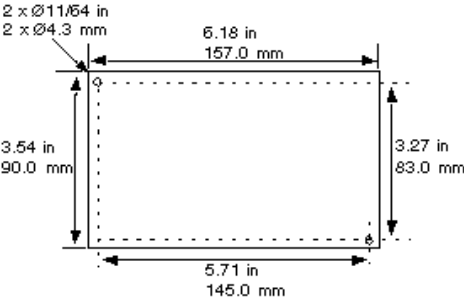
\* 8.5 mm (0.33 in) when the clamp is pulled out.

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



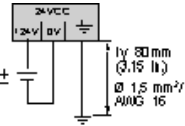
Mounting Hole Layout

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DC Power Supply Wiring Diagram

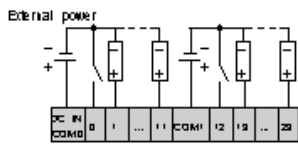
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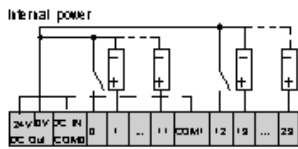
## DC Source Inputs Wiring Diagrams

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### External Power



### Internal Power



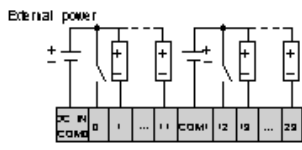
Max current: 400mA.



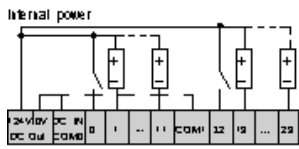
DC Sink Inputs Wiring Diagrams

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External Power

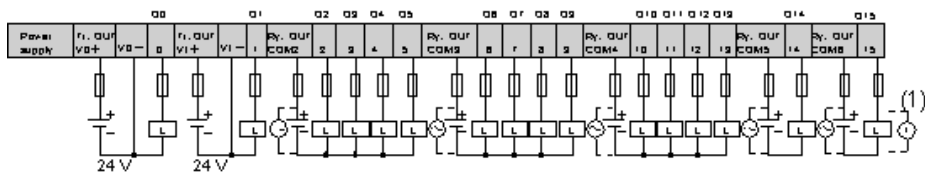


Internal Power



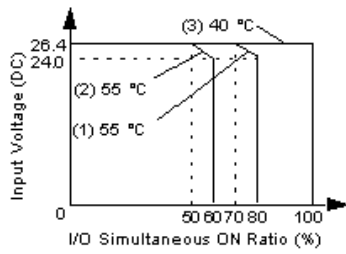
Max current: 400mA.

**Relay and Transistor Outputs Wiring Diagram**



**Performance Curves**



**I/O Usage Limits**





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

**Recommended replacement(s)**

TWDL CDE40DRF is replaced by the following group of products:

1x		Logic controller, Modicon M221, 16 IO relay Ethernet TM221CE16R
1x		Discrete I/O module, Modicon TM3, 24 IO (16 inputs, 8 relay outputs, screw) 24 VDC TM3DM24R

Or TWDL CDE40DRF is replaced by the following group of products:

1x		Logic controller, Modicon M221, 16 IO relay Ethernet TM221ME16R
1x		Discrete I/O module, Modicon TM3, 24 IO (16 inputs, 8 relay outputs, screw) 24 VDC TM3DM24R