

Schneider Series Service Manual

TWDLCAA40DRF

1. Description

TWDLCAA40DRF

3. Product Information

TWDLCAA40DRF | Schneider Electric | Compact Base Controller

Manufacturer : Schneider Electric

Product No. : TWDLCAA40DRF

Product 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

[Us] rated supply voltage : 100...240 V AC

Maximum number of I/O expansion module : 7

Use of slot : Memory cartridge

Data backed up : Internal RAM external battery TSXPLP01, 3 years autonomy

Discrete input logic : Sink or source

Input voltage limits : 20.4...26.4 V

I/O connection : Non-removable screw terminal block

Maximum input/output number : 152 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 : 0.4 A for 24 V DC sensors

Input current : 790 mA

Inrush current : 35 A

Protection type : Power protection by internal fuse

Power consumption in VA : 65 VA at 100 V, 77 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

Dimensions (L x W x H) : 7 cm x 9 cm x 9.5 cm

Weight : 0.525 Kg

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 relay

2 transistor

[Us] rated supply voltage 100...240 V AC

Number of I/O expansion module 7

Use of slot Memory cartridge

Data backed up Internal RAM (external battery TSXPLP01) 3 years

Integrated connection type Power supply

Serial link interface adaptor (RS232C/RS485)

Non isolated serial link mini DIN,

Modbus/character mode master/slave RTU/ASCII

(RS485) half duplex, 38.4 kbit/s

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 μ s + programmed filter time for I0.6 to I0.23 at state 0

35 μ s + programmed filter time for I0.0 to I0.5 at state 1

40 μ s + programmed filter time for I0.0 to I0.5 at state 0

40 μ s + 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 $\leq$ 30000 μ Ohm

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 $\geq$ 20000000 cycles relay output

Electrical durability $\geq$ 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

Input/output number $\leq$ 152 with removable screw terminal block with I/O expansion module

$\leq$ 208 with spring terminal block with I/O expansion module

$\leq$ 264 with HE-10 connector 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 0.4 A for 24 V DC sensors

Input current 790 mA

Inrush current $\leq$ 35 A

Protection type Power protection with internal fuse

Power consumption in VA 65 VA at 100 V

77 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

Internal RAM, floating, trigonometrical

Free slots 1

Realtime clock With, drift: $\leq$ 30 s/month, operating time: 30 days

Positioning functions PWM/PLS 2 channel(s) at 7 kHz

Counting input number 2 channel(s) at 20000 Hz 32 bits

4 channel(s) at 5000 Hz 16 bits

Analogue adjustment points 1 point adjustable from 0...1023

1 point adjustable from 0 to 511 points

Status LED 1 LED user pilot light (STAT)

1 LED green PWR

1 LED green RUN

1 LED per channel green I/O status

1 LED red module error (ERR)

Depth 2.76 in (70 mm)

Height 3.74 in (95 mm)

Width 3.54 in (90 mm)

Product weight 1.16 lb(US) (0.525 kg)

Environment

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 CSA

UL

marking CE

ambient air temperature for operation 32...131 °F (0...55 °C)

ambient air temperature for storage -13...158 °F (-25...70 °C)

relative humidity 30...95 % without condensation

IP degree of protection IP20

operating altitude 0...6561.68 ft (0...2000 m)

storage altitude 0...9842.52 ft (0...3000 m)

vibration resistance 0.075 mm, 10...57 Hz mounting on: 35 mm symmetrical DIN rail

1 gn, 57...150 Hz mounting on: 35 mm symmetrical DIN rail

1.6 mm, 2...25 Hz mounting on: plate or panel with fixing kit

4 gn, 25...100 Hz mounting on: plate or panel with fixing kit

shock resistance 15 gn 11 ms