

Schneider Series Service Manual

170AEC92000

1. Description

The 170AEC92000 part from Schneider Electric's Modicon series is a versatile module featuring essential functionality for reliable performance. It is certified by UL and CSA standards, ensuring compliance with safety requirements.

2. Specifications

Specification	Value
Manufacturer	Schneider Electric
Product	Line Modicon
Part	Number 170AEC92000
Weight	1.00 lbs (0.45 kg)
Product	Certifications UL, CSA
Protective	Treatment TC (Tropicalization Protection)
Input	Overvoltage Protection 45V for 10 seconds
Voltage	State 1 (Guaranteed ON) ≥ 11V
Voltage	State 0 (Guaranteed OFF) ≤ 5V
Current	State 1 (Guaranteed ON) ≥ 2.5 mA
Current	State 0 (Guaranteed OFF) ≤ 1.2 mA
Discrete	Output Logic Positive
Discrete	Output Voltage 24V DC
Number	of Counters 2
Discrete	Input Number 6
Discrete	Output Number 4
Range	of Product
Modicon	Momentum automation platform
Product	or Component Type
High	speed counter module base
Group	of channels
2	groups of 3 discrete inputs
2	groups of 2 discrete outputs
Number	of counter
2	
Discrete	input number
6	
Discrete	output number
4	
Complementary	
Discrete	input logic
Positive	
Discrete	input voltage
-	3...30 V DC
24	V DC
Input	overvoltage protection
45	V 10 s
Voltage	state 1 guaranteed
>=	11 V
Voltage	state 0 guaranteed
<=	5 V
Current	state 1 gu

3. Product Information

The 170AEC92000 part from Schneider Electric's Modicon series is a versatile module featuring essential functionality for reliable performance. It is certified by UL and CSA standards, ensuring compliance with safety requirements.

Technical specifications for 170AEC92000

Manufacturer Schneider Electric

Product Line Modicon

Part Number 170AEC92000

Weight 1.00 lbs (0.45 kg)

Product Certifications UL, CSA

Protective Treatment TC (Tropicalization Protection)

Input Overvoltage Protection 45V for 10 seconds

Voltage State 1 (Guaranteed ON) $\geq 11V$

Voltage State 0 (Guaranteed OFF) $\leq 5V$

Current State 1 (Guaranteed ON) $\geq 2.5\text{ mA}$

Current State 0 (Guaranteed OFF) $\leq 1.2\text{ mA}$

Discrete Output Logic Positive

Discrete Output Voltage 24V DC

Number of Counters 2

Discrete Input Number 6

Discrete Output Number 4

Range of Product

Modicon Momentum automation platform

Product or Component Type

High speed counter module base

Group of channels

2 groups of 3 discrete inputs

2 groups of 2 discrete outputs

Number of counter

2

Discrete input number

6

Discrete output number

4

Complementary

Discrete input logic

Positive

Discrete input voltage

- 3...30 V DC

24 V DC

Input overvoltage protection

45 V 10 s

Voltage state 1 guaranteed

$\geq 11\text{ V}$

Voltage state 0 guaranteed

$\leq 5\text{ V}$

Current state 1 guaranteed

$\geq 2.5\text{ mA}$

Current state 0 guaranteed

$\leq 1.2\text{ mA}$

Discrete output logic

Positive

Discrete output voltage

24 V

Discrete output current

1 A per counter

2 A per module

0.5 A per point

Maximum voltage drop

$<0.5\text{ V}$ 0.5 A at state on

Maximum leakage current

1 mA DC 24 V

Surge current

5 A 1 ms

Response time

< 0.1 ms from state 0 to state 1 output circuit

< 0.1 ms from state 1 to state 0 output circuit

3 ms from state 0 to state 1 input circuit

3 ms from state 1 to state 0 input circuit

Counting input type

Absolute SSI up, down with 4 sub-modes

Incremental up, down, quadrature

Counting input voltage

24 V single ended

5 V differential

Counting frequency

10 kHz single ended

200 kHz differential

Counter inputs resolution

24 bits + sign

Counter configuration

Via comm adapter

Marking

CE

Electrical connection

2 connectors for removable terminal blocks

Current consumption

280 mA 24 V DC

Net Weight

0.46 lb(US) (0.21 kg)

Environment

Resistance to electrostatic discharge

4 kV contact IEC 801-2

8 kV on air IEC 801-2

Resistance to electromagnetic fields

9.1 V/m (10 V/m) 80...1000 MHz IEC 801-3

Product Certifications

UL

CSA

Protective treatment

TC

Ambient Air Temperature for Operation

32...140 °F (0...60 °C)

Ambient Air Temperature for Storage

-40...185 °F (-40...85 °C)

Relative Humidity

95 % without condensation

Operating altitude

<= 16404.2 ft (5000 m)

Ordering and shipping details

Category

US1PC3118206

Discount Schedule

PC31

GTIN

3595861147744

Returnability

No

Country of origin

FR

Packing Units

Unit Type of Package 1

PCE

Nbr. of units in pkg.

1

Package 1 Height

2.283 in (5.800 cm)

Package 1 Width

7.087 in (18.000 cm)

Package 1 Length

10.315 in (26.200 cm)

Package weight(Lbs)

12.557 oz (356.000 g)

Description

The Schneider Electric Modicon part number 170AEC92000 is engineered for functionality and durability. It features certification from both UL and CSA, indicating adherence to rigorous safety and quality standards. Designed specifically for resilience in tropical environments, the module incorporates TC (Tropicalization Protection) to enhance its operational reliability under challenging conditions.

This module supports multiple input and output connections: with six discrete inputs and four discrete outputs. The discrete outputs operate at 24V DC and incorporate a positive logic structure. Input overvoltage protection is also critical, allowing the device to handle surges of up to 45V for a duration of ten seconds without failure.

Voltage operational states are clearly defined, guaranteeing a voltage state of ON when voltages reach 11V or above and ensuring an OFF state when voltages are 5V or below. Current guarantees further enhance performance, demanding a minimum of 2.5 mA for an ON response while cutting off at 1.2 mA for an OFF state. Furthermore, the presence of two counters grants flexibility for varied applications. Overall, the 170AEC92000 module is designed to ensure precision, stability, and adaptability in industrial automation tasks.