Product data sheet

Specifications

distributed analog/discrete I/O Modicon Momentum

170ANR12090

Main

Range of product	Modicon Momentum automation platform
Product or component type	Analogue,discrete I/O base
Group of channels	1 group of 8 discrete outputs 2 groups of 4 discrete inputs 1 group of 6 analog inputs 1 group of 4 analog outputs
Analogue input range	0...10 V
Analogue input type	Single ended
Analogue input resolution	14 bits 0...10 V
Discrete input voltage	24 V DC
Analogue output range	0...10 V 14 bits
Discrete output voltage	10...30 V
Output short-circuit protection	With discrete output
Output overload protection	With discrete output

Complementary

Discrete input number	8 conforming to IEC 1131-2 Type 2
[Us] rated supply voltage	24 V (19.2…30 V)DC
Maximum analogue input voltage	15 V
Input voltage limits	3...32 V
Discrete input logic	Positive
Voltage state 0 guaranteed	<= 5 V for discrete input
Voltage state 1 guaranteed	>= 11 V for discrete input
Current state 0 guaranteed	<= 2 mA (discrete input)
Current state 1 guaranteed	>= 6 mA (discrete input)
Input overvoltage protection	45 V 10 s discrete input
Input resistance	1 MOhm analogue input circuit
Output load	>= 2 kOhm 0...10 V analogue output
Conversion time	0.75 ms analogue input circuit 1.2 ms analogue output
Conversion error	+/- 0.4 % 0...10 V 25 °C analogue output 0,002 0...10 V 25 °C analogue input circuit
Fail state	For analogue output: hold For analogue output: reset to zero

Discrete output type	Transistor
Discrete output logic	Positive
Discrete output current	2 A per group 2 A per module 0.25 A per point
Maximum leakage current	0.4 mA DC 30 V discrete output
Maximum voltage drop	<0.4 V 0.25 A at state on discrete output
Surge current	2.5 A 1 ms discrete output
Response time	1.05 ms from state 1 to state 0 for discrete output 1.2 ms from state 0 to state 1 for discrete input 1.2 ms from state 0 to state 1 for discrete output 1.2 ms from state 1 to state 0 for discrete input
Isolation voltage	500 V (duration = 1 min) between analogue I/O and operating voltage 500 V (duration = 1 min) between operating voltage and I/O from ground
Maximum power dissipation in W	6 W
Marking	CE
Local signalling	4 LEDs for channel status
Electrical connection	2 connectors for removable terminal blocks
Current consumption	400 mA at 24 V DC
Depth	47.5 mm
Height	125 mm
Width	141.5 mm
Net weight	0.24 kg

Environment

Product certifications	UL CSA
Protective treatment	TC
Resistance to electrostatic discharge	4 kV contact conforming to IEC 801-2 8 kV on air conforming to IEC 801-2
Resistance to electromagnetic fields	10 V/m 80...1000 MHz conforming to IEC 801-3
Ambient air temperature for operation	0…60 °C
Ambient air temperature for storage	-40…85 °C
Relative humidity	95 % without condensation
Operating altitude	<= 5000 m

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.500 cm
Package 1 Width	18.000 cm
Package 1 Length	26.000 cm
Package 1 Weight	391.000 g
Unit Type of Package 2	S03
Number of Units in Package 2	10

Package 2 Height	30.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	4.281 kg

Contractual warranty

Warranty	18 months

Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

Environmental footprint

Environmental Disclosure	Product Environmental Profile

Use Better

Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
SCIP Number	441d5619-6318-4bbf-ac83-96d05888ee7e
REACh Regulation	REACh Declaration
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Use Again

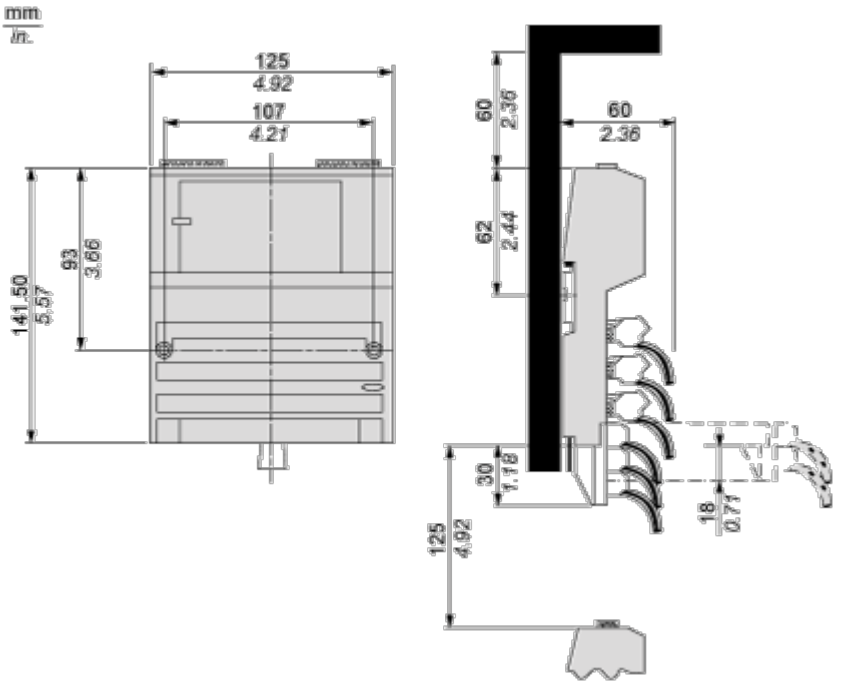
Repack and remanufacture

End of life manual availability	End of Life Information
Take-back	No

Dimensions Drawings

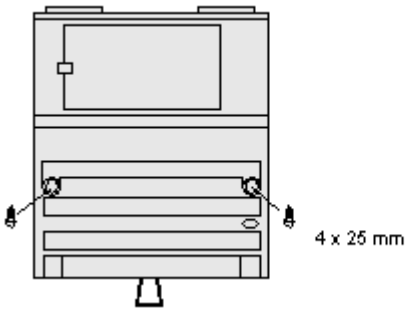
Standard Adapter on a Typical Base

Dimensions



Mounting and Clearance

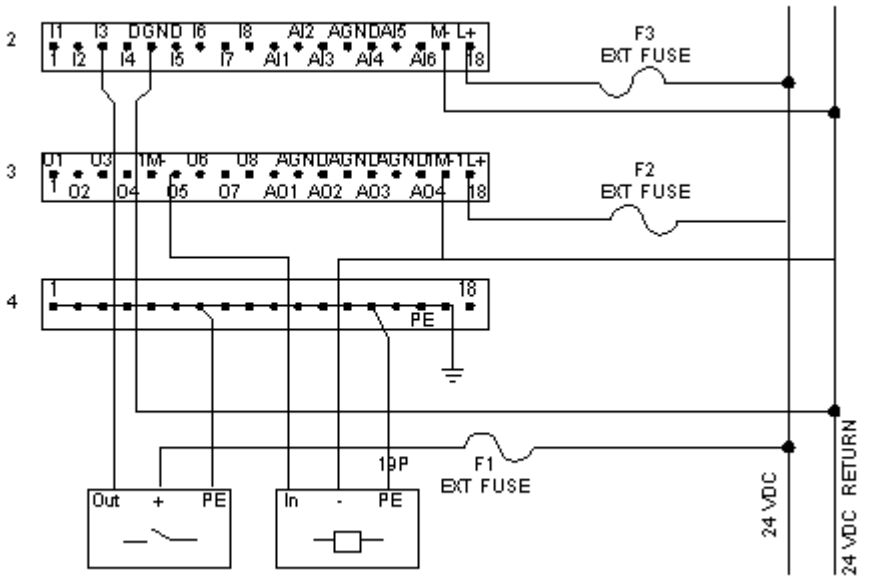
Mounting on a Wall



Connections and Schema

External Wiring Diagrams

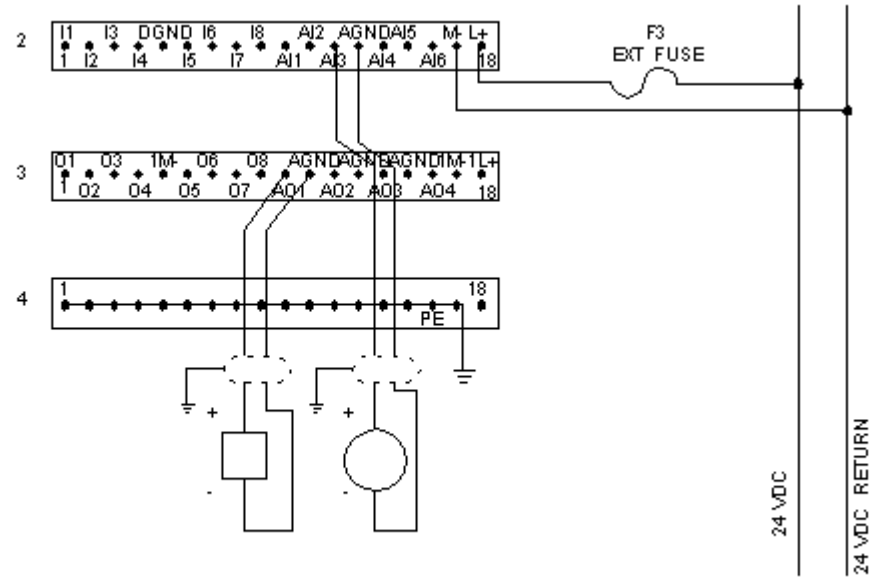
Discrete I/O Devices



F1, F3 1 A fuse

F2 2.5 A fuse

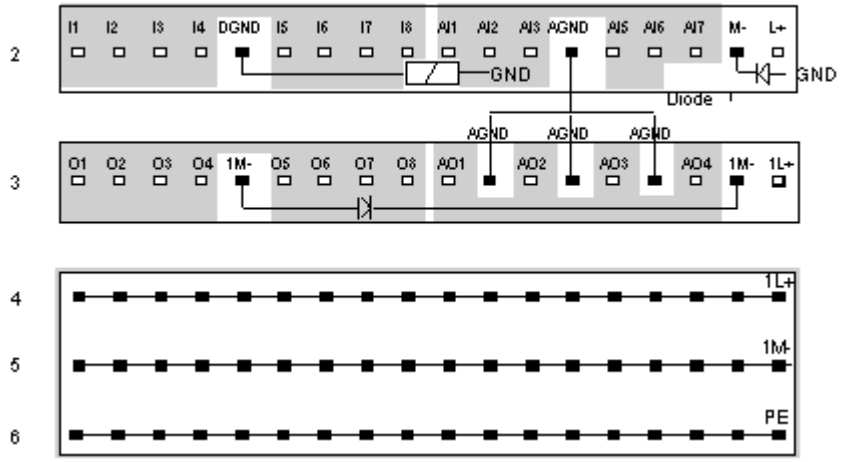
Analog I/O Devices



F3 1 A fuse

Internal Pin Connections

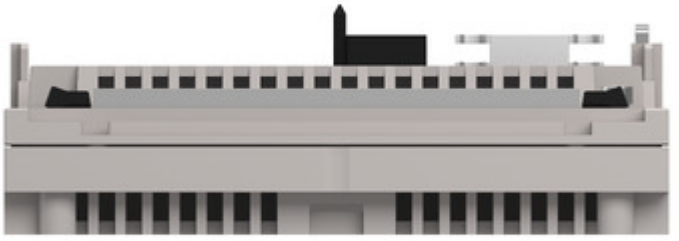
Rows 2 and 3 show the internal connections between terminals on the I/O base. Rows 4 through 6 show the internal connections on the optional busbar.

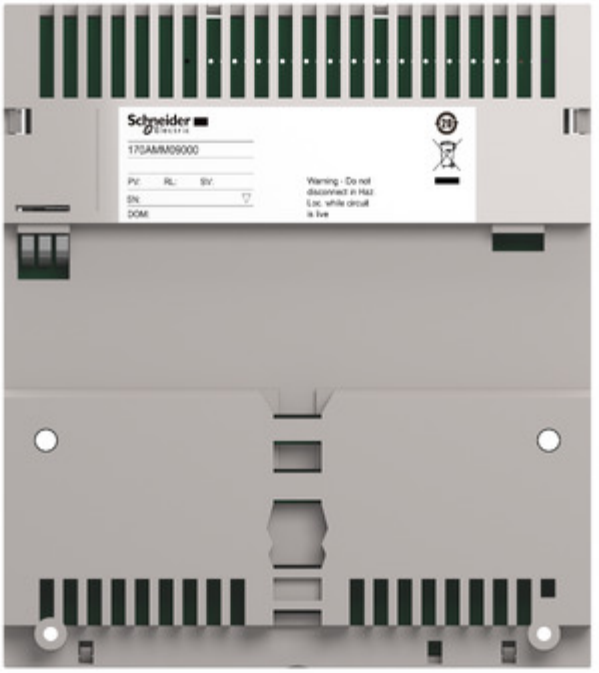


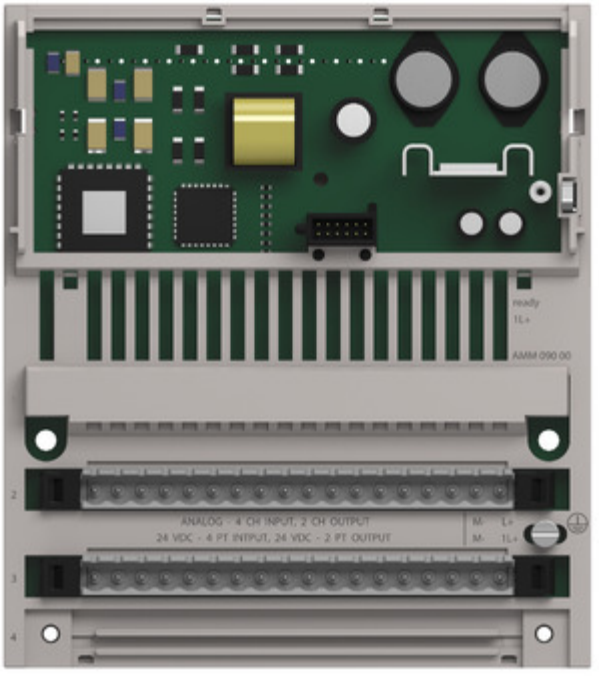
NOTE: AGND and DGND are separated inside the module. External digital inputs must be returned to the DGND terminal. External analog circuits must be returned to AGND terminals.

Image of product / Alternate images

Alternative




Schneider Electric
170AMM09000
PV:
RL:
SV:
SN:
DOM:
Warning - Do not disconnect in Haz Loc while circuit is live


ready
1L+
AMM 090 00
ANALOG - 4 CH INPUT, 2 CH OUTPUT
24 VDC - 4 PT INTPUT, 24 VDC - 2 PT OUTPUT
M-
L+
M-
1L+