Specification





Analog I/O expansion block, Modicon TM7, IP67, 4 AO, +/-10 V, M12 connector

TM7BAO4VLA

Product availability: Non-Stock - Not normally stocked in distribution facility

Price\*: 1,381.50 USD

#### Main

Range Of Product	Modicon TM7
Product Or Component Type	Analog I/O expansion block
Range Compatibility	Modicon M258 Modicon LMC058
Enclosure Material	Plastic
Bus Type	TM7 bus
[Ue] Rated Operational Voltage	24 V DC
Input/Output Number	4
Input/Output Number Of Block	40

### Complementary

Analogue Output Number	4	
Analogue Output Type	Voltage	
Analogue Output Range	+/- 10 V	
Sensor Power Supply	24 V, 500 mA for all channels overload, short-circuit and reverse polarity protection	
Analogue Output Resolution	11 bits + sign	
Electrical Connection	1 male connector M12 - B coding - 4 ways bus IN 1 female connector M12 - B coding - 4 ways bus OUT 1 male connector M8 - 4 ways power IN 1 female connector M8 - 4 ways power OUT 4 female connectors M12 - A coding - 5 ways actuator	
Local Signalling	for bus diagnostic 2 LEDs for sensor/actuator power supply status 2 LEDs	
Operating Position	Any position	
Fixing Mode	By 2 screws	
Net Weight	0.44 lb(US) (0.2 kg)	

## **Environment**

Standards	IEC 61131-2
Product Certifications	GOST-R ATEX II 3g EEx nA II T5 cURus C-tick
Marking	CE

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Ambient Air Temperature For Operation	14140 °F (-1060 °C)	
Ambient Air Temperature For Storage	-13185 °F (-2585 °C)	
Relative Humidity	595 % without condensation or dripping water	
Pollution Degree	2 IEC 60664	
Ip Degree Of Protection	IP67 conforming to IEC 61131-2	
Operating Altitude	06561.68 ft (02000 m)	
Storage Altitude	0.009842.52 ft (03000 m)	
Vibration Resistance	7.5 mm constant amplitude 28 Hz)IEC 60721-3-5 Class 5M3 2 gn constant acceleration 8200 Hz)IEC 60721-3-5 Class 5M3 4 gn constant acceleration 200500 Hz)IEC 60721-3-5 Class 5M3	
Shock Resistance	30 gn 11 ms IEC 60721-3-5 Class 5M3	
Resistance To Electrostatic Discharge	6 kV in contact IEC 61000-4-2 8 kV in air IEC 61000-4-2	
Resistance To Electromagnetic Fields	9.14 V/m (10 V/m) 0.082 Hz IEC 61000-4-3 0.91 V/m (1 V/m) 22.7 Hz IEC 61000-4-3	
Resistance To Fast Transients	2 kV IEC 61000-4-4 power supply) 1 kV IEC 61000-4-4 input/output) 1 kV IEC 61000-4-4 shielded cable)	
Surge Withstand For Dc 24 V Circuit	1 kV power supply (common mode) IEC 61000-4-5 0.5 kV power supply (differential mode) IEC 61000-4-5 1 kV unshielded links (common mode) IEC 61000-4-5 0.5 kV unshielded links (differential mode) IEC 61000-4-5 1 kV shielded links (common mode) IEC 61000-4-5 0.5 kV shielded links (differential mode) IEC 61000-4-5	
Electromagnetic Compatibility	EN/IEC 61000-4-6	
Disturbance Radiated/Conducted	CISPR 11	

# Ordering and shipping details

Category	US1PC1222532
Discount Schedule	PC12
Gtin	3595864092997
Returnability	No
Country Of Origin	AT

# **Packing Units**

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	1.97 in (5.000 cm)
Package 1 Width	2.36 in (6.000 cm)
Package 1 Length	4.13 in (10.500 cm)
Package 1 Weight	7.72 oz (219.000 g)
Unit Type Of Package 2	S02
Number Of Units In Package 2	24
Package 2 Height	5.91 in (15.000 cm)
Package 2 Width	11.81 in (30.000 cm)
Package 2 Length	15.75 in (40.000 cm)

Package 2 Weight

12.29 lb(US) (5.576 kg)

## **Contractual warranty**

Warranty

18 months



**Green Premium**<sup>TM</sup> **label** is Schneider Electric's commitment to delivering products with best-inclass environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

Guide to assess a product's sustainability >





Transparency RoHS/REACh

#### Well-being performance

<b>⊘</b>	Toxic Heavy Metal Free	
<b>②</b>	Mercury Free	
	Rohs Exemption Information	Yes
<b>②</b>	Pvc Free	

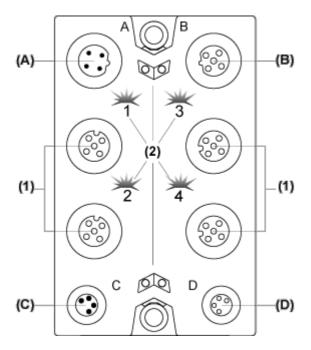
#### **Certifications & Standards**

Reach Regulation	REACh Declaration	
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)	
China Rohs Regulation	China RoHS declaration	
Environmental Disclosure	Product Environmental Profile	
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.	
Circularity Profile	End of Life Information	
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	

Presentation

#### **Analog Output Block**

#### Description



- (A) TM7 bus IN connector
- (B) TM7 bus OUT connector
- (C) 24 Vdc power IN connector
- (D) 24 Vdc power OUT connector
- (1) Output connectors
- (2) Status LEDs

#### **Connector and Channel Assignments**

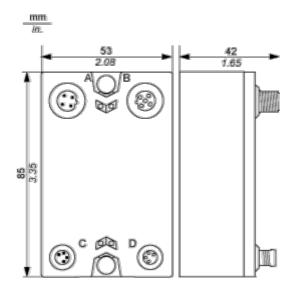
Output connectors	Channel type	Channels
1	Output	Q0
2	Output	Q1
3	Output	Q2
4	Output	Q3

## TM7BAO4VLA

**Dimensions Drawings** 

### TM7 Block, Size 1

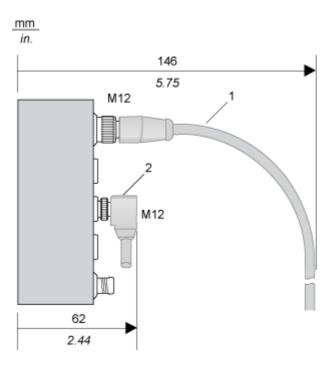
#### **Dimensions**



## TM7BAO4VLA

## Mounting and Clearance

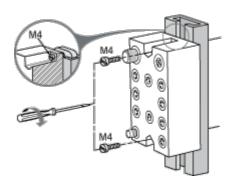
#### **Spacing Requirements**



- 1 Straight cable
- 2 Elbowed cable

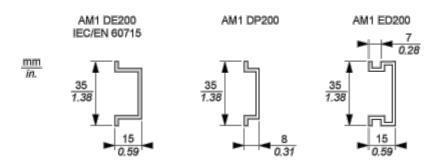
#### **Installation Guidelines**

#### TM7 Block on an Aluminium Frame



NOTE: Maximum torque to fasten the required M4 screws is 0.6 N.m (5.3 lbf-in).

#### TM7 Block on a DIN Rail



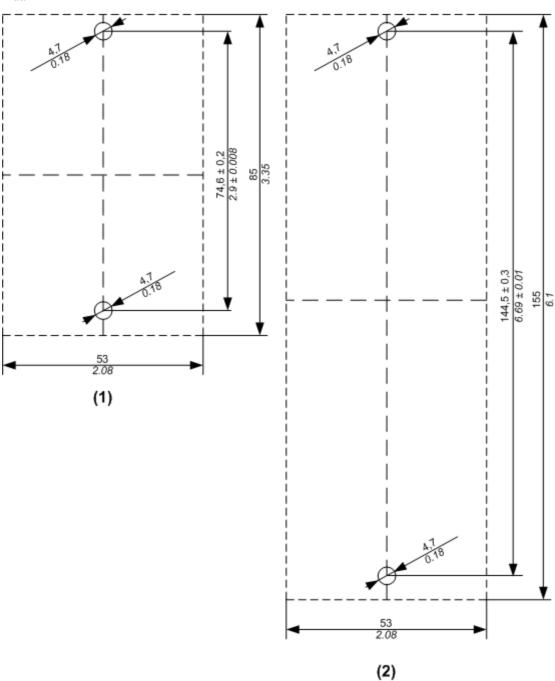
NOTE: Only size 1 (smallest) blocks can be installed on DIN rail with the TM7ACMP mounting plate.

#### TM7 Block Directly on the Machine

Drilling template of the block:

### TM7BAO4VLA

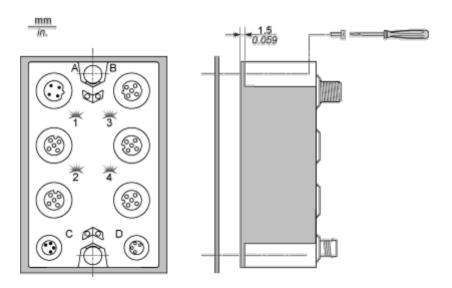




- (1) Size 1
- (2) Size 2

The thickness of the base plate should be taken into consideration when defining the screw length.

### TM7BAO4VLA



NOTE: Maximum torque to fasten the required M4 screws is 0.6 N.m (5.3 lbf-in).

## TM7BAO4VLA

#### Connections and Schema

#### Wiring Diagram

#### **Pin Assignments for Output Connectors**

Connection	Pin	M12 Output
1 2	1	Analog output +
	2	24 Vdc actuator supply
5 - <del>((</del> 0000))	3	Analog output - (0 Vdc)
4	4	0 Vdc
	5	Shield

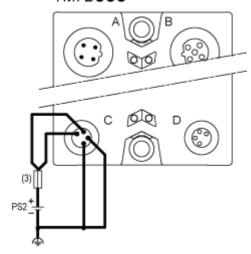
#### TM7BAO4VLA

#### Wiring the Power Supply

When you provide power to a TM7 I/O block using the 24 VDC Power OUT connector of the preceding I/O block, both blocks occupy the same 24 Vdc I/O power segment. However, if you connect an external isolated power supply to the 24 Vdc Power IN connector of a TM7 I/O block, you establish a new 24 Vdc I/O power segment beginning with that I/O block.

I/O block wired with one external 24 Vdc power supply:

#### TM7B●●●



(3) External fuse, Type T slow-blow, 8 A max., 250 V

PS2 External isolated I/O power supply, 24 Vdc