

Product data sheet

Specifications



Counter module, Modicon M238 logic controller, 4 O discrete, 60 kHz, 2 spring terminal blocks

TM200HSC206DF

! Discontinued - Service only

! Discontinued on: Dec 2, 2020

! End-of-service on: Dec 31, 2020

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

Main

Range of Product	Modicon M238 logic controller
Product or Component Type	Counter module
Electrical Connection	2 spring terminal blocks

Complementary

Number of modules	3 counter modules per TM238 base
Discrete input number	12 EN/IEC 61131-2 type 1
Discrete output number	4
Application specific I/O	Frequency generator Downcounting Frequency meter Upcounting Period measurement Axis following
Counting mode	8 mode configurable
Counter inputs resolution	31 bits + sign
Counting frequency	60 kHz
Cycle time	1 ms
Input compatibility	Incremental signal encoder with 15...30 V source outputs 2 and 3-wire sensors (24 V)
Type of cable	Shielded cable
Isolation between channels and internal logic	1500 V for 1 minute
Discrete input type	Auxiliary input IN_CAP Auxiliary input IN_EN Auxiliary input IN_REF High-speed IN_A High-speed IN_B High-speed IN_SYNC
Discrete input logic	Positive logic (sink)
Discrete input voltage	24 V DC
Voltage state 1 guaranteed	15...30 V
Current state 1 guaranteed	5 mA
Voltage state 0 guaranteed	<= 5 V
Current state 0 guaranteed	<= 0.5 mA

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

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Discrete input current	2 mA 11 V
Discrete output logic	Positive logic (source)
Discrete output voltage	24 V DC 19.2...30 V
Discrete output current	0.5 A
Load current	2 A per module 0.5 A per output
Response time on output	<= 200 µs energisation/de-energisation
Maximum leakage current	0.1 mA at state 0
Maximum voltage drop	<3 V at state 1
Short-circuit protection	Automatic reset after disappearance of fault
Output overload protection	0.5...1.5 A trip current with automatic reset after fault disappearance, per o/p
Fallback status	Faulty channel set to 0 Each channel held at its last value or set to the predefined value (0 or 1)
Load inductance	L = 0.5/I²F
Load capacitance	50 µF
Local signalling	1 display block
Current consumption	<= 100 mA 24 V DC internal supply <= 100 mA 5 V DC internal supply <= 2 A 24 V DC external power supply
Mounting Support	35 mm symmetrical DIN rail

Ordering and shipping details

Category	US1PC1222531
Discount Schedule	PC12
GTIN	3606480060540
Returnability	No

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	3.1 in (8 cm)
Package 1 Width	4.1 in (10.5 cm)
Package 1 Length	4.9 in (12.5 cm)
Package weight(Lbs)	7.9 oz (224 g)
Unit Type of Package 2	S02
Number of Units in Package 2	20
Package 2 Height	5.9 in (15 cm)
Package 2 Width	11.8 in (30 cm)
Package 2 Length	15.7 in (40 cm)
Package 2 Weight	11.35 lb(US) (5.15 kg)
Unit Type of Package 3	S02
Number of Units in Package 3	20
Package 3 Height	5.9 in (15 cm)

Package 3 Width	11.8 in (30 cm)
Package 3 Length	15.7 in (40 cm)
Package 3 Weight	11.35 lb(US) (5.15 kg)

Contractual warranty

Warranty (in months)	18
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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 >](#)

Use Better

Materials and Substances	
EU RoHS Directive	Compliant By Exemption
REACH Regulation	Reference contains Substances of Very High Concern above the threshold
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
PVC free	Yes

Use Longer

Lifetime extension	
Repair	No

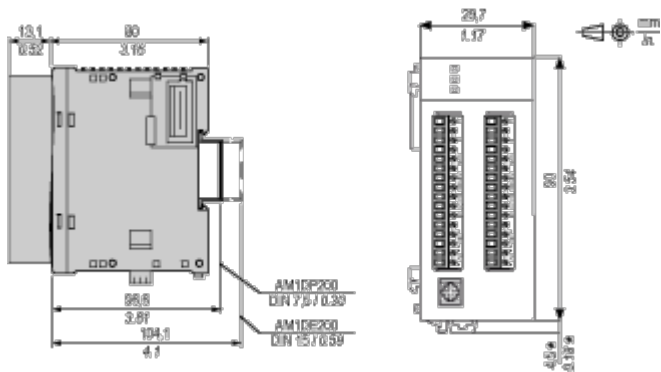
Use Again

Repack and remanufacture	
Circularity Profile	End of Life Information
WEEE Label	 The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

Dimensions Drawings

High Speed Counter (HSC) Module

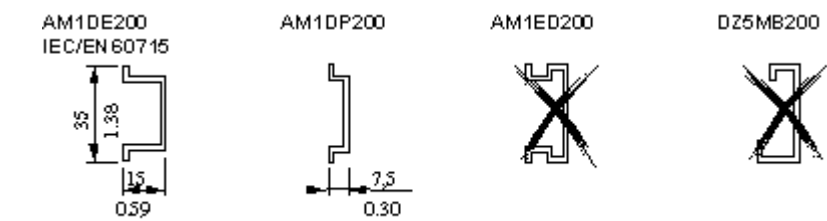
Dimensions



NOTE: * 8.5 mm (0.33 in) when the clip-on lock is pulled out.

Mounting and Clearance

DIN Rail Mounting

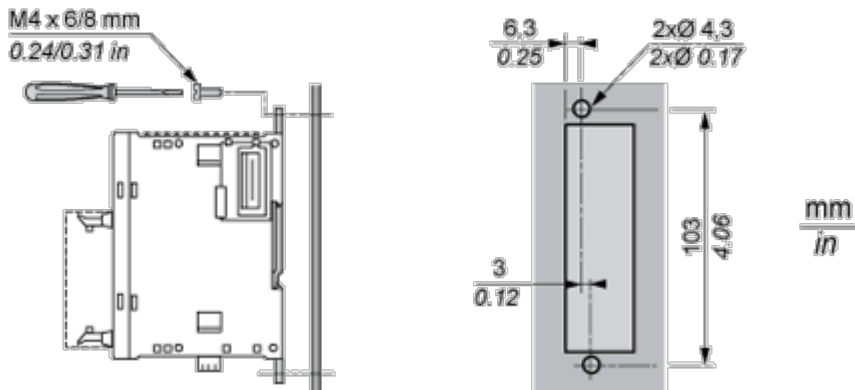


Rail depth	Catalogue part number
15 mm (0.59 in.)	AM1DE200
7,5 mm (0.30 in.)	AM1DP200

NOTE: Do not use AM1ED200 and DZ5MB200

Module Mounting on a Panel Surface

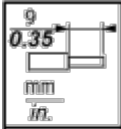
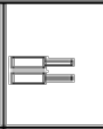
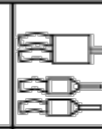
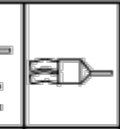
Mounting Hole Layout



Connections and Schema

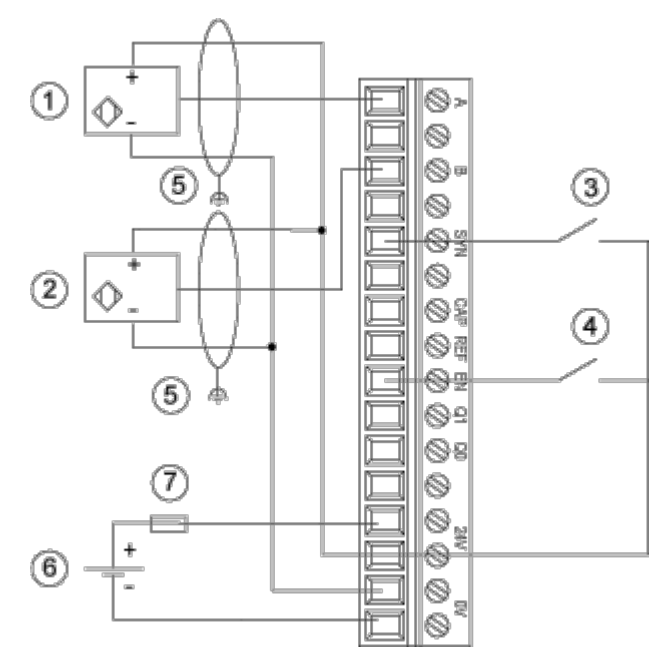
Wiring Requirements

Cable Types and Wire Sizes for Removable Screw Terminal Block

							
mm ²	0,14...1,5	0,25...0,5	0,25...1,5	0,14...0,5	0,14...0,75	0,25...0,34	0,5
AWG	26...16	24...20	24...16	26...20	26...18	24...22	20

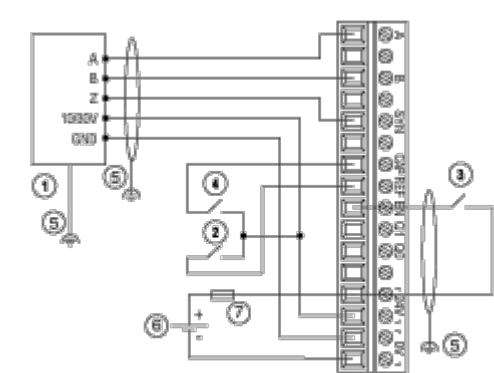
Wiring Diagrams Examples

Sensors Connections



- 1 IN_A input
- 2 IN_B input
- 3 IN_SYNC input (synchronization input)
- 4 IN_EN input (enable input)
- 5 Functional ground
- 6 24 Vdc Power Supply
- 7 External fuse

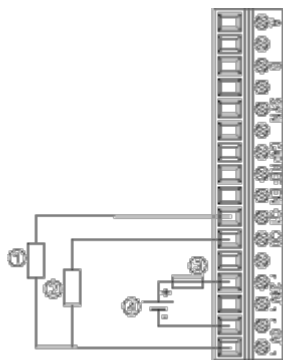
Incremental Encoder Connection



- 1 Encoder (inputs A, B and Z)
- 2 IN_REF input (reference input)
- 3 IN_EN input (enable input)
- 4 IN_CAP input (capture input)
- 5 Functional ground

- 624 Vdc Power supply
- 7External fuse

Actuators and Power Supply Connections



- 1Actuator for the Q1 output
- 2Actuator for the Q0 output
- 3External fuse
- 424 Vdc Power Supply for sensors and actuators