

Modicon TM5

High-Performance and Safe IP20 Modular I/O System

Counter modules

Applications	Upcounting, downcounting, period meter, frequency meter, frequency generator, axis following with encoder	
Compatibility	Local and remote I/O	–
	Distributed I/O	Sercos bus interface module (1)



Channel connection	Via removable spring terminal blocks (to be ordered separately)	
Number of counter channels	2	1
IEC/EN 61131-2 conformity	Type 1	Incremental
Type of signal (2)	Sink	Sink
Type of input	1-, 2-, or 3-wire	–
Nominal input voltage	24 V ---	24 V ---, asymmetrical
Voltage limit values	20.4...28.8 V ---	–
Frequency per channel	50 kHz	100 kHz
Resolution	–	16/32 bits
Functions	Event counting Interval measurement	2 x 24 V --- auxiliary inputs 24 V --- encoder power supply
Counter modules	TM5SDI2DF	TM5SE1IC01024
Compatible bus bases (3)	TM5ACBM11, TM5ACBM15	
Compatible removable terminal block (3)	TM5ACTB12	
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(1) PacDrive LMC Eco/Pro/Pro2 motion controllers only
(2) Source output: PNP output; Sink output: NPN output
(3) To be ordered separately

Upcounting, downcounting, period meter, frequency meter, frequency generator, axis following with encoder			
–	■ Modicon M258 logic controller ■ Modicon LMC058 motion controller	–	–
Sercos bus interface module (1)	■ Ethernet network interface module ■ CANopen bus interface module ■ Sercos bus interface module	Sercos bus interface module (1)	Sercos bus interface module (1)



Via removable spring terminal blocks (to be ordered separately)				
2	1	1	1	1
Incremental	Incremental	SSI absolute	Incremental	Incremental
Sink	RS422, Sink	Sink	Sink	Sink
–	–	–	3-wire	3-wire
24 V ---, asymmetrical	5 V ---, symmetrical	5 V ---, symmetrical	5 V ---, symmetrical	5 V ---, symmetrical
–	20.4...28.8 V ---	20.4...28.8 V ---	20.4...28.8 V ---	20.4...28.8 V ---
100 kHz	250 kHz	1 MHz	4 MHz	4 MHz
16/32 bits	16/32 bits	32 bits	16/32 bits	16/32 bits
2 x 24 V --- auxiliary inputs 24 V --- encoder power supply	2 x 24 V --- auxiliary inputs	2 x 24 V --- auxiliary inputs	1 encoder emulation channel (A/B) with reference pulse	1 ABR incremental encoder, 5 V
TM5SE2IC01024	TM5SE1IC02505	TM5SE1SC10005	TM5SE1MISC20005	TM5SE1IC20005
TM5ACBM11, TM5ACBM15				
TM5ACTB12				
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Presentation

TM5SDI12DF and TM5SE modules are used to count the pulses generated by a sensor or to process signals from an incremental encoder, depending on the selected reference.

The breadth of the TM5 counter modules offer makes it possible to adapt the configuration to the machine's exact requirements: the counter electronic modules differ in terms of their frequency and the functions offered.

The function parameters are configured using EcoStruxure Machine Expert software. Each TM5 counter module comprises three parts to be ordered separately:

- A counter electronic module
- A bus base
- A terminal block

These modules can be mechanically assembled before mounting on a symmetrical rail. They offer the following advantages:

- Removable terminal block
- Spring terminals that can be used for quick, tool-free connection of the sensors and preactuators (the quality of the spring terminals avoids the need for periodic retightening)
- Hot swapping capability

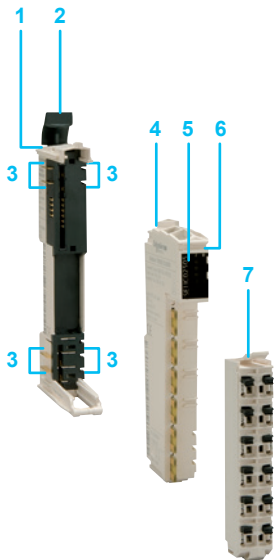
Counter module compatibility		
	TM5SDI2DF TM5SE11C01024 TM5SE21C01024 TM5SE1MISC20005 TM5SE11C20005	TM5SE11C02505 TM5SE1SC10005
Local and remote I/O	–	■ Modicon M258 logic controller ■ Modicon LMC058 motion controller
Distributed I/O	■ Sercos bus interface module (1)	■ Ethernet network interface module ■ CANopen bus interface module ■ Sercos bus interface module

Description

TM5 counter modules comprise:

- 1 A bus base
- 2 A mechanical clip for locking onto a symmetrical rail
- 3 A bus expansion connection on each side of the base to provide the link with the adjacent controller or module
- 4 A counter electronic module
- 5 An LED display block for the module channels and diagnostics
- 6 A slot for the plain text cover holder (label holder)
- 7 A removable spring terminal block with locking clip and slots for colored ID markers

(1) PacDrive LMC Eco/Pro/Pro2 motion controllers only





TM5SDI2DF



TM5SE●●●●●●●●



TM5ACBM●●



TM5ACTB●●

References

Description	Counting frequency	Number of channels Function	Reference	Weight kg/lb
Counter electronic modules	50 kHz	2 counter channels: event counting, interval measurement	TM5SDI2DF	0.025/ 0.055
	100 kHz	1 incremental encoder channel 2 x 24 V $\overline{\text{---}}$ auxiliary inputs	TM5SE1IC01024	
	100 kHz	2 incremental encoder channels 2 x 24 V $\overline{\text{---}}$ auxiliary inputs	TM5SE2IC01024	
	250 kHz	1 incremental encoder channel 2 x 24 V $\overline{\text{---}}$ auxiliary inputs	TM5SE1IC02505	
	1 MHz	1 absolute encoder channel 2 x 24 V $\overline{\text{---}}$ auxiliary inputs	TM5SE1SC10005	
	4 MHz	1 encoder emulation channel (A/B) with reference pulse 2 x 24 V $\overline{\text{---}}$ auxiliary inputs	TM5SE1MISC20005	
	4 MHz	1 ABR incremental encoder, 5 V 2 x 24 V $\overline{\text{---}}$ auxiliary inputs	TM5SE1IC20005	

Description	Characteristics	Reference	Weight kg/lb
Bus bases	24 V $\overline{\text{---}}$	TM5ACBM11	0.020/ 0.044
	24 V $\overline{\text{---}}$ With address setting	TM5ACBM15	0.020/ 0.044
Terminal blocks	For counter electronic module 12 spring terminals	TM5ACTB12	0.020/ 0.044

Accessories

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