



Figure similar

SIMATIC ET 200SP, TM PTO 2x24 V, interface module for stepper drives, 2 channels pulse train output, PTO: 24 V, 2 DI, 1 DQ 24 V DC per channel, suitable for BU type A0

General information	
Product type designation	TM PTO 2x24V
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC00
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> Isochronous mode 	Yes
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	STEP 7 V17 with HSP or higher
<ul style="list-style-type: none"> PROFIBUS from GSD version/GSD revision 	One GSD file each, Revision 3 and 5 and higher
<ul style="list-style-type: none"> PROFINET from GSD version/GSD revision 	GSDML V2.35
Supply voltage	
Rated value (DC)	24 V
Load voltage L+	
<ul style="list-style-type: none"> Rated value (DC) 	24 V
<ul style="list-style-type: none"> permissible range, lower limit (DC) 	19.2 V
<ul style="list-style-type: none"> permissible range, upper limit (DC) 	28.8 V
<ul style="list-style-type: none"> Reverse polarity protection 	Yes
Input current	
Current consumption, max.	50 mA; without load
Power loss	
Power loss, typ.	1.5 W
Address area	
Address space per module	
<ul style="list-style-type: none"> Inputs 	32 byte
<ul style="list-style-type: none"> Outputs 	16 byte
Hardware configuration	
Automatic encoding	Yes
<ul style="list-style-type: none"> Mechanical coding element 	Yes
Digital inputs	
Number of digital inputs	6; 3 per channel
Digital inputs, parameterizable	Yes
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Digital input functions, parameterizable	
<ul style="list-style-type: none"> Synchronization 	Yes
<ul style="list-style-type: none"> Probe 	Yes
<ul style="list-style-type: none"> Drive ready 	Yes
Input voltage	
<ul style="list-style-type: none"> Rated value (DC) 	24 V

<ul style="list-style-type: none"> • for signal "0" • for signal "1" • permissible voltage at input, min. • permissible voltage at input, max. 	-5 ... +5 V +11 to +30V -30 V; -5 V continuous, -30 V brief reverse polarity protection 30 V
Input current	
<ul style="list-style-type: none"> • for signal "1", typ. 	2.5 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	Yes; none / 0.05 / 0.1 / 0.4 / 0.8 / 1.6 / 3.2 / 12.8 / 20 ms
Cable length	
<ul style="list-style-type: none"> • shielded, max. • unshielded, max. 	1 000 m 600 m
Digital outputs	
Number of digital outputs	6; 3 per channel
Current-sinking	Yes; For 24 V PTO outputs
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	Yes; electronic/thermal
<ul style="list-style-type: none"> • Response threshold, typ. 	1 A
Controlling a digital input	Yes
Digital output functions, parameterizable	
<ul style="list-style-type: none"> • PTO (pulse train output) signal interface — 24 V asymmetrical • PTO (pulse train output) signal type — Pulse and direction — Count up, count down — Incremental encoder (A, B phase shift) — Incremental encoder (A, B phase shift, quadruple) 	Yes Yes Yes Yes Yes Yes
Switching capacity of the outputs	
<ul style="list-style-type: none"> • with resistive load, max. • on lamp load, max. 	0.1 A; 0.5 A for CHn.ED 1 W; 5 W for CHn.ED
Load resistance range	
<ul style="list-style-type: none"> • lower limit • upper limit 	240 Ω; 48 ohms for CHn.ED 12 kΩ
Output voltage	
<ul style="list-style-type: none"> • for signal "1", min. 	23.2 V; L+ (-1.3 V), L+ (-0.8 V) for CHn.ED
Output current	
<ul style="list-style-type: none"> • for signal "1" rated value • for signal "1" permissible range, max. • for signal "1" minimum load current • for signal "0" residual current, max. 	0.1 A; 0.5 A for CHn.ED 0.12 A; 0.6 A for CHn.ED 2 mA 0.5 mA
Switching frequency	
<ul style="list-style-type: none"> • with resistive load, max. • with inductive load, max. • on lamp load, max. • For signal interface 24 V asymmetrical 	10 kHz 0.5 Hz; According to IEC 60947-5-1, DC-13 10 Hz 200 kHz; For 24 V PTO outputs
Total current of the outputs	
<ul style="list-style-type: none"> • Current per module, max. 	1.4 A
Cable length	
<ul style="list-style-type: none"> • shielded, max. 	600 m; Up to 10 kHz, 50 m at 200 kHz
Interrupts/diagnostics/status information	
Alarms	
<ul style="list-style-type: none"> • Diagnostic alarm 	Yes
Diagnoses	
<ul style="list-style-type: none"> • Monitoring the supply voltage • Short-circuit 	Yes Yes
Diagnostics indication LED	
<ul style="list-style-type: none"> • Monitoring of the supply voltage (PWR-LED) • Channel status display • for module diagnostics 	Yes; green PWR LED Yes; green LED Yes; green/red DIAG LED

Potential separation	
Potential separation channels	
• between the channels and backplane bus	Yes
Isolation	
Isolation tested with	707 V DC (type test)
Ambient conditions	
Ambient temperature during operation	
• horizontal installation, min.	-30 °C
• horizontal installation, max.	60 °C; Observe derating
• vertical installation, min.	-30 °C
• vertical installation, max.	50 °C; Observe derating
Altitude during operation relating to sea level	
• Installation altitude above sea level, max.	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Decentralized operation	
to SIMATIC S7-300	Yes; Via control and feedback interface
to SIMATIC S7-400	Yes; Via control and feedback interface
to SIMATIC S7-1200	Yes
to SIMATIC S7-1500	Yes
to standard PROFIBUS master	Yes; Via control and feedback interface
to standard PROFINET controller	Yes; Via control and feedback interface
Dimensions	
Width	15 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	45 g

Classifications			
		Version	Classification
	eClass	14	27-24-26-05
	eClass	12	27-24-26-05
	eClass	9.1	27-24-26-05
	eClass	9	27-24-26-05
	eClass	8	27-24-26-05
	eClass	7.1	27-24-26-05
	eClass	6	27-24-26-05
	ETIM	9	EC001601
	ETIM	8	EC001601
	ETIM	7	EC001601
	IDEA	4	3567
	UNSPSC	15	32-15-17-05

Approvals / Certificates	
General Product Approval	EMV

[Manufacturer Declaration](#)



[KC](#)

For use in hazardous locations



[FM](#)

[CCC-Ex](#)



[Miscellaneous](#)

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