## SIEMENS

## Data sheet

## 6ES7550-1AA00-0AB0



SIMATIC S7-1500, TM count 2x24 V counter module, 2 channels for 24 V incremental or encoder 3 DI, 2 DQ per channel

General information	
Product type designation	TM Count 2x24V
Firmware version	V1.3
• FW update possible	Yes
Product function	
● I&M data	Yes; I&M0 to I&M3
Isochronous mode	Yes
Engineering with	
<ul> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>	V12 (FW V1.0) V15 (FW V1.3)/V12 (FW V1.0), V13 (FW V1.1)
<ul> <li>PROFIBUS from GSD version/GSD revision</li> </ul>	GSD Revision 5
<ul> <li>PROFINET from GSD version/GSD revision</li> </ul>	V2.3 / -
Installation type/mounting	
Rail mounting	Yes; S7-1500 mounting rail
Supply voltage	
Load voltage L+	
Rated value (DC)	24 V
<ul> <li>permissible range, lower limit (DC)</li> </ul>	19.2 V
<ul> <li>permissible range, upper limit (DC)</li> </ul>	28.8 V
<ul> <li>Reverse polarity protection</li> </ul>	Yes
Input current	
Current consumption, max.	75 mA; without load
Encoder supply	
Number of outputs	1; A common 24V encoder supply for both channels
24 V encoder supply	
• 24 V	Yes; L+ (-0.8 V)
<ul> <li>Short-circuit protection</li> </ul>	Yes
<ul> <li>Output current, max.</li> </ul>	1 A; total current of all encoders/channels
Power	
Power available from the backplane bus	1.3 W
Power loss	
Power loss, typ.	4 W
Address area	
Address space per module	
Inputs	16 byte; Per channel
Outputs	12 byte; per channel; 4 bytes for Motion Control
Digital inputs	
Number of digital inputs	6; 3 per channel
Digital inputs, parameterizable	Yes

Input characteristic curve in accordance with IEC 61131,	Yes
type 3	
Digital input functions, parameterizable	
Gate start/stop	Yes
Capture	Yes
<ul> <li>Synchronization</li> </ul>	Yes
<ul> <li>Freely usable digital input</li> </ul>	Yes
Input voltage	
<ul> <li>Type of input voltage</li> </ul>	DC
<ul> <li>Rated value (DC)</li> </ul>	24 V
● for signal "0"	-5 +5 V
● for signal "1"	+11 to +30V
<ul> <li>permissible voltage at input, min.</li> </ul>	-30 V; -5 V continuous, -30 V brief reverse polarity protection
<ul> <li>permissible voltage at input, max.</li> </ul>	30 V
Input current	
● 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
— at "0" to "1", min.	6 μs; for parameterization "none"
— at "1" to "0", min.	6 μs; for parameterization "none"
for technological functions	
— parameterizable	Yes
Cable length	
<ul> <li>shielded, max.</li> </ul>	1 000 m
• unshielded, max.	600 m
Digital outputs	
Type of digital output	Transistor
Number of digital outputs	4; 2 per channel
Digital outputs, parameterizable	Yes
Short-circuit protection	Yes; electronic/thermal
Response threshold, typ.	1A
Limitation of inductive shutdown voltage to	L+ (-33 V)
Controlling a digital input	Yes
Digital output functions, parameterizable	
Switching tripped by comparison values	Yes
Freely usable digital output	Yes
Switching capacity of the outputs	
with resistive load, max.	0.5 A; Per digital output
• on lamp load, max.	5 W
Load resistance range	(0.0
lower limit	48 Ω 12 kΩ
upper limit	12 kΩ
Output voltage	DC
Type of output voltage     for signal "4" min	
• for signal "1", min.	23.2 V; L+ (-0.8 V)
Output current	0.5 A: Per digital output
<ul> <li>for signal "1" rated value</li> <li>for signal "1" permissible range, max</li> </ul>	0.5 A; Per digital output
<ul> <li>for signal "1" permissible range, max.</li> <li>for signal "1" minimum load current</li> </ul>	0.6 A; Per digital output 2 mA
<ul> <li>for signal "1" minimum load current</li> <li>for signal "0" residual current, max</li> </ul>	2 mA 0.5 mA
for signal "0" residual current, max. Output delay with resistive load	
• "0" to "1", max.	50 µs
• 0 to 1, max. • "1" to "0", max.	50 μs 50 μs
Switching frequency	00 µ0
with resistive load, max.	10 kHz
<ul> <li>with resistive load, max.</li> <li>with inductive load, max.</li> </ul>	0.5 Hz; Acc. to IEC 60947-5-1, DC-13; observe derating curve
<ul> <li>on lamp load, max.</li> </ul>	10 Hz
Total current of the outputs	
Current per module, max.	2 A
o out on por modulo, max.	- / `

Cable length	
• shielded, max.	1 000 m
<ul> <li>unshielded, max.</li> </ul>	600 m
Encoder	
Connectable encoders	
<ul> <li>2-wire sensor</li> </ul>	Yes
<ul> <li>permissible quiescent current (2-wire sensor), max.</li> </ul>	1.5 mA
Encoder signals, incremental encoder (asymmetrical)	
<ul> <li>Input voltage</li> </ul>	24 V
<ul> <li>Input frequency, max.</li> </ul>	200 kHz
<ul> <li>Counting frequency, max.</li> </ul>	800 kHz; with quadruple evaluation
Cable length, shielded, max.	600 m; depending on input frequency, encoder and cable quality; max. 50 m at 200 kHz
<ul> <li>Signal filter, parameterizable</li> </ul>	Yes
<ul> <li>Incremental encoder with A/B tracks, 90° phase offset</li> </ul>	Yes
<ul> <li>Incremental encoder with A/B tracks, 90° phase offset and zero track</li> </ul>	Yes
pulse encoder	Yes
pulse encoder with direction	Yes
pulse encoder with one impulse signal per count direction	Yes
Encoder signal 24 V	
— permissible voltage at input, min.	-30 V
— permissible voltage at input, max.	30 V
Interface types	
Source/sink input	Yes
<ul> <li>Input characteristic curve in accordance with IEC 61131, type 3</li> </ul>	Yes
Isochronous mode Filtering and processing time (TCI), min.	130 µs
	130 μs 250 μs
Filtering and processing time (TCI), min.	
Filtering and processing time (TCI), min. Bus cycle time (TDP), min.	
Filtering and processing time (TCI), min. Bus cycle time (TDP), min. Interrupts/diagnostics/status information	
Filtering and processing time (TCI), min. Bus cycle time (TDP), min. Interrupts/diagnostics/status information Alarms	250 μs
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm	250 μs Yes
Filtering and processing time (TCI), min. Bus cycle time (TDP), min. Interrupts/diagnostics/status information Alarms • Diagnostic alarm • Hardware interrupt	250 μs Yes
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Hardware interrupt         Diagnoses	250 μs Yes Yes
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Hardware interrupt         Diagnoses         • Monitoring the supply voltage	250 μs Yes Yes
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Hardware interrupt         Diagnoses         • Monitoring the supply voltage         • Wire-break	250 μs Yes Yes Yes Yes
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Hardware interrupt         Diagnoses         • Monitoring the supply voltage         • Wire-break         • Short-circuit	250 μs Yes Yes Yes Yes Yes
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Hardware interrupt         Diagnoses         • Monitoring the supply voltage         • Wire-break         • Short-circuit         • A/B transition error at incremental encoder	250 μs Yes Yes Yes Yes Yes
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Hardware interrupt         Diagnoses         • Monitoring the supply voltage         • Wire-break         • Short-circuit         • A/B transition error at incremental encoder         Diagnostics indication LED	250 μs Yes Yes Yes Yes Yes Yes
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Hardware interrupt         Diagnoses         • Monitoring the supply voltage         • Short-circuit         • A/B transition error at incremental encoder         Diagnostics indication LED         • RUN LED	250 μs Yes Yes Yes Yes Yes Yes Yes
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Hardware interrupt         Diagnoses         • Monitoring the supply voltage         • Wire-break         • Short-circuit         • A/B transition error at incremental encoder         Diagnostics indication LED         • RUN LED         • ERROR LED	250 μs Yes Yes Yes Yes Yes Yes Yes Yes Yes; green LED Yes; red LED
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms <ul> <li>Diagnostic alarm</li> <li>Hardware interrupt</li> </ul> Diagnoses <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> <li>A/B transition error at incremental encoder</li> </ul> Diagnostics indication LED <ul> <li>RUN LED</li> <li>ERROR LED</li> <li>MAINT LED</li> </ul>	250 μs Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Hardware interrupt         Diagnoses         • Monitoring the supply voltage         • Wire-break         • Short-circuit         • A/B transition error at incremental encoder         Diagnostics indication LED         • RUN LED         • ERROR LED         • MAINT LED         • Monitoring of the supply voltage (PWR-LED)	250 μs Yes Yes Yes Yes Yes Yes Yes Yes Yes; green LED Yes; red LED Yes; red LED Yes; green LED Yes; green LED
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Hardware interrupt         Diagnoses         • Monitoring the supply voltage         • Wire-break         • Short-circuit         • A/B transition error at incremental encoder         Diagnostics indication LED         • RUN LED         • MAINT LED         • Monitoring of the supply voltage (PWR-LED)         • Channel status display	250 μs Yes Yes Yes Yes Yes Yes Yes Yes Yes; green LED Yes; red LED Yes; Yellow LED Yes; green LED Yes; green LED Yes; green LED
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Hardware interrupt         Diagnoses         • Monitoring the supply voltage         • Wire-break         • Short-circuit         • A/B transition error at incremental encoder         Diagnostics indication LED         • RUN LED         • ERROR LED         • Monitoring of the supply voltage (PWR-LED)         • Channel status display         • for channel diagnostics	250 μs Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms <ul> <li>Diagnostic alarm</li> <li>Hardware interrupt</li> </ul> Diagnoses <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> <li>A/B transition error at incremental encoder</li> </ul> Diagnostics indication LED       RUN LED <ul> <li>RUN LED</li> <li>Maintoring of the supply voltage (PWR-LED)</li> <li>Channel status display</li> <li>for channel diagnostics</li> <li>Status indicator forward counting (green)</li> </ul>	250 μs Yes Yes Yes Yes Yes Yes Yes Ye
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms <ul> <li>Diagnostic alarm</li> <li>Hardware interrupt</li> </ul> Diagnoses <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> <li>A/B transition error at incremental encoder</li> </ul> Diagnostics indication LED           RUN LED           ERROR LED           Monitoring of the supply voltage (PWR-LED)           Channel status display           for channel diagnostics           Status indicator forward counting (green)           Status indicator backward counting (green)	250 μs Yes Yes Yes Yes Yes Yes Yes Ye
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms <ul> <li>Diagnostic alarm</li> <li>Hardware interrupt</li> </ul> Diagnoses <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> <li>A/B transition error at incremental encoder</li> </ul> Diagnostics indication LED           RUN LED           ERROR LED           Monitoring of the supply voltage (PWR-LED)           Channel status display           for channel diagnostics           Status indicator forward counting (green)           Status indicator backward counting (green)	250 μs Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms <ul> <li>Diagnostic alarm</li> <li>Hardware interrupt</li> </ul> Diagnoses <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> <li>A/B transition error at incremental encoder</li> </ul> Diagnostics indication LED           RUN LED           ERROR LED           Monitoring of the supply voltage (PWR-LED)           Channel status display           for channel diagnostics           Status indicator forward counting (green)           Status indicator backward counting (green)           Status indicator backward counting (green)           Number of counters	250 μs Yes Yes Yes Yes Yes Yes Yes Ye
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms <ul> <li>Diagnostic alarm</li> <li>Hardware interrupt</li> </ul> Diagnoses <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> <li>A/B transition error at incremental encoder</li> </ul> Diagnostics indication LED <ul> <li>RUN LED</li> <li>ERROR LED</li> <li>Monitoring of the supply voltage (PWR-LED)</li> <li>Channel status display</li> <li>for channel diagnostics</li> <li>Status indicator forward counting (green)</li> <li>Status indicator backward counting (green)</li> <li>Status indicator backward counting (green)</li> </ul> Integrated Functions         Counter       Number of counters <ul> <li>Counting frequency, max.</li> </ul>	250 μs Yes Yes Yes Yes Yes Yes Yes Ye
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms <ul> <li>Diagnostic alarm</li> <li>Hardware interrupt</li> </ul> Diagnoses <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> <li>A/B transition error at incremental encoder</li> </ul> Diagnostics indication LED <ul> <li>RUN LED</li> <li>ERROR LED</li> <li>Monitoring of the supply voltage (PWR-LED)</li> <li>Channel status display</li> <li>for channel diagnostics</li> <li>Status indicator forward counting (green)</li> <li>Status indicator backward counting (green)</li> <li>Status indicator backward counting (green)</li> </ul> Integrated Functions           Counter         Number of counters           Counting frequency, max.	250 μs Yes Yes Yes Yes Yes Yes Yes Ye
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms <ul> <li>Diagnostic alarm</li> <li>Hardware interrupt</li> </ul> Diagnoses <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> <li>A/B transition error at incremental encoder</li> </ul> Diagnostics indication LED <ul> <li>RUN LED</li> <li>ERROR LED</li> <li>Monitoring of the supply voltage (PWR-LED)</li> <li>Channel status display</li> <li>for channel diagnostics</li> <li>Status indicator forward counting (green)</li> <li>Status indicator backward counting (green)</li> <li>Status indicator backward counting (green)</li> </ul> Integrated Functions         Counter       Number of counters <ul> <li>Counting frequency, max.</li> </ul> Counting functions	250 μs Yes Yes Yes Yes Yes Yes Yes Ye
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Hardware interrupt         Diagnoses         • Monitoring the supply voltage         • Wire-break         • Short-circuit         • A/B transition error at incremental encoder         Diagnostics indication LED         • RUN LED         • ERROR LED         • Monitoring of the supply voltage (PWR-LED)         • Channel status display         • for channel diagnostics         • Status indicator forward counting (green)         • Status indicator backward counting (green)         • Status indicator backward counting (green)         • Counter         • Number of counters         • Counting frequency, max.         Counting functions         • Can be used with TO High_Speed_Counter         • Continuous counting	250 μs Yes Yes Yes Yes Yes Yes Yes Ye
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms         Diagnostic alarm         Hardware interrupt         Diagnoses         Monitoring the supply voltage         Wire-break         Short-circuit         A/B transition error at incremental encoder         Diagnostics indication LED         RUN LED         ERROR LED         Monitoring of the supply voltage (PWR-LED)         Channel status display         for channel diagnostics         Status indicator forward counting (green)         Status indicator backward counting (green)         Status indicator backward counting (green)         Integrated Functions         Counter         Number of counters         Counting frequency, max.         Counting functions         Can be used with TO High_Speed_Counter         Counter response parameterizable	250 µs Yes Yes Yes Yes Yes Yes Yes Ye
Filtering and processing time (TCI), min.         Bus cycle time (TDP), min.         Interrupts/diagnostics/status information         Alarms         • Diagnostic alarm         • Hardware interrupt         Diagnoses         • Monitoring the supply voltage         • Wire-break         • Short-circuit         • A/B transition error at incremental encoder         Diagnostics indication LED         • RUN LED         • ERROR LED         • Monitoring of the supply voltage (PWR-LED)         • Channel status display         • for channel diagnostics         • Status indicator forward counting (green)         • Status indicator backward counting (green)         • Status indicator backward counting (green)         • Counter         • Number of counters         • Counting frequency, max.         Counting functions         • Can be used with TO High_Speed_Counter         • Continuous counting	250 µs Yes Yes Yes Yes Yes Yes Yes Ye

<ul> <li>Event-controlled stop</li> </ul>	Yes
Synchronization via digital input	Yes
Counting range, parameterizable	Yes
Comparator	163
— Number of comparators	2; Per channel
— Direction dependency	Yes
— Can be changed from user program	Yes
Position detection	163
Incremental acquisition	Yes
Suitable for S7-1500 Motion Control	Yes
Measuring functions	100
Measuring time, parameterizable	Yes
Dynamic measurement period adjustment	Yes
Number of thresholds, parameterizable	2
Measuring range	-
— Frequency measurement, min.	0.04 Hz
— Frequency measurement, max.	800 kHz
- Cycle duration measurement, min.	1.25 µs
— Cycle duration measurement, max.	25 s
Accuracy	200
- Frequency measurement	100 ppm; depending on measuring interval and signal evaluation
— Cycle duration measurement	100 ppm; depending on measuring interval and signal evaluation
- Velocity measurement	100 ppm; depending on measuring interval and signal evaluation
Potential separation	
Potential separation channels	
between the channels	No
<ul> <li>between the channels and backplane bus</li> </ul>	Yes
Between the channels and load voltage L+	No
Isolation	
Isolation tested with	707 V DC (type test)
Ambient conditions	
Ambient temperature during operation	
Ambient temperature during operation	
horizontal installation min	0 °C
horizontal installation, min.	0 °C
• horizontal installation, max.	60 °C; Please note derating for inductive loads
<ul><li>horizontal installation, max.</li><li>vertical installation, min.</li></ul>	60 °C; Please note derating for inductive loads 0 °C
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul>	60 °C; Please note derating for inductive loads
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Altitude during operation relating to sea level	60 °C; Please note derating for inductive loads 0 °C 40 °C; Please note derating for inductive loads
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul>	60 °C; Please note derating for inductive loads 0 °C
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Altitude during operation relating to sea level	60 °C; Please note derating for inductive loads 0 °C 40 °C; Please note derating for inductive loads 5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200MP
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul>	60 °C; Please note derating for inductive loads 0 °C 40 °C; Please note derating for inductive loads 5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200MP
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> Decentralized operation	60 °C; Please note derating for inductive loads 0 °C 40 °C; Please note derating for inductive loads 5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200MP system manual
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> <li>Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> </li> <li>Decentralized operation <ul> <li>to SIMATIC S7-300</li> </ul> </li> </ul>	60 °C; Please note derating for inductive loads 0 °C 40 °C; Please note derating for inductive loads 5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200MP system manual Yes
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> <li>Altitude during operation relating to sea level</li> <li>Installation altitude above sea level, max.</li> </ul> Decentralized operation <ul> <li>to SIMATIC S7-300</li> <li>to SIMATIC S7-400</li> </ul>	60 °C; Please note derating for inductive loads         0 °C         40 °C; Please note derating for inductive loads         5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200MP system manual         Yes         Yes         Yes
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> <li>Altitude during operation relating to sea level         <ul> <li>Installation altitude above sea level, max.</li> </ul> </li> <li>Decentralized operation         to SIMATIC S7-300         to SIMATIC S7-400         to SIMATIC S7-1200</li> </ul>	60 °C; Please note derating for inductive loads         0 °C         40 °C; Please note derating for inductive loads         5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200MP system manual         Yes         Yes         Yes         Yes         Yes         Yes
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> <li>Altitude during operation relating to sea level         <ul> <li>Installation altitude above sea level, max.</li> </ul> </li> <li>Decentralized operation         to SIMATIC S7-300         to SIMATIC S7-400         to SIMATIC S7-1200         to SIMATIC S7-1500</li> </ul>	60 °C; Please note derating for inductive loads 0 °C 40 °C; Please note derating for inductive loads 5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200MP system manual Yes Yes Yes Yes
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> <li>Altitude during operation relating to sea level         <ul> <li>Installation altitude above sea level, max.</li> </ul> </li> <li>Decentralized operation         to SIMATIC S7-300         to SIMATIC S7-400         to SIMATIC S7-1200         to SIMATIC S7-1500         to standard PROFIBUS master</li> </ul>	60 °C; Please note derating for inductive loads         0 °C         40 °C; Please note derating for inductive loads         5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200MP system manual         Yes         Yes; FW V1.1 and higher
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> <li>Altitude during operation relating to sea level         <ul> <li>Installation altitude above sea level, max.</li> </ul> </li> <li>Decentralized operation         to SIMATIC S7-300         to SIMATIC S7-400         to SIMATIC S7-1200         to SIMATIC S7-1500         to standard PROFIBUS master         to standard PROFINET controller</li> </ul>	60 °C; Please note derating for inductive loads         0 °C         40 °C; Please note derating for inductive loads         5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200MP system manual         Yes         Yes; FW V1.1 and higher
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> <li>Altitude during operation relating to sea level         <ul> <li>Installation altitude above sea level, max.</li> </ul> </li> <li>Decentralized operation         to SIMATIC S7-300         to SIMATIC S7-400         to SIMATIC S7-1200         to SIMATIC S7-1500         to standard PROFIBUS master         to standard PROFINET controller         <ul> <li>Dimensions</li> </ul> </li> </ul>	60 °C; Please note derating for inductive loads 0 °C 40 °C; Please note derating for inductive loads 5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200MP system manual Yes Yes Yes Yes Yes Yes; FW V1.1 and higher Yes
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> Decentralized operation <ul> <li>to SIMATIC S7-300</li> <li>to SIMATIC S7-400</li> <li>to SIMATIC S7-1200</li> <li>to SIMATIC S7-1500</li> <li>to standard PROFIBUS master</li> <li>to standard PROFINET controller</li> </ul> Dimensions Width	60 °C; Please note derating for inductive loads         0 °C         40 °C; Please note derating for inductive loads         5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200MP system manual         Yes         Yes         Yes         Yes         Yes; FW V1.1 and higher         Yes         35 mm
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> <li>Altitude during operation relating to sea level         <ul> <li>Installation altitude above sea level, max.</li> </ul> </li> <li>Decentralized operation         <ul> <li>to SIMATIC S7-300</li> <li>to SIMATIC S7-400</li> <li>to SIMATIC S7-1200</li> <li>to SIMATIC S7-1500</li> <li>to standard PROFIBUS master</li> <li>to standard PROFINET controller</li> </ul> </li> <li>Dimensions         <ul> <li>Width</li> <li>Height</li> <li>Depth</li> </ul> </li> </ul>	60 °C; Please note derating for inductive loads         0 °C         40 °C; Please note derating for inductive loads         5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200MP system manual         Yes         Yes         Yes         Yes         Yes; FW V1.1 and higher         Yes         35 mm         147 mm
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul> Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> </ul> Decentralized operation <ul> <li>to SIMATIC S7-300</li> <li>to SIMATIC S7-400</li> <li>to SIMATIC S7-1200</li> <li>to SIMATIC S7-1500</li> <li>to standard PROFIBUS master</li> <li>to standard PROFINET controller</li> </ul> Dimensions <ul> <li>Width</li> <li>Height</li> <li>Depth</li> </ul> Weights	60 °C; Please note derating for inductive loads         0 °C         40 °C; Please note derating for inductive loads         5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200MP system manual         Yes         Yes         Yes         Yes; FW V1.1 and higher         Yes         35 mm         147 mm         129 mm
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> <li>Altitude during operation relating to sea level         <ul> <li>Installation altitude above sea level, max.</li> </ul> </li> <li>Decentralized operation         <ul> <li>to SIMATIC S7-300</li> <li>to SIMATIC S7-400</li> <li>to SIMATIC S7-1200</li> <li>to SIMATIC S7-1500</li> <li>to standard PROFIBUS master</li> <li>to standard PROFINET controller</li> </ul> </li> <li>Dimensions         <ul> <li>Width</li> <li>Height</li> <li>Depth</li> </ul> </li> </ul>	60 °C; Please note derating for inductive loads         0 °C         40 °C; Please note derating for inductive loads         5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200MP system manual         Yes         Yes         Yes         Yes         Yes; FW V1.1 and higher         Yes         35 mm         147 mm