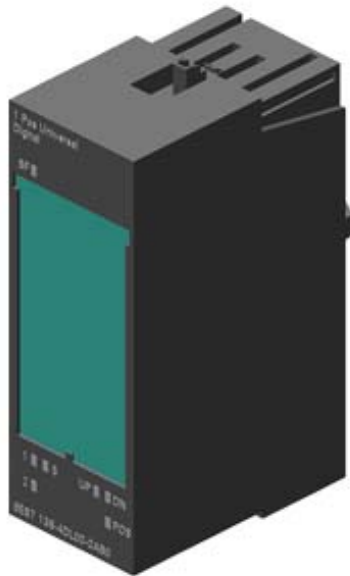


SIMATIC DP, Electronics module for ET 200S, 1 POS U, Controlled positioning with digital outputs for 5 V/24 V incremental encoder, SSI encoder, 30 mm overall width



Supply voltage	
Load voltage L+	
• Rated value (DC)	24 V
• permissible range, lower limit (DC)	20.4 V
• permissible range, upper limit (DC)	28.8 V
• Reverse polarity protection	Yes
Input current	
from load voltage L+ (without load), max.	55 mA
from backplane bus 3.3 V DC, max.	10 mA
Encoder supply	
5 V encoder supply	
• 5 V	No
24 V encoder supply	
• 24 V	Yes
• Short-circuit protection	Yes
• Output current, max.	500 mA
Absolute encoder (SSI) encoder supply	
• Absolute encoder (SSI)	Yes

• Type of output voltage	L+ (-0.8 V)
• Short-circuit protection	Yes
• Output current, max.	500 mA

#### Power loss

Power loss, typ.	2 W
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#### Digital inputs

Input characteristic curve in accordance with IEC 61131, type 2	Yes
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#### Input voltage

• Rated value (DC)	24 V
• for signal "0"	-30 to +5 V
• for signal "1"	+11 to +30V

#### Input current

• for signal "0", max. (permissible quiescent current)	2 mA
• for signal "1", typ.	9 mA

#### Input delay (for rated value of input voltage)

• Input frequency (with a time delay of 0.1 ms), max.	100 kHz
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#### Cable length

• unshielded, max.	50 m
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#### Digital outputs

Short-circuit protection	Yes
• Response threshold, typ.	0.7 to 1.8 A

Limitation of inductive shutdown voltage to	Yes; L+ (-55 to 60 V)
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Controlling a digital input	Yes
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#### Switching capacity of the outputs

• on lamp load, max.	5 W
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#### Output voltage

• Rated value (DC)	24 V
• for signal "0", max.	3 V
• for signal "1", min.	L+ (-1 V)

#### Output current

• for signal "1" permissible range for 0 to 60 °C, min.	7 mA
• for signal "1" permissible range for 0 to 60 °C, max.	600 mA
• for signal "0" residual current, max.	0.3 mA

#### Output delay with resistive load

• "0" to "1", max.	typically 150 μs
• "1" to "0", max.	typically 150 μs

#### Switching frequency

• with resistive load, max.	100 Hz
• with inductive load, max.	2 Hz
• on lamp load, max.	10 Hz
<b>Cable length</b>	
• shielded, max.	1 000 m
• unshielded, max.	600 m

## Encoder

Number of connectable encoders, max.	1
<b>Connectable encoders</b>	
• Incremental encoder (symmetrical)	Yes
• Incremental encoder (asymmetrical)	Yes
• Absolute encoder (SSI)	Yes
• 2-wire sensor	Yes; Type 2
<b>Encoder signals, incremental encoder (symmetrical)</b>	
<b>Encoder signal 5 V</b>	
— Signal level	to RS-422
— Terminating resistor	330 Ω
— Differential input voltage, min.	1 V
— Input frequency, max.	500 kHz
— Cable length, shielded, max.	50 m
<b>Encoder signals, absolute encoder (SSI)</b>	
• Cable length, shielded, max.	320 m at 125 kHz, 160 m at 250 kHz, 60 m at 500 kHz, 20 m at 1 MHz, 8 m at 2 MHz, twisted in pairs and shielded
• Monoflop time	64 μs
<b>Updating the encoder value</b>	
— Telegram runtime at 13 bit, min.	7 μs
— Telegram runtime at 25 bit, min.	13 μs

## Response times

Updating time of the feedback messages	1 ms
Latch	In the case of incremental encoders: typ. 400 ms; in the case of SSI encoders: typ. 400 ms + age of the encoder value:
Response time at switchover/switchoff point	In the case of incremental encoders: output delay + 30 μs; in the case of SSI encoders: output delay + message frame runtime + 30 ms

## Interrupts/diagnostics/status information

<b>Diagnostics indication LED</b>	
• Actual value falling DN (green)	Yes
• Actual value rising UP (green)	Yes
• Positioning mode POS (green)	Yes
• Group error SF (red)	Yes
• Status indicator digital input (green)	Yes

### Potential separation

between backplane bus and all other circuit components	Yes
between the channels and backplane bus	Yes

### Dimensions

Width	30 mm
Height	81 mm
Depth	52 mm

### Weights

Weight, approx.	65 g
<b>last modified:</b>	06/12/2020