

SIMATIC S7-200 SMART, Digital I/O SM DT32, 16DI/16DO, 16 DI 24 V DC, Sink/Source, 16 DO, Transistor 0.75A



Supply voltage	
Rated value (DC)	
<ul style="list-style-type: none"> • 24 V DC 	Yes
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Input current	
from backplane bus 5 V DC, typ.	170 mA; For 5 V DC from CPU module
Output voltage	
Power supply to the transmitters	
<ul style="list-style-type: none"> • Rated value (DC) 	24 V
<ul style="list-style-type: none"> • short-circuit proof 	No
Digital inputs	
Number of digital inputs	16
<ul style="list-style-type: none"> • in groups of 	2
Parallel switching of inputs	Yes
Input characteristic curve in accordance with IEC 61131, type 1	Yes
Number of simultaneously controllable inputs	

horizontal installation	
— up to 50 °C, max.	16
vertical installation	
— up to 40 °C, max.	16
Input voltage	
• Type of input voltage	DC
• Rated value (DC)	24 V
• for signal "0"	< 5 V DC
• for signal "1"	+15 to +30V
Input current	
• for signal "0", max. (permissible quiescent current)	1 mA
• for signal "1", min.	2.5 mA
• for signal "1", max.	5 mA
• for signal "1", typ.	4 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— at "0" to "1", max.	200 µs
— at "1" to "0", max.	200 µs
Cable length	
• shielded, max.	500 m
• unshielded, max.	300 m
Digital outputs	
Number of digital outputs	16
• in groups of	3
Current-sinking	No
Current-sourcing	Yes
Short-circuit protection	No
Switching capacity of the outputs	
• with resistive load, max.	0.75 A
• on lamp load, max.	5 W
Output voltage	
• Rated value (DC)	24 V
• for signal "0", max.	0.1 V
• for signal "1", min.	20 V
• for signal "1", max.	28.8 V; max. value is equal to feed L+
Output current	
• for signal "1" rated value	0.75 A
Output delay with resistive load	
• "0" to "1", max.	50 µs
• "1" to "0", max.	200 µs
Parallel switching of two outputs	

<ul style="list-style-type: none"> • for logic links 	Yes; only outputs of the same group
<ul style="list-style-type: none"> • for uprating 	Yes; possible (only outputs of the same group)
<ul style="list-style-type: none"> • for redundant control of a load 	Yes; only outputs of the same group
Total current of the outputs (per group)	
all mounting positions	
— up to 40 °C, max.	6 A; For the group of eight points , the current is 6 A ; for the group of four points , the current is 3A
horizontal installation	
— up to 50 °C, max.	6 A; For the group of eight points , the current is 6 A ; for the group of four points , the current is 3A
vertical installation	
— up to 40 °C, max.	6 A; For the group of eight points , the current is 6 A ; for the group of four points , the current is 3A
all other mounting positions	
— up to 40 °C, max.	6 A; For the group of eight points , the current is 6 A ; for the group of four points , the current is 3A
Interrupts/diagnostics/status information	
Diagnostics indication LED	
<ul style="list-style-type: none"> • for status of the inputs 	Yes
<ul style="list-style-type: none"> • for status of the outputs 	Yes
Potential separation	
Potential separation digital inputs	
<ul style="list-style-type: none"> • between the channels 	Yes; Optocoupler
Potential separation digital outputs	
<ul style="list-style-type: none"> • between the channels 	Yes; Optocoupler
Isolation	
Isolation tested with	500V AC for 1 minute
EMC	
Interference immunity against discharge of static electricity	
<ul style="list-style-type: none"> • Interference immunity against discharge of static electricity acc. to IEC 61000-4-2 	Yes; ±4 kV contact discharge (to IEC 801-2/IEC 1000-4-2; ESD), ±8 kV air discharge (to IEC 801-2/IEC 1000-4-2; ESD)
— Test voltage at air discharge	8 kV
— Test voltage at contact discharge	4 kV
Interference immunity against high-frequency electromagnetic fields	
<ul style="list-style-type: none"> • Interference immunity against high-frequency radiation acc. to IEC 61000-4-3 	Yes
— Frequency range of the RF radiation	80 to 1000 MHz, 10 V/m, 1.4 to 2.0 GHz, 3 V/m, 2.0 to 2.7 GHz, 1 V/m(In the range of 87 MHz to 187 MHz, 174 MHz to 230 MHz and 470 MHz to 790 MHz: 3V/m)
Interference immunity to cable-borne interference	
<ul style="list-style-type: none"> • Interference immunity on supply lines acc. to IEC 61000-4-4 	Yes; 2 kV acc. to IEC 61000-4-4, burst

<ul style="list-style-type: none"> • Interference immunity on signal cables acc. to IEC 61000-4-4 	Yes; ±2 kV acc. to IEC 61000-4-4, Burst
Interference immunity against voltage surge	
<ul style="list-style-type: none"> • on the supply lines acc. to IEC 61000-4-5 • asymmetric interference <ul style="list-style-type: none"> — Test voltage on supply cables — Test voltage on signal cables >30m 	<p>Yes; With upstream protective element</p> <p>2 kV</p> <p>2 kV</p>
Interference immunity against conducted variable disturbance induced by high-frequency fields	
<ul style="list-style-type: none"> • Interference immunity against high frequency current feed acc. to IEC 61000-4-6 • Interference immunity against high-frequency radiation acc. to IEC 61000-4-6 <ul style="list-style-type: none"> — Test voltage at 80% amplitude modulation with 1kHz in the range 9 kHz to 80 MHz 	<p>Yes</p> <p>Yes; 10 V/m, with 80% amplitude modulation at 1 kHz</p> <p>10 V</p>
Emission of radio interference acc. to EN 55 011	
<ul style="list-style-type: none"> • Emission of radio interference • Limit class A, for use in industrial areas 	<p>Interference emission to EN 50081-2, testing to EN 55011, Class A, Group 1</p> <p>Yes</p>
Degree and class of protection	
Degree of protection acc. to EN 60529	
<ul style="list-style-type: none"> • IP20 	Yes
Standards, approvals, certificates	
CE mark	Yes
Dimensions	
Width	70 mm
Height	100 mm
Depth	81 mm
Weights	
Weight, approx.	257.3 g
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