SIEMENS

Data sheet 6ES7288-2DT32-0AA0

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

General information	
Product type designation	SM DT32, DI 16x24 V DC, DQ 16x24 V DC/0.75 A
Supply voltage	
Rated value (DC)	24 V
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
Digital inputs	
Number of digital inputs	16
● 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 +30 V
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

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Output delay with resistive load	
● "0" to "1", max.	50 µs
● "1" to "0", max.	200 µs
Parallel switching of two outputs	
● for logic links	Yes; only outputs of the same group
● for uprating	Yes; possible (only outputs of the same group)
● 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	
● for status of the inputs	Yes
● for status of the outputs	Yes
Potential separation	
Potential separation digital inputs	
● between the channels	Yes; Optocoupler
Potential separation digital outputs	
● between the channels	Yes; Optocoupler
Isolation	
Isolation tested with	500 V AC for 1 minute
EMC	
Interference immunity against discharge of static electricity	
● 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	
● 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	
● Interference immunity on supply lines acc. to IEC 61000-4-4	Yes; 2 kV acc. to IEC 61000-4-4, burst
● 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	
● Interference immunity on supply lines acc. to IEC 61000-4-5	Yes; With upstream protective element
● asymmetric interference	
— Test voltage on supply cables	2 kV
— Test voltage on signal cables >30m	2 kV
Interference immunity against conducted variable disturbance induced by high-frequency fields	
● Interference immunity against high frequency current feed acc. to IEC 61000-4-6	Yes
● Interference immunity against high-frequency radiation acc. to IEC 61000-4-6	Yes; 10 V/m, with 80% amplitude modulation at 1 kHz
— Test voltage at 80% amplitude modulation with 1kHz in the range 9 kHz to 80 MHz	10 V
Emission of radio interference acc. to EN 55 011	
● Emission of radio interference	Interference emission to EN 50081-2, testing to EN 55011, Class A, Group 1
● Limit class A, for use in industrial areas	Yes
Degree and class of protection	

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IP degree of protection	IP20
Standards, approvals, certificates	
CE mark	Yes
Dimensions	
Width	70 mm
Height	100 mm
Depth	81 mm
Weights	
Weight, approx.	257.3 g

Classifications

	Version	Classification
eClass	14	27-24-22-04
eClass	12	27-24-22-04
eClass	9.1	27-24-22-04
eClass	9	27-24-22-04
eClass	8	27-24-22-04
eClass	7.1	27-24-22-04
eClass	6	27-24-22-04
ETIM	9	EC001419
ETIM	8	EC001419
ETIM	7	EC001419
IDEA	4	3566
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval

CE EG-Konf.

UK CA

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