SIEMENS

Data sheet 6ES7288-2DR32-0AA0

SIMATIC S7-200 SMART, Digital I/O SM DR32, 16DI/16DO, 16 DI 24 V DC, Sink/Source, 16 DO, relay 2 A

General information	
Product type designation	SM DR32, DI 16x24 V DC, DQ 16x relay/2A
Supply voltage	
Rated value (DC)	24 V
• 24 V DC	Yes
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Input current	
Current consumption, typ.	165 mA; Current for 24 V DC input power
from backplane bus 5 V DC, typ.	165 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
Short-circuit protection	No
Output current	
• for signal "1" rated value	2 A
Output delay with resistive load	
• "0" to "1", max.	10 ms
• "1" to "0", max.	10 ms
Relay outputs	
• Number of relay outputs	16
• Rated supply voltage of relay coil L+ (DC)	24 V
— Reverse polarity protection	Yes
• Current consumption of relays (coil current of all relays), max.	165 mA
Switching capacity of contacts	
— with inductive load, max.	2 A
— on lamp load, max.	30 W; 30 W with DC, 200 W with AC
— with resistive load, up to 50 °C, max.	2 A
— with resistive load, up to 60 °C, max.	2 A
— with resistive load, max.	2 A
— Thermal continuous current, max.	2 A

Cable length	
• shielded, max.	500 m
• unshielded, max.	150 m
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; Relay, dry contact
Isolation	
Isolation tested with	500 V AC for 1 minute for input isolation; 1500 V AC for 1 minute for output isolation
EMC	
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high-frequency radiation acc. to IEC 61000-4-3	
— 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 against voltage surge	
• 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 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	
Degree of protection acc. to EN 60529	IP20
• IP20	Yes
Standards, approvals, certificates	
CE mark	Yes
Dimensions	

Width	70 mm
Height	100 mm
Depth	81 mm

Weights	
Weight, approx.	295.4 g

last modified: 03/31/2020