



SIMATIC, electronic module for ET200iSP, 4 DO, 23.1 V DC/20 mA, "L"-shutdown, Ex ib (ia Ga) IIC T4 Gb, Ex ib [ia IIIC Da] IIC T4 Gb, Ex ib [ia] I Mb

General information	
Product brand name	SIMATIC
Product family	ET 200iSP
Product category	Digital module output
Product type designation	4DQ 23.1 V DC/20 mA
HW functional status	7
Firmware version	V3.0.0
Product version	SHUT DOWN "L"
Installation type/mounting	
Rack mounting	No
Front mounting	Yes
Rail mounting	Yes
Wall mounting/direct mounting	No
Supply voltage	
Type of supply voltage	DC
Input current	
Current consumption, typ.	290 mA
from load voltage (power bus), max.	340 mA; with actuator supply
Power loss	
Power loss, typ.	2.5 W
Address area	
Address space per module	
<ul style="list-style-type: none"> <li>Address space per module, max.</li> </ul>	2 byte
Hardware configuration	
Fieldbus connection via separate transceiver	Yes
Digital outputs	
Type of digital output	Transistor
Number of digital outputs	4; additionally 1 intrinsically-safe input for L shutdown
Short-circuit protection	Yes
No-load voltage $U_{ao}$ (DC)	23.1 V
Internal resistor $R_i$	275 $\Omega$
Trend key points E	
<ul style="list-style-type: none"> <li>Voltage <math>U_e</math> (DC)</li> <li>Current <math>I_e</math></li> </ul>	17.6 V 20 mA
Output voltage	
<ul style="list-style-type: none"> <li>Type of output voltage</li> <li>permissible voltage at output, min.</li> <li>permissible voltage at output, max.</li> </ul>	DC 0 V 23.1 V
Output current	
<ul style="list-style-type: none"> <li>for signal "1" rated value</li> </ul>	0.02 A

<b>Output delay with resistive load</b>	
• "0" to "1", max.	2 ms
• "1" to "0", max.	1.5 ms
<b>Parallel switching of two outputs</b>	
• for uprating	No; for Ex reasons not possible; nor for predecessor
<b>Switching frequency</b>	
• with resistive load, max.	100 Hz
• with inductive load, max.	2 Hz
<b>Cable length</b>	
• shielded, max.	500 m
• unshielded, max.	500 m
<b>Interfaces</b>	
Number of PROFINET interfaces	0
Number of RS 485 interfaces	0
<b>Protocols</b>	
Supports protocol for PROFINET IO	No
PROFIsafe	No
PROFIBUS	No
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes
<b>Alarms</b>	
• Diagnostic alarm	Yes; Parameterizable
• Hardware interrupt	No
<b>Diagnoses</b>	
• Diagnostic information readable	Yes
• Wire-break	Yes; $R > 10 \text{ kohms}$ , $I < 100 \text{ }\mu\text{A}$
• Short-circuit	Yes; $R < 80 \text{ Ohm}$ (one output), $R < 40 \text{ Ohm}$ (outputs connected in parallel)
<b>Diagnostics indication LED</b>	
• Group error SF (red)	Yes
• Status indicator digital output (green)	Yes
<b>Ex(i) characteristics</b>	
Module for Ex(i) protection	Yes; for more Co/Lo combinations, see certificate IECEx KEM 05.0011
<b>maximum values for connecting terminals for gas group IIC</b>	
• $U_o$ (no-load voltage), max.	25.6 V
• $I_o$ (short-circuit current), max.	96 mA
• $P_o$ (power output), max.	0.61 W
• $C_o$ (permissible external capacity), max.	98 nF
• $L_o$ (permissible external inductivity), max.	3 mH
• $U_i$ (intrinsically safe input voltage), max.	28 V; switch input circuit
• $P_i$ (intrinsically safe input power), max.	1.2 W; switch input circuit
• $C_i$ (internal capacity), max.	3 nF; switch input circuit
<b>Potential separation</b>	
<b>Potential separation digital outputs</b>	
• between the channels	No
• between the channels and backplane bus	Yes
• Between the channels and load voltage L+	Yes
<b>Degree and class of protection</b>	
IP degree of protection	IP30
<b>Standards, approvals, certificates</b>	
CE mark	CE 0344
UKCA mark	DEKRA 21UKEX0085 Importer UK: Siemens plc Manchester M20 2UR
cULus	LISTED E334384
FM approval	CLASSIFIED 3025852
Suitable for safety functions	No
INMETRO certificate	UL-BR 12.0073
reference designation according to IEC 81346-2 (2009)	K
<b>Highest safety class achievable in safety mode</b>	
• SIL acc. to IEC 61508	No
<b>Use in hazardous areas</b>	
• ATEX marking	II 2 G (1) G Ex ib [ia Ga] IIC T4 Gb II 2 G (1) D Ex ib [ia IIIC Da] IIC T4 Gb I M2 Ex ib [ia] I Mb

- ATEX certificate
- IECEx
- CCC Ex
- EAC Ex
- FM marking

KEMA 04 ATEX 1249  
 IECEx KEM 05.0011  
 2020322316002945  
 PB Ex ib [ia] I Mb 1Ex ib [ia Ga] IIC T4 Gb [Ex ia Da] IIC  
 Class I, Zone 1 AEx ib [ia] IIC T4 Ex ib IIC T4 NI, Class I, DIV.2, GP. A,B,C,D  
 T4 AIS, Class I, DIV.1, GP. A,B,C,D T4 DIP Class II, III, GP. E,F,G  
 ATEX gas explosion protection, Zone 1  
 ATEX dust explosion protection, Zone 21 always install in corresponding enclosure  
 Yes  
 Yes

- Explosion protection category for gas
- Explosion protection category for dust

- associated equipment (Ex ia)
- associated equipment (Ex ib)

Marine approval	
• Germanischer Lloyd (GL)	Yes
• American Bureau of Shipping (ABS)	Yes
• Bureau Veritas (BV)	Yes
• Det Norske Veritas (DNV)	Yes

connection method	
Design of electrical connection	Screw/spring-type terminal

Dimensions	
Width	30 mm
Height	129 mm
Depth	136.5 mm

Weights	
Weight, approx.	255 g

Classifications			
	Version	Classification	
eClass	14	27-24-26-04	
eClass	12	27-24-26-04	
eClass	9.1	27-24-26-04	
eClass	9	27-24-26-04	
eClass	8	27-24-26-04	
eClass	7.1	27-24-26-04	
eClass	6	27-24-26-04	
ETIM	10	EC001599	
ETIM	9	EC001599	
ETIM	8	EC001599	
ETIM	7	EC001599	
IDEA	4	3566	
UNSPSC	15	32-15-17-05	

**Approvals / Certificates**

General Product Approval



[Miscellaneous](#)

[China RoHS](#)

[KC](#)



**For use in hazardous locations**



[FM](#)



[Miscellaneous](#)



**For use in hazardous locations** **Maritime application**

[CCC-Ex](#)



[Miscellaneous](#)

[Miscellaneous](#)



Maritime application

Environment



[NK / Nippon Kaiji Kyokai](#)



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