SIEMENS

Data sheet

6ES7136-6DC00-0CA0



SIMATIC DP, electronic module ET 200SP, F-DQ 8x24VDC/0.5A PP HF, 15 mm width, up to PL E (ISO 13849) up to SIL 3 (IEC 61508)

General information	
Product type designation	F-DQ 8x24 V DC/0.5 A PP HF
Firmware version	
FW update possible	Yes
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC02
Product function	
• I&M data	Yes; I&M0 to I&M3
Engineering with	
 STEP 7 TIA Portal configurable/integrated from version 	V14 SP1 with HSP 202
 STEP 7 configurable/integrated from version 	V5.5 SP4 HF5
 PROFINET from GSD version/GSD revision 	V2.31
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
power supply according to NEC Class 2 required	No
Input current	
Current consumption (rated value)	75 mA; without load
Current consumption, max.	21 mA; From the backplane bus
output voltage / header	
Rated value (DC)	24 V
Power	
Power available from the backplane bus	70 mW
Power loss	
Power loss, typ.	3 W
Address area	
Address space per module	
Inputs	6 byte; 5 bytes non-RIOforFA; 6 bytes RIOforFA
Outputs	6 byte; 5 bytes non-RIOforFA; 6 bytes RIOforFA
Hardware configuration	
Automatic encoding	Yes
Electronic coding element type F	Yes
Digital outputs	
Type of digital output	Transistor
Number of digital outputs	8
Digital outputs, parameterizable	Yes
Short-circuit protection	Yes
Response threshold, typ.	Min. 0.7 A

Limitation of inductive shutdown voltage to Typ39 V Controlling a digital input Yes; digital output, according to IEC 61131-2, type 0.5 Switching capacity of the outputs 0.5 A • on Iamp load, max. 0.5 A = on Iamp load, max. 2 W Load resistance range 12 000 Ω Output voltage 24 V; L+ (0.5 V) Output voltage 0.5 A = ori signal *1" rated value 0.5 A, note derating data in the manual = ori signal *1" rated value 0.5 A, note derating data in the manual = ori apto fo *0, max. 3 A	On an airsuit dataatian	Na
Contention of a degraph reput of the control of the Control of LCC 01131-2, kyen 0.5 week and be active of the control of the control of the Control of Co	Open-circuit detection	No
Sinching passafty of the acquatsInterference of the acquats• with residue load, max.0.4 A• on lamp load, max.2 W• Coore limit12000 D• Coore limit2 DO D• Order limit0 SA• Order limit0 SA• Order limit0 SA• order limit0 SA• with residue load, max.0 SA• with residue load, max.0 SA, Note derating load in the manual• with residue load, max.0 SA, Note derating loads in the manual• with residue load, max.0 SA, Note derating loads in the manual• Unrest per module, max.0 SA, Note derating loads in the manual• Current per module, max.0 SA, Note derating loads in the manual• Current per module, max.0 SA, Note derating loads in the manual• Current per module, max.0 SA, Note derating loads in the manual• Current per module, max.0 SA, Note derating loads in the manual• Current per module, max.0 SA, Note derating loads in the manual• Current per module, max.0 SA, Note derating loads in the manual• Current per module, max.0 SA, Note derating loads in the manual• Current per module, max.0 SA, Note derating loads in the manual• Current per module, max.0 SA, Note derating loads in the manual• Current per module, max.0 SA, Note derating loads in the manual• Current per module, max.0 SA<		
• or large load, max.05 Åion large load, max.240Loaderstander mage48 Å Å• upper link48 Å Å• upper link2000 ÅOrtigal 11*, min.241/1 f (0.5 V)Ortigal 11*, min.05 ÅOrtigal 11*, min.05 Å		Yes; digital output, according to IEC 61131-2, type 0.5
o longe hand, max.2 WLoad resistance range4 & 0o longe i mit4 & 0o longe i mit2 000 0Collegal velocity2 000 0Collegal velocity2 000 0Collegal velocity2 000 0Collegal velocity0 5 AStand carrent max.0 5 AStand carrent max.0 1 Hz, according to EC 00647-51, DC-13, symmetricalvelocity long max.0 1 Hz, according to EC 00647-51, DC-13, symmetricalvelocity long max.0 1 Hz, according to EC 00647-51, DC-13, symmetricalvelocity long max.0 1 Hz, according to EC 00647-51, DC-13, symmetricalvelocity long max.0 1 Hz, according to EC 00647-51, DC-13, symmetricalvelocity long max.0 1 Hz, according to EC 00647-51, DC-13, symmetricalvelocity long max.0 1 Hz, according to EC 00647-51, DC-13, symmetricalvelocity long max.0 1 Hz, according to EC 00647-51, DC-13, symmetricalvelocity long max.0 1 Hz, according to EC 00647-51, DC-13, symmetricalvelocity long max.0 1 Hz, according to EC 00647-51, DC-13, symmetricalvelocity long max.0 1 Hz, according to EC 00647-51, DC-13, symmetricalvelocity long max.0 1 Hz, according to Ec 00647-51, DC-13, symmetricalvelocity long max.0 1 Hz, according to Ec 00647-51, DC-13, symmetricalvelocity long max.0 Avelocity long max.0 A<		
load residue range i upper limit 42 000 0 Unper limit 44 0 Unp		
• loger time48 0 outper time• upper time2000 0Output vertue• 0• of signal "1", min.24 VI. L4 (-0.5 V)• Outget current0.5 A• of signal "1" rated value0.5 A• with inductive load, max.0.1 Hz; according to IEC 60847.5 1, DC 13, symmetrical• with inductive load, max.0.1 Hz; according to IEC 60847.5 1, DC 13, symmetrical• with inductive load, max.0.5 A: note derating data in the manual• outrent of the outputs5 A: note derating data in the manual• Current per module, max.3 A: note derating data in the manual• Current per module, max.2 SA• - up to 50 °C, max.2 SA• - up to 50 °C, max.2 SA• - up to 50 °C, max.2 SA• uph to 50 °C, max.100 m• unsheided, max.Yes• Diagonsta functionYes• Pols 50 °C, max.Yes• Pols 50 °C, max.Yes• unsheided, max.100 m• unsheided, max.100 m• unsheided, max.Yes• output to the subject of the subjec	 on lamp load, max. 	2 W
• upger limit12 000 ÅOutput solating- for signal "f. min.24 V: L+ (-0.5 V)Comput content- for signal "f. red value0.5 Å- for signal "f. red value0.5 Å- of signal "f. red value0.5 Å- of redical cornert, max.0.5 Å- with redictive load, max.0.1 Hz, according to IGC 6047-5-1, DC-13, symmetrical- with redictive load, max.0.1 Hz, according to IGC 6047-5-1, DC-13, symmetrical- on lang load, max.0.5 Å note derating data in the manual- on lang load, max.0.5 Å note derating data in the manual- on pot 60 tronouble, max.0.5 Å note derating data in the manual- Our of the outputs (per module)3 Å- on pot 60 tronouble, max.2 Å- on pot 60 tronouble, max.3 Å- on pot 60 tronouble, max.100 m- on p	Load resistance range	
Output vertiage• for signal *** min.24 V. L + (-0.5 V)• for signal *** rated value0.5 A• with inductive load, max.0.1 Hz; symmetrical• with inductive load, max.0.1 Hz; scoreding to iEC 60947-5-1, DC-13, symmetrical• with inductive load, max.1.1 Hz; scoreding to iEC 60947-5-1, DC-13, symmetrical• with inductive load, max.1.1 Hz; scoreding to iEC 60947-5-1, DC-13, symmetrical• with inductive load, max.1.1 Hz; scoreding to iEC 60947-5-1, DC-13, symmetrical• with inductive load, max.1.1 Hz; scoreding to iEC 60947-5-1, DC-13, symmetrical• out nam load, max.1.1 Hz; scoreding to atta in the manual• Current per module, max.3.4 note derating data in the manual• Current per module, max.2.4 A• out to 50 °C, max.2.4 A• up to 60 °C, max.2.4 A• up to 60 °C, max.2.4 A• up to 60 °C, max.1.00 m• unitielited, max.1.00 m• unitielit	lower limit	48 Ω
• los signal ***, nin.24V. L+ (.0.5 V)Output current.• los signal *** red value0.5 A• los signal *** red value0.5 RA• of signal *** red value0.5 RA• of signal *** red value0.5 RA• with indictive load, max.0.8 L*. Symmetrical• with indictive load, max.0.8 L*. Symmetrical• with indictive load, max.0.8 L*. Symmetrical• of namp load, max.0.8 A: note derating data in the manual• Current per channel, max.0.8 A: note derating data in the manual• Current per channel, max.0.8 A: note derating data in the manual• Current per channel, max.0.8 A: note derating data in the manual• Current per module, max.2.4 A• outp 0.60 °C, max.2.A- up 0.60 °C, max.2.A• up 0.60 °C, max.2.A• up 0.60 °C, max.100 m• unshided, max.100 m<	• upper limit	12 000 Ω
Output convent 0.5 A I-for signal "1" readvalue 0.5 A Smitching frequency 0.5 mA Switching frequency 0.5 mA with resistive load, max. 0.1 Hz; symmetrical with resistive load, max. 0.1 Hz; symmetrical with resistive load, max. 0.1 Hz; symmetrical ion lang load, max. 10 Hz; Symmetrical ion lang load, max. 10 Hz; Symmetrical Current for homel, max. 3 A: note derating data in the manual Current for homel, max. 3 A: note derating data in the manual Current for wordule, max. 3 A - up to 60 °C, max. 2 S A - up to 60 °C, max. 2 S A - up to 60 °C, max. 2 A vertical installation 100 m - up to 50 °C, max. 2 A Cable length 100 m - up to 50 °C, max. 2 S A - up to 50 °C, max. 2 S A - sheleda, max. 100 m - sheleda, max. 100 m - sheleda, max. 100 m - sheleda, max. 100 m <tr< td=""><td>Output voltage</td><td></td></tr<>	Output voltage	
• for signal "0" residual current, max.0.5 mA• of misgnal "0" residual current, max.0.5 mA• with indictive load, max.30 Hz: Symmetrical• with indictive load, max.1.14: according to IEC 60347-5-1, DC-13, symmetrical• with indictive load, max.2.14: Symmetrical• of namp load, max.1.01: Symmetrical• of namp load, max.0.5 A: note derating data in the manual• Outment per channel, max.3.6 A: note derating data in the manual• Current per module, max.3.6 A: note derating data in the manual• Current per module, max.3.6 A: note derating data in the manual• Out of 0.7, max.3.6 A• up to 50 °C, max.2.5 A• up to 50 °C, max.2.6 A• up to 50 °C, max.2.6 A• up to 50 °C, max.100 m• up to 50 °C, max.100 m• unshielded, max.100 m• Uns	 for signal "1", min. 	24 V; L+ (-0.5 V)
• for signal "0" residual current, max.0.5 mASwitching frequency• with residual load, max.0.1 Hz. scording to EC 80947-5-1, DC-13, symmetrical• with residue load, max.0.1 Hz. scording to EC 80947-5-1, DC-13, symmetrical• on lamp load, max.10 Hz. Symmetrical• Courrent per channel, max.0.5 A, note derating data in the manual• Courrent per channel, max.0.5 A, note derating data in the manual• Courrent per channel, max.0.5 A, note derating data in the manual• Courrent per module, max.3 A• outp to 50 °C, max.2.5 A up to 50 °C, max.3 A• Stalledido, max.100 m• unshelded, max.100 m• unst	Output current	
Switching frequency vith inductive lead, max. 0.1 Hz; according to IEC 60947-5-1, DC-13, symmetrical vith inductive lead, max. 2.1 Hz; Symmetrical 0.1 Hz; according to IEC 60947-5-1, DC-13, symmetrical vith inductive lead, max. 2.1 Hz; Symmetrical 2.0 rand pload, max. 2.1 Hz; Symmetrical 0.1 Hz; according to IEC 60947-5-1, DC-13, symmetrical vith inductive lead, max. 2.1 Hz; Symmetrical 2.0 rand pload, max. 2.1 Hz; Symmetrical vith inductive lead, max. 2.5 A; note derating data in the manual Current per module, max. 3.4 A - up to 50 °C, max. 2.6 A vertical installation - up to 50 °C, max. 2.6 A vertical installation - up to 50 °C, max. 2.6 A vertical installation - up to 50 °C, max. 2.6 A vertical installation - up to 50 °C, max. 2.6 A vertical installation - up to 50 °C, max. 100 m vertical installation - up to 50 °C, max. 2.6 A vertical installation vertical installation vertical installation vertical max	 for signal "1" rated value 	0.5 A
with resistive load, max.30 Hz: Symmetricalwith reductive load, max.11 Hz: according to EC 60947.51, DC-13, symmetricalo lamp load, max.10 Hz: Symmetricalo lamp load, max.10 Hz: Symmetricalc Current per channel, max.0.5 A: note derating data in the manualCurrent per module, max.0.5 A: note derating data in the manualCurrent per module, max.3.A: note derating data in the manualTotal current of the outputs2.5 A- up to 50 °C, max.2.5 A- up to 50 °C, max.2.5 A- up to 50 °C, max.2.4 ACeteleratif2.4 A- up to 50 °C, max.2.6 A- up to 50 °C, max.100 m- up to 50 °C, max.100 m- unscheided, max.100 m- n	 for signal "0" residual current, max. 	0.5 mA
with inductive load, max.0.1 Hz; according to IEC 60947-5-1, DC-13, symmetrical• with capacitive load, max.2.Hz; Symmetrical• on lamp load, max.3.5 A; note derating data in the manual• Current per homanel, max.3.5 A; note derating data in the manual• Current per homanel, max.3.4; note derating data in the manual• Current per homanel, max.3.4; note derating data in the manual• Current per homanel, max.3.4; note derating data in the manual• Current per homanel, max.3.4; note derating data in the manual• Up to 40 °C; max.2.5 A;- up to 60 °C; max.2.4• up to 60 °C; max.1.00 m• unshelded, max.100 m• unshel	Switching frequency	
• with capacitive load, max.2 Hz: Symmetrical• on lamp load, max.10 Hz: Symmetrical• Current per channel, max.0.5 A. note derating data in the manual• Current per module, max.3.4• Current per module, max.3.4- up to 40 °C, max.3.4- up to 60 °C, max.2.5 A- up to 60 °C, max.2.6 A- up to 60 °C, max.2.6 A- up to 60 °C, max.2.6 A- up to 50 °C, max.2.6 A- up to 50 °C, max.100 m• ushelded, max.100 m </td <td>• with resistive load, max.</td> <td>30 Hz; Symmetrical</td>	• with resistive load, max.	30 Hz; Symmetrical
• with capacitive load, max.2 Hz: Symmetrical• on lamp load, max.10 Hz: Symmetrical• Current per channel, max.0.5 A. note derating data in the manual• Current per module, max.3.4• Current per module, max.3.4- up to 40 °C, max.3.4- up to 60 °C, max.2.5 A- up to 60 °C, max.2.6 A- up to 60 °C, max.2.6 A- up to 60 °C, max.2.6 A- up to 50 °C, max.2.6 A- up to 50 °C, max.100 m• ushelded, max.100 m </td <td>• with inductive load, max.</td> <td></td>	• with inductive load, max.	
• on lamp load, max.10 Hz; SymmetricalTotal current of the outputs5.5.4, note derating data in the manual• Current per rhannel, max.3.6. note derating data in the manualTotal current of the outputs (per module)International installation3.4. note derating data in the manual- up to 40 °C, max.3.4 up to 60 °C, max.2.5. A up to 60 °C, max.2.4.Cable length2.4 up to 60 °C, max.100 m• unshelded, max.No• Diagnostic sfunctionYes• Diagnostic sfunctionYes• Diagnostic functionYes (preen LED• ENROR LEDYes; (per LED• ENROR LEDYes; (per LED• ENROR LEDYes; (per LED• Channel status displayYes; (per LED• Channel status displayYes; (per LED• Channel diagnosticsYes; (per LED• Enterlist separation channelsNo• between the channels and backpiane busYes• between the channels an		
Total current of the outputs 0.5 A, note derating data in the manual • Current per notable, max. 0.5 A, note derating data in the manual • Current per notable, max. 3 A • up to 40 °C, max. 3 A - up to 50 °C, max. 2 A • up to 50 °C, max. 100 m • shielded, max. 100 m • up to 50 °C, max. 100 m	-	
• Current per channel, max.0.5 A; note derating data in the manual• Current per module, max.3 A; note derating data in the manualTotal current of the outputs (per module)• horizontal installation		, synnioursen
• Current of the outputs (per module) Total current of the outputs (per module) horizontal installation - up to 40 °C, max. 3 A - up to 50 °C, max. 2.5 A - up to 60 °C, max. 2.5 A - up to 60 °C, max. 2.6 A vertical installation - up to 50 °C, max. 3 A Cable length vertical installation - up to 50 °C, max. 3 A Cable length - up to 50 °C, max. 3 A - up to 50 °C, max. 3 A - up to 50 °C, max. 3 A - up to 50 °C, max. 4 A - up to famile up op to fam fue to 50 °C, fam. 4 C - up t	·	0.5 A: note derating data in the manual
Total current of the outputs (per module) horizontal installation	-	· · · · · · · · · · · · · · · · · · ·
horizontal installationup to 40°C, max.3 Aup to 60°C, max.2.5 Aup to 60°C, max.2 ACable length	· · · · · · · · · · · · · · · · · · ·	
up to 40 °C, max. 3 Å up to 50 °C, max. 2.5 Å up to 50 °C, max. 2 Å vertical installation up to 50 °C, max. up to 50 °C, max. 2 Å Cable length 100 m inshielded, max. 100 m Substitute values connectable No Alarma		
-up to 60 °C, max. 2 A vertical installation 2 -up to 50 °C, max. 2 A Cable length 100 m • unshielded, max. 100 m • unshielded, max. 100 m • unshielded, max. 100 m Diagnostics function Yes Substitute values connectable No Alarms • Diagnostics fairm • Diagnostics fairm Yes; green LED • RUN LED Yes; green LED • RUN LED Yes; green LED • Channel status display Yes; green LED • for ordname diagnostics Yes; green LED • for module diagnostics Yes; green VR LED • between the channels No • between the channels No • between the channels No • between the channels and the power supply of the electronics No between the channels and backplane bus Yes		
vertical installation 2 A	•	
up to 50 °C, max. 2 A Cable length up to 50 °C, max. 100 m • shielded, max. 100 m -unshielded, max. 100 m • unshielded, max. 100 m -up to 50 °C, max. 100 m • unshielded, max. 100 m -up to 50 °C, max. 100 m • unshielded, max. 100 m -up to 50 °C, max. 100 m • unshielded, max. 100 m -up to 50 °C, max. 100 m • unshielded, max. 100 m -up to 50 °C, max. 100 m • to sup to 50 °C, max. 100 m -up to 50 °C, max. 100 m • to rup to 50 °C, max. 100 m No 100 m • to to to 50 °C, max. Yes 100 m 100 m • to to to 50 °C, max. Yes green LED Yes; red LED Yes; red LED 100 m 100 m 100 m 100 m • to thame id lagnostics Yes; red LED Yes; red LED 100 m 100 m <td></td> <td>2 A</td>		2 A
Cable length 100 m • inshielded, max. 100 m • unshielded, max. 100 m Diagnostics function 100 m Diagnostics function Yes Diagnostics function Yes Substitue values connectable No Alarms - • Diagnostic alarm Yes • Diagnostic sindication LED Yes; green LED • ERROR LED Yes; green PWR LED • Channel status display Yes; green PWR LED • Or of namel diagnostics Yes; green PWR LED • for module diagnostics Yes; green PWR LED • for module diagnostics Yes; green LED • between the channels No • between the channels No • between the channels No • between the channels and backplane bus Yes • between the channels No <		
• shielded, max.100 m• unshielded, max.100 mterupts/diagnostics/status informationUragnostics functionYesDiagnostics functionNoAlarms• Diagnostics alarmYes• Diagnostics indication LED• RUN LEDYes; green LED• RROR LEDYes; green PUR LED• Channel status displayYes; green PUR LED• Or ondamel diagnosticsYes; green PUR LED• for dnamel diagnosticsYes; green PUR LED• for module diagnosticsYes; green PUR LED• for module diagnosticsYes; green ICD• between the channelsNo• between the channels and backplane busYes• between the channelsNo• between the channels and the power supply of the electronicsNo• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsNo• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYes <td>— up to 50 °C, max.</td> <td>2 A</td>	— up to 50 °C, max.	2 A
• unshielded, max. 100 m terrupts/diagnostics/status information terrupts/diagnostics/status information lagnostics function Substitute values connectable Substitute values	Cable length	
Iterrupts/diagnostics/status information Yes Diagnostics function No Atarms • Diagnostic alarm Yes • Diagnostic alarm Yes Diagnostic alarm Yes Diagnostic alarm Yes Diagnostic alarm Yes Diagnostic alarm Yes; green LED • RUN LED Yes; green NPW LED • Channel status display Yes; green PWR LED • Channel status display Yes; green LED • for channel diagnostics Yes; green LED • for channel diagnostics Yes; green ILED • for channel diagnostics Yes; green/red DIAG LED • for module diagnostics Yes; green/red DIAG LED • for channel sand backplane bus Yes • between the channels No • between the channels and backplane bus Yes • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No • balatoin tested with 707 V DC (type test) tandards, approvals, certificates Yes Suitab	 shielded, max. 	100 m
Diagnostics function Yes Substitute values connectable No Alarms	 unshielded, max. 	100 m
Substitute values connectable No Alarms Ves Diagnostic alarm Yes Diagnostic alarm Yes Diagnostic alarm Yes Polagnostic alagnostics Yes Polagnostics Yes Polagnostics Yes Polential separation channels No Polential separation channels No Polential separation channels No Polential separation channels and backplane bus Yes Polential separation channels No Polential separation channels No Polation Yes Solitation tested with 707 V DC (type test) tandards, approvals, cortificates Yes <td>Interrupts/diagnostics/status information</td> <td></td>	Interrupts/diagnostics/status information	
Alarms Yes Diagnostics indication LED Yes; green LED • ERROR LED Yes; green LED • Monitoring of the supply voltage (PWR-LED) Yes; green PWR LED • Channel status display Yes; green PWR LED • for channel diagnostics Yes; green LED • for channel diagnostics Yes; green LED • for module diagnostics Yes; green/red DIAG LED • between the channels No • between the channels Yes • between the channels and backplane bus Yes • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No • bottween the channels and the power supply of the electronics Yes • bottween the channels and the power supply of the electronics No • bottween the channels and the power supply of the electronics Yes • clatal a. approvals. cortificates Yes <t< td=""><td>Diagnostics function</td><td>Yes</td></t<>	Diagnostics function	Yes
• Diagnostic alarmYesDiagnostics indication LED• RUN LEDYes; green LED• RROR LEDYes; red LED• Monitoring of the supply voltage (PWR-LED)Yes; green PWR LED• Channel status displayYes; green LED• Channel diagnosticsYes; red LED• for channel diagnosticsYes; green LED• for module diagnosticsYes; green/red DIAG LED• for module diagnosticsYes; green/red DIAG LED• for module diagnosticsYes; green/red DIAG LED• between the channelsNo• between the channels and backplane busYes• between the channels and backplane busYes• between the channels and backplane busNo• between the channels, and the power supply of the electronicsNo• balation tested with707 V DC (type test)Isolation tested withYesSultable for safety functionsYesHighest safety class achievable in safety modeYes• Performance level according to ISO 13849-1PLe• Cattegory according to ISO 13849-1Sult a• Sult ac. to IEC 61508Sult a• Probability of failure (for service life of 20 years and repair to 100 hours)• Low demand mode: PFDay in accordance with< 6.00E-05	Substitute values connectable	No
Diagnostics indication LED Yes; green LED • RUN LED Yes; red LED • ERROR LED Yes; red LED • Monitoring of the supply voltage (PWR-LED) Yes; green PWR LED • Channel status display Yes; green LED • for channel diagnostics Yes; green LED • for channel diagnostics Yes; green LED • for module diagnostics Yes; green/red DIAG LED otential separation Ves; green/red DIAG LED otential separation channels No • between the channels and backplane bus Yes • between the channels and backplane bus Yes • between the channels and the power supply of the electronics No volation Yor V DC (type test) tandards, approvals, certificates Yes Suitable for safety functions Yes Highest safety class achievable in safety mode Yes • Performance level according to ISO 13849-1 PLe • Category according to ISO 13849-1 Cat. 4 • Sil. acc. to IEC 61508 Sil. 3 Probability of failure (for service life of 20 years and repair time of 100 hours) Iou demand mode: PFDag in accordance with - Low demand mode: PFDag in	Alarms	
• RUN LEDYes; green LED• ERROR LEDYes; red LED• Monitoring of the supply voltage (PWR-LED)Yes; green PWR LED• Channel status displayYes; green LED• for channel diagnosticsYes; red LED• for module diagnosticsYes; green/ted DIAG LED• for module diagnosticsYes; green/ted DIAG LED• otential separationYes• between the channelsNo• between the channels and backplane busYes• between the channels and the power supply of the electronicsNo• between the channels and the power supply of the electronics to the safety functionsYof Y DC (type test)tandards, approvals, certificatesYof Y DC (type test)Suitable for safety functionsYesHighest safety class achievable in safety modeYes• Performance level according to ISO 13849-1PLe• Category according to ISO 13849-1PLe• Sil acc. to IEC 61508Sil 3• Brobability of failure (for service life of 20 years and repair time / TO0 hours)• Low demand mode: PFDarg in accordance with< 6.00E-05	Diagnostic alarm	Yes
• RUN LEDYes; green LED• ERROR LEDYes; red LED• Monitoring of the supply voltage (PWR-LED)Yes; green PWR LED• Channel status displayYes; green LED• for channel diagnosticsYes; red LED• for module diagnosticsYes; green/ted DIAG LED• for module diagnosticsYes; green/ted DIAG LED• otential separationYes• between the channelsNo• between the channels and backplane busYes• between the channels and the power supply of the electronicsNo• between the channels and the power supply of the electronics to the safety functionsYof Y DC (type test)tandards, approvals, certificatesYof Y DC (type test)Suitable for safety functionsYesHighest safety class achievable in safety modeYes• Performance level according to ISO 13849-1PLe• Category according to ISO 13849-1PLe• Sil acc. to IEC 61508Sil 3• Brobability of failure (for service life of 20 years and repair time / TO0 hours)• Low demand mode: PFDarg in accordance with< 6.00E-05	Diagnostics indication LED	
• ERROR LEDYes; red LED• Monitoring of the supply voltage (PWR-LED)Yes; green PWR LED• Channel status displayYes; green LED• for channel diagnosticsYes; red LED• for module diagnosticsYes; green/red DIAG LED• otential separationNoPotential separation channelsYes• between the channels and backplane busYes• between the channels and backplane busYes• between the channels and the power supply of the electronicsNo• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYes• between the channels of the safety modeYes• clategory according to ISO 13849-1Clategory according to ISO 13849-1• SlL acc. to IEC 61508SlL a• Probability of failure (for service life of 20 years and repair time / 100 hours)- Low demand mode: PFDavg in accordance with< 6.00E-05	-	Yes; green LED
• Monitoring of the supply voltage (PWR-LED)Yes; green PWR LED• Channel status displayYes; green LED• for channel diagnosticsYes; red LED• for module diagnosticsYes; green/red DIAG LED• between the channelsNo• between the channels and backplane busYes• between the channels and backplane busYes• between the channels and the power supply of the electronicsNo• between the channels and the power supply of the electronicsNo• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsNo• between the channels and the power supply of the electronicsYor V DC (type test)• between the channels and the power supply of the clatafor tested with707 V DC (type test)• between the channels and the power supply of the clatafor tested withYes• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYes• between the channels and the power supply of the electronicsYor V DC (type test)• suitable for safety functionsYes• Low denal mode: I safety modeCat. 4• Category according to ISO 13849-1PLe• Category according to ISO 13849-1SIL 3• Dibubility of failure (for service life of 20 years and repair time of 100 hours)- Low demand mode: PFDavg in accordance with< 6.00E-05	• ERROR LED	
• for channel diagnostics Yes; red LED • for module diagnostics Yes; green/red DIAG LED otential separation Potential separation channels • between the channels No • between the channels and backplane bus Yes • between the channels and backplane bus Yes • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No • botween the channels and the power supply of the electronics Yes • botween the channels and the power supply of the electronics Yes • solation Yes • clated with 707 V DC (type test) • fundered y approvals, certificates Yes • Category according to ISO 13849-1 PLe <tr< td=""><td></td><td>-</td></tr<>		-
• for module diagnostics Yes; green/red DIAG LED otential separation Potential separation channels • between the channels No • between the channels and backplane bus Yes • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No • solation 707 V DC (type test) tandards, approvals, certificates Suitable for safety functions • Suitable for safety functions Yes • Performance level according to ISO 13849-1 Cat. 4 • SiL acc. to IEC 61508 SiL 3 • Probability of failure (for service life of 20 years and repair time of 100 hours) — Low demand mode: PFDavg in accorda		-
otential separation Potential separation channels • between the channels • between the channels and backplane bus • between the channels and backplane bus • between the channels and the power supply of the electronics • between the channels and the power supply of the electronics • between the channels and the power supply of the electronics • between the channels and the power supply of the electronics • between the channels and the power supply of the electronics • between the channels and the power supply of the electronics • between the channels and the power supply of the electronics • between the channels and the power supply of the electronics • between the channels and the power supply of the electronics • solation • Isolation tested with 707 V DC (type test) tandards, approvals, certificates Suitable for safety functions Yes Highest safety class achievable in safety mode • Performance level according to ISO 13849-1 PLe • Category according to ISO 13849-1 Cat. 4 • SIL acc. to IEC 61508 SIL 3 Probability of failure (for service life of 20 years and repair time of 100 hours) < 6.00E-05		
Potential separation channels No • between the channels and backplane bus Yes • between the channels and backplane bus Yes • between the channels and the power supply of the electronics No • between the channels and the power supply of the electronics No solation 707 V DC (type test) tandards, approvals, certificates Yes Suitable for safety functions Yes Highest safety class achievable in safety mode Yes • Performance level according to ISO 13849-1 PLe • Category according to ISO 13849-1 Cat. 4 • SIL acc. to IEC 61508 SIL 3 Probability of failure (for service life of 20 years and repair time of 100 hours) T00 hours) — Low demand mode: PFDavg in accordance with < 6.00E-05	-	100, gicelilled DIAO LED
• between the channelsNo• between the channels and backplane busYes• between the channels and the power supply of the electronicsNo• between the channels and the power supply of the electronicsNo• between the channels and the power supply of the electronicsNo• between the channels and the power supply of the electronicsNo• colationYes• Isolation tested with707 V DC (type test)• tandards, approvals, certificatesYesSuitable for safety functionsYes• Highest safety class achievable in safety modePLe• Performance level according to ISO 13849-1Cat. 4• Category according to ISO 13849-1Cat. 4• SIL acc. to IEC 61508SIL 3• Probability of failure (for service life of 20 years and repair time of 100 hours)— Low demand mode: PFDavg in accordance with< 6.00E-05		
• between the channels and backplane bus • between the channels and the power supply of the electronicsYesNosolation• colationIsolation tested with707 V DC (type test)tandards, approvals, certificatesSuitable for safety functionsYesSuitable for safety functionsYesHighest safety class achievable in safety mode• Performance level according to ISO 13849-1PLe• Category according to ISO 13849-1Cat. 4• SIL acc. to IEC 61508SIL 3Probability of failure (for service life of 20 years and repair time of 100 hours)- Low demand mode: PFDavg in accordance with< 6.00E-05		
• between the channels and the power supply of the electronicsNosolationNosolationSolation tested with707 V DC (type test)tandards, approvals, certificatesYesSuitable for safety functionsYesHighest safety class achievable in safety modePLe• Performance level according to ISO 13849-1PLe• Category according to ISO 13849-1Cat. 4• SIL acc. to IEC 61508SIL 3Probability of failure (for service life of 20 years and repair time of 100 hours)- Low demand mode: PFDavg in accordance with- Low demand mode: PFDavg in accordance with< 6.00E-05		
electronics solation Isolation tested with 707 V DC (type test) tandards, approvals, certificates Suitable for safety functions Yes Highest safety class achievable in safety mode • Performance level according to ISO 13849-1 PLe • Category according to ISO 13849-1 Cat. 4 • SIL acc. to IEC 61508 SIL 3 Probability of failure (for service life of 20 years and repair time of 100 hours) - Low demand mode: PFDavg in accordance with		
solation Isolation tested with 707 V DC (type test) tandards, approvals, certificates Suitable for safety functions Yes Highest safety class achievable in safety mode • Performance level according to ISO 13849-1 PLe • Category according to ISO 13849-1 Cat. 4 • SIL acc. to IEC 61508 SIL 3 Probability of failure (for service life of 20 years and repair time of 100 hours) - Low demand mode: PFDavg in accordance with		No
Isolation tested with 707 V DC (type test) tandards, approvals, certificates Yes Suitable for safety functions Yes Highest safety class achievable in safety mode Performance level according to ISO 13849-1 • Performance level according to ISO 13849-1 PLe • Category according to ISO 13849-1 Cat. 4 • SIL acc. to IEC 61508 SIL 3 Probability of failure (for service life of 20 years and repair time of 100 hours) of 100 hours) — Low demand mode: PFDavg in accordance with < 6.00E-05		
tandards, approvals, certificates Suitable for safety functions Yes Highest safety class achievable in safety mode Performance level according to ISO 13849-1 • Performance level according to ISO 13849-1 PLe • Category according to ISO 13849-1 Cat. 4 • SIL acc. to IEC 61508 SIL 3 Probability of failure (for service life of 20 years and repair time of 100 hours) - Low demand mode: PFDavg in accordance with		
Suitable for safety functions Yes Highest safety class achievable in safety mode Performance level according to ISO 13849-1 • Performance level according to ISO 13849-1 PLe • Category according to ISO 13849-1 Cat. 4 • SIL acc. to IEC 61508 SIL 3 Probability of failure (for service life of 20 years and repair time of 100 hours) - Low demand mode: PFDavg in accordance with		
Highest safety class achievable in safety mode • Performance level according to ISO 13849-1 PLe • Category according to ISO 13849-1 Cat. 4 • SIL acc. to IEC 61508 SIL 3 Probability of failure (for service life of 20 years and repair time of 100 hours) - Low demand mode: PFDavg in accordance with		
Performance level according to ISO 13849-1 PLe Category according to ISO 13849-1 Cat. 4 SIL acc. to IEC 61508 SIL 3 Probability of failure (for service life of 20 years and repair time of 100 hours) Low demand mode: PFDavg in accordance with < 6.00E-05	· · · · · · · · · · · · · · · · · · ·	Yes
Category according to ISO 13849-1 Cat. 4 SIL acc. to IEC 61508 SIL 3 Probability of failure (for service life of 20 years and repair time of 100 hours) Low demand mode: PFDavg in accordance with < 6.00E-05		
SIL acc. to IEC 61508 SIL 3 Probability of failure (for service life of 20 years and repair time of 100 hours) Low demand mode: PFDavg in accordance with < 6.00E-05	 Performance level according to ISO 13849-1 	PLe
Probability of failure (for service life of 20 years and repair time of 100 hours) — Low demand mode: PFDavg in accordance with < 6.00E-05	 Category according to ISO 13849-1 	Cat. 4
— Low demand mode: PFDavg in accordance with < 6.00E-05	SIL acc. to IEC 61508	SIL 3
	Probability of failure (for service life of 20 years and repair time	e of 100 hours)
SIL3		< 6.00E-05

- High demand/continuous mode: PFH in accordance with SIL3

< 2.00E-09 1/h

with SIL3	
Ambient conditions	
Ambient temperature during operation	
 horizontal installation, min. 	0°C
 horizontal installation, max. 	60 °C
 vertical installation, min. 	0°C
 vertical installation, max. 	50 °C
Altitude during operation relating to sea level	
 Installation altitude above sea level, max. 	4 000 mere with a section
• Installation attitude above sea level, max.	4 000 m; with derating
• Installation altitude above sea level, max. Dimensions	4 000 m; with defating
	4 000 m; with derating 15 mm
Dimensions	
Dimensions Width	15 mm
Dimensions Width Height	15 mm 73 mm
Dimensions Width Height Depth	15 mm 73 mm

last modified:

8/7/2023 🖸