SIEMENS

Data sheet

6ES7522-5HF00-0AB0

Siemens EcoTech

SIMATIC S7-1500, digital output module DQ 8xAC 230V/5A ST; relay; 8 channels in groups of 1; 5 A per group; diagnostics; substitute value: switching cycle counter for integrated relay, the module supports the safety-oriented shutdown of load groups up to SIL1 according to EN IEC 62061:2021 and Category 2 / PL c according to EN ISO 13849-1:2015. front connector (screw terminals or push-in) to be ordered separately

Figure similar

General information	
Product type designation	DQ 8x230 V AC/5 A ST (relay)
HW functional status	From FS02
Firmware version	V2.1.0
● FW update possible	Yes
Product function	
● I&M data	Yes; I&M0 to I&M3
● Isochronous mode	No
● Prioritized startup	Yes
Engineering with	
● STEP 7 TIA Portal configurable/integrated from version	V12 / V12
● STEP 7 configurable/integrated from version	V5.5 SP3 / -
● PROFIBUS from GSD version/GSD revision	V1.0 / V5.1
● PROFINET from GSD version/GSD revision	V2.3 / -
Operating mode	
● DQ	Yes
● DQ with energy-saving function	No
● PWM	No
● Oversampling	No
● MSO	Yes
● Integrated operating cycle counter	Yes; FW V2.1.0 or higher

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

Input current	
Current consumption, max.	80 mA

output voltage / header	
Rated value (AC)	230 V; 24 V DC to 120 V DC / 24 V AC to 230 V AC

Power	
Power consumption from the backplane bus	0.8 W

Power loss	
Power loss, typ.	5 W

Digital outputs	
Type of digital output	Relays

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Number of digital outputs	8
Current-sinking	Yes
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	No
Controlling a digital input	Yes; possible
Size of motor starters according to NEMA, max.	5
Switching capacity of the outputs	
● on lamp load, max.	1 500 W; 10 000 operating cycles
● Low energy/fluorescent lamps with electronic control gear	10x 58 W (25 000 operating cycles)
● Fluorescent tubes, conventionally compensated	1x 58 W (25 000 operating cycles)
● Fluorescent tubes, uncompensated	10x 58 W (25 000 operating cycles)
Output current	
● for signal "1" rated value	5 A
● for signal "1" permissible range, min.	5 mA; 10 V
● for signal "1" permissible range, max.	8 A; thermal continuous current
● for signal "0" residual current, max.	0 A
Parallel switching of two outputs	
● for logic links	Yes
● for uprating	No
● for redundant control of a load	Yes
Switching frequency	
● with resistive load, max.	2 Hz
● with inductive load, max.	0.5 Hz
● on lamp load, max.	2 Hz
Total current of the outputs	
● Current per channel, max.	8 A; see additional description in the manual
● Current per group, max.	8 A; see additional description in the manual
● Current per module, max.	64 A; see additional description in the manual
Relay outputs	
● Number of relay outputs	8
● Rated supply voltage of relay coil L+ (DC)	24 V
● Current consumption of relays (coil current of all relays), typ.	80 mA
● external protection for relay outputs	With miniature circuit breaker with characteristic B for: cos φ 1.0: 600 A cos φ 0.5 ... 0.7: 900 A with 8 A Diazed fuse: 1 000 A
● Contact connection (internal)	No
● Number of operating cycles, max.	4 000 000; see additional description in the manual
● Relay approved acc. to UL 508	Yes; 250 V AC/5 A g.p.; 120 V AC TV-4 tungsten; A300, R300
Switching capacity of contacts	
— with inductive load, max.	see additional description in the manual
— with resistive load, max.	see additional description in the manual
Cable length	
● shielded, max.	1 000 m
● unshielded, max.	600 m
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
● Diagnostic alarm	Yes
● Maintenance interrupt	Yes
Diagnoses	
● Monitoring the supply voltage	Yes
● Wire-break	No
● Short-circuit	No
Diagnostics indication LED	
● RUN LED	Yes; green LED
● ERROR LED	Yes; red LED
● MAINT LED	Yes; Yellow LED
● Monitoring of the supply voltage (PWR-LED)	Yes; green LED
● Channel status display	Yes; green LED

● for channel diagnostics	No
● for module diagnostics	Yes; red LED

Potential separation

Potential separation channels

● between the channels	Yes; Switching of different phases permitted
● between the channels, in groups of	1
● between the channels and backplane bus	Yes
● Between the channels and load voltage L+	Yes

Permissible potential difference

between different circuits	250 V AC between the channels and the supply voltage L+, 250 V AC between the channels and the backplane bus; 250 V AC between the channels (500 V AC when connecting different phases; basic insulation)

Isolation

Isolation tested with	between the channels: 3 100 V DC; between the channels and the backplane bus: 3 100 V DC; between the channels and the supply voltage L+: 3 100 V DC; between the L+ and the backplane bus: 707 V DC (type test)

Standards, approvals, certificates

Siemens Eco Profile (SEP)	Siemens EcoTech
Suitable for safety functions	No
Suitable for safety-related tripping of standard modules	Yes; From FS03

Ecological footprint

● environmental product declaration	Yes

Global warming potential

— global warming potential, (total) [CO_2 eq]	43.8 kg
— global warming potential, (during production) [CO_2 eq]	9.5 kg
— global warming potential, (during operation) [CO_2 eq]	34.5 kg
— global warming potential, (after end of life cycle) [CO_2 eq]	-0.231 kg

Highest safety class achievable for safety-related tripping of standard modules

● Performance level according to ISO 13849-1	PL c
● Category according to ISO 13849-1	Cat. 2
● SIL acc. to IEC 62061	SIL 1
● remark on safety-oriented shutdown	https://support.industry.siemens.com/cs/de/en/view/39198632

product functions / security / header

signed firmware update	No
data integrity	No

Ambient conditions

Ambient temperature during operation

● horizontal installation, min.	-30 °C; From FS03
● horizontal installation, max.	60 °C
● vertical installation, min.	-30 °C; From FS03
● vertical installation, max.	40 °C

Dimensions

Width	35 mm
Height	147 mm
Depth	129 mm

Weights

Weight, approx.	350 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

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ETIM	8	EC001419
ETIM	7	EC001419
IDEA	4	3566
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval	Marine / Shipping	other
CSA CE EG-Konf. UL UR EAC	Lloyd's Register LRS	Confirmation

other	Environment	
Miscellaneous	Environmental Confirmations	Environmental Confirmations

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