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Data sheet 6ES7132-6BD20-0DA0

Siemens EcoTech

SIMATIC ET 200SP, digital output module, DQ 4x 24 V DC/2A High Speed, Pack quantity: 1 unit suitable for BU type A0, Color code CC00, 3 alternative operating modes: DQ, Oversampling, PWM Module diagnostics



General information	
Product type designation	DQ 4x24 V DC/2 A HS
HW functional status	From FS05
Firmware version	
● FW update possible	Yes
usable BaseUnits	BU type A0
Color code for module-specific color-coded label	CC00
Product function	
● I&M data	Yes; I&M0 to I&M3
● Isochronous mode	Yes; Operating modes DQ and OVS only
Engineering with	
● STEP 7 TIA Portal configurable/integrated from version	STEP 7 V15.1 or higher
● STEP 7 configurable/integrated from version	via GSD as of V5.6 HF4
● PROFIBUS from GSD version/GSD revision	One GSD file each, Revision 3 and 5 and higher
● PROFINET from GSD version/GSD revision	GSDML V2.33
Operating mode	
● DQ	Yes
● DQ with energy-saving function	Yes; Valve control
● PWM	Yes
● Cam control (switching at comparison values)	Yes; Via MtM (module-to-module communication)
● Oversampling	Yes
● MSO	No
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.	50 mA; without load
Output voltage	
Rated value (DC)	24 V
Power loss	
Power loss, typ.	2.5 W; at 24 V, 25 °C, DQ mode, 2 A per channel
Address area	
Address space per module	
● Inputs	1 byte; Max. 14 bytes in the cam control operating mode

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● Outputs	1 byte; Max. 16 bytes in the oversampling operating mode
Hardware configuration	
Automatic encoding	Yes
● Mechanical coding element	Yes
● Type of mechanical coding element	Type A
Selection of BaseUnit for connection variants	
● 2-wire connection	BU type A0
● 3-wire connection	BU type A0 with AUX terminals or potential distributor module
● 4-wire connection	BU type A0 + Potential distributor module
Digital outputs	
Type of digital output	Source output (PNP, current-sourcing)
Number of digital outputs	4
Current-sinking	No
Current-sourcing	Yes; Push-pull output
Digital outputs, parameterizable	Yes
Short-circuit protection	Yes
● Response threshold, typ.	6 A
Limitation of inductive shutdown voltage to	M (-1 V)
Controlling a digital input	No
Digital output functions, parameterizable	
● Switching tripped by comparison values	Yes
— Number of cam tracks, max.	4
— Number of cams per module, max.	16
— Number of cams per track, max.	16
— Supported axis types	Linear axes and rotary axes with modulo function
— Hysteresis	Yes
— Pulsed cam output	Yes
— Range of values for comparison values, max.	-2,147,483,648 to 2,147,483,647 (user-specific within this range)
● Freely usable digital output	Yes
● PWM output	Yes
— Number, max.	4
— Cycle duration, parameterizable	Yes; 0 ms, 0.2 ms, 0.4 ms, 0.93 ms, 1.33 ms, 4.27 ms, 10.67 ms, 21.33 ms, 34.13 ms, 59.73 ms
— Resolution of the duty cycle	0.1 %
● Digital output with oversampling	Yes
— Number, max.	4
— Values per cycle, max.	32
— Resolution, min.	100 µs
Switching capacity of the outputs	
● with resistive load, max.	2 A
● on lamp load, max.	10 W
Load resistance range	
● lower limit	12 Ω
● upper limit	3 400 Ω
Output current	
● for signal "1" rated value	2 A
● for signal "0" residual current, max.	0.1 mA
Output delay with resistive load	
● "0" to "1", max.	1 µs
● "1" to "0", max.	1 µs
Parallel switching of two outputs	
● for uprating	No
Switching frequency	
● with resistive load, max.	5 kHz
● with inductive load, max.	5 kHz
● on lamp load, max.	5 kHz
Total current of the outputs	
● Current per channel, max.	2 A
● Current per module, max.	8 A

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Total current of the outputs (per module)	
horizontal installation	
— up to 30 °C, max.	8 A; DQ mode
— up to 40 °C, max.	6.9 A; DQ mode
— up to 50 °C, max.	4.7 A; DQ mode
— up to 60 °C, max.	2.5 A; DQ mode
vertical installation	
— up to 30 °C, max.	7.2 A; DQ mode
— up to 40 °C, max.	5.6 A; DQ mode
— up to 50 °C, max.	4 A; DQ mode
Cable length	
● shielded, max.	50 m
● unshielded, max.	50 m
Isochronous mode	
Execution and activation time (TCO), min.	40 µs
Bus cycle time (TDP), min.	125 µs
Jitter, max.	1 µs
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
● Diagnostic alarm	Yes
Diagnoses	
● Diagnostic information readable	Yes
● Monitoring the supply voltage	Yes
● Wire break	No
● Short-circuit	Yes; module-wise
● Group error	Yes
Diagnostics indication LED	
● Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
● Channel status display	Yes; green LED
● for channel diagnostics	No
● for module diagnostics	Yes; green/red DIAG LED
Potential separation	
Potential separation channels	
● between the channels	No
● between the channels and backplane bus	Yes
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Suitable for safety functions	No
Suitable for safety-related tripping of standard modules	No
Ecological footprint	
● environmental product declaration	Yes
Global warming potential	
— global warming potential, (total) [CO2 eq]	29.3 kg
— global warming potential, (during production) [CO2 eq]	3.98 kg
— global warming potential, (during operation) [CO2 eq]	25.6 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-0.245 kg
Ambient conditions	
Ambient temperature during operation	
● horizontal installation, min.	-30 °C
● horizontal installation, max.	60 °C
● vertical installation, min.	-30 °C
● vertical installation, max.	50 °C
Altitude during operation relating to sea level	

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● Installation altitude above sea level, max.	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Absolute humidity	
● dew point, min.	-60 °C; suitable for dry room applications
Dimensions	
Width	15 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	31 g

Classifications

	Version	Classification
eClass	16	27-24-26-04
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 | Manufacturer Declaration

General Product Approval | **For use in hazardous locations**

China RoHS

For use in hazardous locations

CCC-Ex | FM | Miscellaneous | Type Examination Certificate

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

CCC-Ex | NK / Nippon Kaiji Kyokai

Maritime application | **Environment**

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CCS (China Classification Society) KR (Korean Register of Shipping)

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