## **SIEMENS**

## **Data sheet**

6ES7132-6FD00-0CU0



SIMATIC ET 200SP, digital output module DQ 4x 24..230V AC/2A HF packaging unit: 1 piece, two alternative modes: DQ and power control, fits to BU-Type U0, color code CC20, channel diagnosis

Product type designation	General information	
Firmware version  FW update possible usable BaseUnits  Color code for module-specific color identification plate  Product function  IBM data IsM data IsM data Isocorronous mode  Engineering with STEP 7 TIA Portal configurable/integrated from version PROFIBUS from GSD version/GSD revision GSD as of Revision 5 GSD as of Revisio	Product type designation	DQ 4x24 230 V AC/2 A HF
FW update possible usable BaseUnits Color code for module-specific color identification plate Product function  IsM data Isochronous mode STEP 7 TIA Portal configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision PROFINET from GSD version/GSD revision PROM DQ with energy-saving function PWM No Oversampling MSO Phase control Trailing-edge phase Half-wave Full-wave Full-wave Full-wave Full-wave Full-wave Rated value (AC) Permissible range, lower limit (AC) permissible range, upper limit (AC) permissible range, upper limit (AC) Input current Current consumption (rated value) Output voltage / header Rated value (AC) Power loss Power loss, typ.  PW, Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz  W, Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz  PW, Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz  PW, Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz  PW, Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	HW functional status	From FS03
usable BaseUnits  Color code for module-specific color identification plate  Product function  • I&M data • Isochronous mode  Engineering with  • STEP 7 TIA Portal configurable/integrated from version • PROFIBUS from GSD version/GSD revision	Firmware version	
Color code for module-specific color identification plate Product function  I &M data Scortronous mode No  Engineering with STEP 7 TIA Portal configurable/integrated from version FROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision PDQ DQ Yes DQ with energy-saving function PMM No Oversampling MSO Phase control Trailing-edge phase Full-wave	FW update possible	Yes
Product function  • I&M data • Isochronous mode  Engineering with • STEP 7 TIA Portal configurable/integrated from version • STEP 7 To nonfigurable/integrated from version • STEP 7 To nonfigurable/integrated from version • STEP 7 To nonfigurable/integrated from version • PROFIBUS from GSD version/GSD revision • PROFINET from GSD version/GSD revision • PROFINET from GSD version/GSD revision  • DQ • DQ • DQ • DQ • DQ with energy-saving function • PWM • Oversampling • MSO • Phase control • Trailing-edge phase • Full-wave • Full-wave • Full-wave • Full-wave • Full-wave • Full-wave  Supply voltage  Rated value (AC) permissible range, lower limit (AC) permissible range, upper limit (AC) permissible range, upper limit (AC)  100 (AC) 100 (	usable BaseUnits	BU type U0
I likil data I lisochronous mode Ingineering with I STEP 7 TIA Portal configurable/integrated from version STEP 7 TIA Portal configurable/integrated from version STEP 7 Ton figurable/integrated from version PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision PROFI	Color code for module-specific color identification plate	CC20
Isochronous mode  Ingineering with  Ingineering	Product function	
Engineering with  STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision  Operating mode  PQ Yes DQ with energy-saving function Yes DO with energy-saving function Yes PVM No Oversampling No No Phase control Yes; Control area: 8.5 100% of the phase angle Trailing-edge phase Half-wave Yes Full-wave Yes Full-wave Yes Supply voltage Rated value (AC) Permissible range, lower limit (AC) 20.4 V Permissible range, upper limit (AC) 264 V Input current Current consumption (rated value) 8 mA; without load output voltage / header Rated value (AC) Power loss Power loss, typ.  9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	• I&M data	Yes; I&M0 to I&M3
STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision  Operating mode  DQ Pes DQ With energy-saving function PWM No Oversampling No MSO Phase control Trailing-edge phase Pall-wave Full-wave Full-wave Full-wave Pull-wave Supply voltage Rated value (AC) Permissible range, lower limit (AC) Permissible range, upper limit (AC) Permissible range, upper limit (AC) Permissible range, upper limit (AC) Prower loss Power loss, typ.  9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	Isochronous mode	No
version  STEP 7 configurable/integrated from version  PROFIBUS from GSD version/GSD revision  PROFINET from GSD version/GSD revision  PROFINET from GSD version/GSD revision  PROFINET from GSD version/GSD revision  Operating mode  DQ  PQ  DQ with energy-saving function  PWM  No  Oversampling  MSO  Phase control  Trailing-edge phase  Half-wave  Full-wave  Full-wave  Full-wave  Full-wave  Supply voltage  Rated value (AC)  permissible range, lower limit (AC)  permissible range, upper limit (AC)  permissible range, upper limit (AC)  permissible range, upper limit (AC)  230 V; 47 63 Hz, max. rate of change of frequency 1 mHz/s  264 V  Input current  Current consumption (rated value)  8 mA; without load  output voltage / header  Rated value (AC)  Power loss  Power loss, typ.  9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	Engineering with	
PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision  PROFINET from GSD version/GSD revision  Operating mode  DQ Yes DQ with energy-saving function Yes PWM No Oversampling MSO Phase control Trailing-edge phase Half-wave Full-wave Full-wave Supply voltage Rated value (AC) Permissible range, lower limit (AC) Input current Current consumption (rated value) Rated value (AC) Power loss Power loss, typ.  GSD as of Revision 5 GSDML V2.3 GSDML V.2.4 GSD	g g	V14
PROFINET from GSD version/GSD revision  Operating mode  DQ Pes DQ with energy-saving function PWM No Oversampling No Phase control Phase control Trailing-edge phase Full-wave Pfull-wave Pfull-wave Supply voltage Rated value (AC) Permissible range, lower limit (AC) Input current Current consumption (rated value)  Rated value (AC) Power loss Power loss, typ.  Power loss, typ.  GSDML V2.3  Yes Yes Yes  Yes  Yes  Yes No	<ul> <li>STEP 7 configurable/integrated from version</li> </ul>	STEP 7 V5.5 or higher
Operating mode  • DQ • DQ with energy-saving function • PWM • Oversampling • MSO • Phase control • Trailing-edge phase • Full-wave • Full-wave • Full-wave  Supply voltage Rated value (AC) permissible range, upper limit (AC) permissible range, upper limit (AC) permissible range, upper limit (AC)  Input current Current consumption (rated value)  Output voltage / Rated value (AC) Power loss  Power loss, typ.  Yes  Yes  Yes  Yes  Yes  Supply voltage  Rated value (AC) 230 V; 47 63 Hz, max. rate of change of frequency 1 mHz/s 264 V  Input current  Current consumption (rated value)  8 mA; without load  output voltage / header  Rated value (AC)  9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	<ul> <li>PROFIBUS from GSD version/GSD revision</li> </ul>	GSD as of Revision 5
DQ     DQ with energy-saving function     PWM     No     Oversampling     No     MSO     Phase control     Trailing-edge phase     Half-wave     Full-wave     Pull-wave  Supply voltage  Rated value (AC)     permissible range, lower limit (AC)     permissible range, upper limit (AC)     permissible range, upper limit (AC)     230 V; 47 63 Hz, max. rate of change of frequency 1 mHz/s     permissible range, upper limit (AC)     264 V  Input current Current consumption (rated value)     8 mA; without load  output voltage / header Rated value (AC)     230 V; 24V AC to 230V AC  Power loss Power loss, typ.  9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	<ul> <li>PROFINET from GSD version/GSD revision</li> </ul>	GSDML V2.3
DQ with energy-saving function PWM Oversampling No MSO Phase control Trailing-edge phase Half-wave Full-wave Full-wave  Rated value (AC) permissible range, lower limit (AC) permissible range, upper limit (AC)  Input current Current consumption (rated value)  Output voltage / header Rated value (AC) Power loss Power loss, typ.  Po	Operating mode	
PWM Oversampling No MSO Phase control Frailing-edge phase No Half-wave Full-wave Full-wave Permissible range, lower limit (AC) permissible range, upper limit (AC) power loss Valv V permissible range, upper limit (AC) power loss Power loss, typ.  9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	• DQ	Yes
Oversampling  MSO  MSO  Phase control  Trailing-edge phase  Half-wave  Full-wave  Full-wave  Yes  Supply voltage  Rated value (AC)  permissible range, lower limit (AC)  permissible range, upper limit (AC)  permissible range, upper limit (AC)  Rated value (AC)  Power loss  Power loss, typ.  No  Yes; Control area: 8.5 100% of the phase angle  No  Yes  No  Yes  Yes  Supply voltage  230 V; 47 63 Hz, max. rate of change of frequency 1 mHz/s  20.4 V  264 V  Input current  Current consumption (rated value)  8 mA; without load  output voltage / header  Rated value (AC)  Power loss  Power loss, typ.  9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	<ul> <li>DQ with energy-saving function</li> </ul>	Yes
MSO Phase control Phase control Trailing-edge phase Trailing-edge phase No Half-wave Full-wave Full-wave Full-wave  Rated value (AC) Power loss, typ.  No Yes; Control area: 8.5 100% of the phase angle No Yes; Control area: 8.5 100% of the phase angle No Yes No Yes Supply voltage Rated value (AC) 230 V; 47 63 Hz, max. rate of change of frequency 1 mHz/s 20.4 V 264 V Input current Current consumption (rated value) 8 mA; without load Output voltage / header Rated value (AC) Power loss Power loss, typ.  9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	• PWM	No
<ul> <li>Phase control</li> <li>Trailing-edge phase</li> <li>Half-wave</li> <li>Full-wave</li> <li>Full-wave</li> <li>Yes</li> <li>Full-wave</li> <li>Yes</li> </ul> Supply voltage Rated value (AC) <ul> <li>permissible range, lower limit (AC)</li> <li>permissible range, upper limit (AC)</li> <li>264 V</li> </ul> Input current Current consumption (rated value) <ul> <li>8 mA; without load</li> <li>output voltage / header</li> <li>Rated value (AC)</li> <li>230 V; 24V AC to 230V AC</li> </ul> Power loss Power loss, typ. <ul> <li>9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz</li> </ul>	<ul> <li>Oversampling</li> </ul>	No
<ul> <li>Trailing-edge phase</li> <li>Half-wave</li> <li>Full-wave</li> <li>Full-wave</li> <li>Supply voltage</li> <li>Rated value (AC)</li> <li>permissible range, lower limit (AC)</li> <li>permissible range, upper limit (AC)</li> <li>264 V</li> <li>Input current</li> <li>Current consumption (rated value)</li> <li>8 mA; without load</li> <li>output voltage / header</li> <li>Rated value (AC)</li> <li>Rated value (AC)</li> <li>Power loss</li> <li>Power loss, typ.</li> <li>9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz</li> </ul>	• MSO	No
● Half-wave Full-wave Yes  Supply voltage  Rated value (AC) permissible range, lower limit (AC) permissible range, upper limit (AC) 20.4 V  permissible range, upper limit (AC) Input current Current consumption (rated value) Output voltage / header  Rated value (AC) Power loss  Power loss, typ.  Yes Yes Yes  Supply voltage Yes  And	Phase control	Yes; Control area: 8.5 100% of the phase angle
● Full-wave  Supply voltage  Rated value (AC)  permissible range, lower limit (AC)  permissible range, upper limit (AC)  permissible range, upper limit (AC)  input current  Current consumption (rated value)  output voltage / header  Rated value (AC)  Power loss  Power loss, typ.  Yes  230 V; 47 63 Hz, max. rate of change of frequency 1 mHz/s  20.4 V  264 V  8 mA; without load  output voltage / header  Rated value (AC)  9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	Trailing-edge phase	No
Rated value (AC)  permissible range, lower limit (AC)  permissible range, upper limit (AC)  permissible range, upper limit (AC)  20.4 V  Input current  Current consumption (rated value)  output voltage / header  Rated value (AC)  Power loss  Power loss, typ.  230 V; 47 63 Hz, max. rate of change of frequency 1 mHz/s  20.4 V  264 V  8 mA; without load  230 V; 24V AC to 230V AC  Power loss  9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	<ul> <li>Half-wave</li> </ul>	Yes
Rated value (AC)  permissible range, lower limit (AC)  permissible range, upper limit (AC)  20.4 V  permissible range, upper limit (AC)  Input current  Current consumption (rated value)  8 mA; without load  output voltage / header  Rated value (AC)  Power loss  Power loss, typ.  230 V; 47 63 Hz, max. rate of change of frequency 1 mHz/s  20.4 V  264 V  Input current  230 V; 24V V  240 V  250 V; 24V AC to 230V AC	<ul><li>Full-wave</li></ul>	Yes
permissible range, lower limit (AC)  permissible range, upper limit (AC)  264 V  Input current  Current consumption (rated value)  output voltage / header  Rated value (AC)  Power loss  Power loss, typ.  20.4 V  264 V  8 mA; without load  230 V; 24V AC to 230V AC  9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	Supply voltage	
permissible range, upper limit (AC)  Input current  Current consumption (rated value)  output voltage / header  Rated value (AC)  Power loss  Power loss, typ.  264 V  8 mA; without load  230 V; 24V AC to 230V AC  9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	Rated value (AC)	230 V; 47 63 Hz, max. rate of change of frequency 1 mHz/s
Input current  Current consumption (rated value) 8 mA; without load  output voltage / header  Rated value (AC) 230 V; 24V AC to 230V AC  Power loss  Power loss, typ. 9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	permissible range, lower limit (AC)	20.4 V
Current consumption (rated value)  8 mA; without load  output voltage / header  Rated value (AC)  230 V; 24V AC to 230V AC  Power loss  Power loss, typ.  9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	permissible range, upper limit (AC)	264 V
output voltage / header  Rated value (AC)  Power loss  Power loss, typ.  9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	Input current	
Rated value (AC)  230 V; 24V AC to 230V AC  Power loss  Power loss, typ.  9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	Current consumption (rated value)	8 mA; without load
Power loss  Power loss, typ.  9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	output voltage / header	
Power loss, typ. 9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz	Rated value (AC)	230 V; 24V AC to 230V AC
Hz	Power loss	
Address area	Power loss, typ.	9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz
	Address area	
Address space per module	Address space per module	

• Inputs	+ 1 byte for QI information
Outputs	8 byte
Hardware configuration	
Automatic encoding	Yes
Mechanical coding element	Yes
Type of mechanical coding element	type C
Selection of BaseUnit for connection variants	1,900
1-wire connection	BU type U0
2-wire connection	BU type U0
3-wire connection	BU type U0 + Potential distributor module
Digital outputs	
Type of digital output	Triac
Number of digital outputs	4
Current-sinking	No
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	No; external fusing necessary
Open-circuit detection	Yes; channel by channel
Response threshold, typ.	1 mA; 40 V AC or more
Overload protection	No; A miniature fuse with 10 tripping current and tripping characteristic
·	"quick response" must be provided in the module supply
Controlling a digital input	Yes
Switching capacity of the outputs	
<ul><li>with resistive load, max.</li></ul>	2 A; Max. 4 A, see additional description in manual
<ul> <li>with inductive load, max.</li> </ul>	2 A
<ul><li>on lamp load, max.</li></ul>	100 W; Tungsten rating in accordance with UL; for thermistors with
Output voltage	higher power ratings, see the notes in the manual
• for signal "1", min.	20.4 V
Output current	
for signal "1" rated value	2 A
• for signal "1" permissible range, min.	10 mA
• for signal "1" permissible range, max.	4 A; note derating data in the manual
• for signal "0" residual current, max.	3 mA
Output delay with resistive load	
• "0" to "1", max.	40 ms; 2 AC cycles
• "1" to "0", max.	20 ms; 1 AC cycle
Parallel switching of two outputs	
• for logic links	No
• for uprating	No
for redundant control of a load	Yes
Switching frequency	
with resistive load, max.	10 Hz; Applies to DQ mode; limited by line frequency in PC mode
• with inductive load (acc. to IEC 60947-5-1, AC15),	10 Hz; Applies to DQ mode; limited by line frequency in PC mode
max.	A Her Applies to DO made III II II II II
• on lamp load, max.	1 Hz; Applies to DQ mode; limited by line frequency in PC mode
Total current of the outputs	0.00.00.00.00.00.00.00.00.00.00.00.00.0
Current per channel, max.	2 A; Max. 4 A, see additional description in manual
Current per module, max.  Total current of the cutnute (nor module)	8 A
Total current of the outputs (per module)	
horizontal installation	0.4
— up to 40 °C, max.	8 A
— up to 50 °C, max.	6 A
— up to 60 °C, max.	4 A
vertical installation	ο Λ
— up to 30 °C, max.	8 A
— up to 40 °C, max.	6 A 4 A
— up to 50 °C, max.	4 A
Cable length  • shielded, max.	1 000 m
Gillolada, max.	. 555 111

• unshielded, max.	600 m
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
Diagnostic alarm	Yes
Diagnoses	
<ul> <li>Diagnostic information readable</li> </ul>	Yes
<ul> <li>Monitoring the supply voltage</li> </ul>	Yes
<ul><li>Wire-break</li></ul>	Yes; channel by channel
Short-circuit	No
Group error	Yes
Diagnostics indication LED	
<ul> <li>Monitoring of the supply voltage (PWR-LED)</li> </ul>	Yes; green PWR LED
<ul> <li>Channel status display</li> </ul>	Yes; green LED
<ul> <li>for channel diagnostics</li> </ul>	Yes; red Fn LED
<ul> <li>for module diagnostics</li> </ul>	Yes; green/red DIAG LED
Potential separation	
Potential separation channels	
<ul> <li>between the channels</li> </ul>	No
<ul> <li>between the channels and backplane bus</li> </ul>	Yes
<ul> <li>between the channels and the power supply of the electronics</li> </ul>	No
Isolation	
Isolation tested with	2 545 V DC/2 s (routine test)
Standards, approvals, certificates	
Suitable for safety functions	No
Ambient conditions	
Ambient temperature during operation	
horizontal installation, min.	-30 °C
<ul> <li>horizontal installation, max.</li> </ul>	60 °C
<ul> <li>vertical installation, min.</li> </ul>	-30 °C
<ul> <li>vertical installation, max.</li> </ul>	50 °C
Altitude during operation relating to sea level	
<ul> <li>Installation altitude above sea level, max.</li> </ul>	2 000 m; On request: Installation altitudes greater than 2 000 m
Dimensions	
Width	20 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	50 g
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