6ES7132-6BF01-2AA0

## **Data sheet**



SIMATIC ET 200SP, Digital output module, DQ 8x 24V DC/0,5A Basic, Source output (PNP,P-switching) Packing unit: 10 pieces, fits to BU-type A0, Colour Code CC02, aubstitute value output, module diagnostics for: supply voltage

Product type designation DQ &24 VC/0.5A BA  HW functional status From FS02  From FS02  From FS02  V0.0  • FW update possible No 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 • Isochronous mode No Engineering with • STEP 7 TIA Portal configurable/integrated from version • FROF IRUS from GSD version/GSD revision • PROFINET from GSD version/GSD revision • PWM • Oversampling • No • Voersampling • No • MSO Supply voltage  Rated value (DC) permissible range, Lower limit (DC) permissible range, Lower limit (DC) permissible range, Lower limit (DC) Reverse polarity protection  Power loss Power loss Power loss Power loss, typ.  1 W  Address space per module • Metalization of the first	General information		
Firmware version  FV update possible usable BaseUnits  Color code for module-specific color identification plate Product function  I RIM data Sochronous mode No  Engineering with STEP 7 TIA Portal configurable/integrated from version FYFP 8 TIA PORTAL PORT	Product type designation	DQ 8x24VDC/0.5A BA	
FW update possible usable BaseUnits Color code for module-specific color identification plate Product function  IsM data Isochronous mode No Engineering with STEP 7 TIA Portal configurable/integrated from version FROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD Provision PROFIBUS from GSD version/GSD Provis	HW functional status	From FS02	
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  • PROFIBUS from GSD version/GSD revision  • PROFINET from GSD version/GSD revision  • DQ  • With energy-saving function  • No  • PWM  No  • Oversampling  • MSO  Supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Input current  Current consumption, max.  output voltage / hoader  Rated value (DC)  Power loss  Power loss  Power loss  Power loss  Power loss  Address space per module  • Address space per module  • Address space per module, max.  Automatic encoding  Yes	Firmware version	V0.0	
Color code for module-specific color identification plate  Product function  I I&M data I Sechronous mode No  Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 Configurable/integrated from version STEP 7 Configurable/integrated from version STEP 7 Configurable/integrated from version PROFIBUS from GSD version/CSD revision PROFIBUS from GSD version/CSD revision PROFINET from GSD version/GSD revision SDML V2.3  Operating mode DQ Yes DQ With energy-saving function PPWM No Oversampling No No Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range purper limit (DC) Permissible rang	FW update possible	No	
Product function  • I&M data • Isochronous mode  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 • PROFINET from GSD version/GSD revision • DQ • PWI Ves • DQ with energy-saving function • PWM • Oversampling • MSO  Supply voltage  Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Reverse polarity protection Input current  Current consumption, max. 45 mA; without load output voltage / header Rated value (DC) Power loss Power loss Power loss Power loss, typ. 1 W  Address space per module • Address space per module, max. 1 byte  Hardware configuration Automatic encoding	usable BaseUnits	BU type A0	
I I I I I I I I I I I I I I I I I I I	Color code for module-specific color identification plate	CC02	
Isochronous mode Ingineering with  Isochronous mode Ingineering with  Isochronous mode modes	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 One GSD file each, Revision 3 and 5 and higher PROFINET from GSD version/GSD revision One GSD file each, Revision 3 and 5 and higher  GSDML V2.3  Operating mode DQ Yes DQ with energy-saving function No PWM No Oversampling No No Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Reverse polarity protection Yes Input current Current consumption, max. 45 mA; without load output voltage / header Rated value (DC) Power loss Power loss, typ. 1 W  Address area Address space per module Address space per module, max. 1 byte  Hardware configuration Automatic encoding Yes	<ul><li>I&amp;M data</li></ul>	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 PROFINET from GSD version/GSD revision One GSD file each, Revision 3 and 5 and higher GSDML V2.3  Operating mode  PQ PQ PQ PQ PQ PQ PQ PQ PWM NO PWM NO PWM NO PWM NO PWM NO PWM PMO PWM NO PWM PMO PWM NO PWM PMO PWM NO POVersampling NO PWM PMO POVERSAMPLING PROFINET (DC) PETMISSIBLE range, lower limit (DC) PETMISSIBLE range, upper limit (DC) PREVERSE polarity protection PROFINET Current consumption, max. PASS MAY PASS WITHOUT VORTAGE  Rated value (DC) POWER loss Power loss Power loss, typ.  Address area Address space per module Address space per module Address space per module, max.  1 byte  Hardware configuration Automatic encoding PS PME 15 HS PASS Space per module PY ES	Isochronous mode	No	
version  STEP 7 configurable/integrated from version  PROFIBUS from GSD version/GSD revision  PROFIBUS from GSD version/GSD revision  PROFINET from GSD version/GSD revision  GSDML V2.3  Operating mode  DQ Yes  DQ with energy-saving function  PWM No  Oversampling No  MSO  Supply voltage  Rated value (DC)  Permissible range, lower limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Yes  Input current  Current consumption, max.  Output voltage / header  Rated value (DC)  Power loss  Power loss, typ.  Address space per module  Address space per module, max.  1 byte  Hardware configuration  Automatic encoding  Yes	Engineering with		
PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision GSDML V2.3  Operating mode  DQ Yes DQ with energy-saving function PWM No Oversampling No 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. 45 mA; without load  output voltage / header Rated value (DC) 24 V  Power loss Power loss, typ. 1 W  Address area Address space per module Address space per module, max. 1 byte  Hardware configuration Automatic encoding Yes  One GSD file each, Revision 3 and 5 and higher GSDML V2.3  One GSD file each, Revision 3 and 5 and higher GSDML V2.3  One GSD file each, Revision 3 and 5 and higher GSDML V2.3  One GSD file each, Revision 3 and 5 and higher GSDML V2.3   One GSD file each, Revision 3 and 5 and higher GSDML V2.3  One GSD file each, Revision 3 and 5 and higher GSDML V2.3   The sum of the		V14	
● PROFINET from GSD version/GSD revision  Operating mode      ● DQ	<ul> <li>STEP 7 configurable/integrated from version</li> </ul>	V5.5 SP3	
Operating mode  • DQ  • DQ Yes  • DQ with energy-saving function  No  • PWM  • Oversampling  • MSO  Supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Yes  Input current  Current consumption, max.  45 mA; without load  output voltage / header  Rated value (DC)  Power loss  Power loss, typ.  Address space per module  • Address space per module, max.  1 byte  Hardware configuration  Automatic encoding  Yes	<ul> <li>PROFIBUS from GSD version/GSD revision</li> </ul>	One GSD file each, Revision 3 and 5 and higher	
DQ     DQ with energy-saving function     PWM     No     Oversampling     No     MSO     No  Supply voltage  Rated value (DC)     permissible range, lower limit (DC)     permissible range, upper limit (DC)     permissible range, upper limit (DC)     permissible range, upper limit (DC)     Reverse polarity protection     Yes  Input current  Current consumption, max.  45 mA; without load  output voltage / header  Rated value (DC)     24 V  Power loss  Power loss  Power loss, typ.  Address area  Address space per module     Address space per module, max.  1 byte  Hardware configuration  Automatic encoding  Yes	PROFINET from GSD version/GSD revision	GSDML V2.3	
DQ with energy-saving function PWM No Oversampling No MSO No  Supply voltage  Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range, was a very limit (DC) Permissible range, upper limit (DC) Pess Ves Ves Ves Ves Ves Ves Ves Ves Ves	Operating mode		
PWM Oversampling No MSO No  Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Reverse polarity protection Yes Input current Current consumption, max. 45 mA; without load output voltage / header Rated value (DC) Power loss Power loss, typ. 1 W  Address area Address space per module Address space per module, max. 1 byte  Hardware configuration Automatic encoding Yes	• DQ	Yes	
Oversampling     MSO     MSO     No  Supply voltage  Rated value (DC)     permissible range, lower limit (DC)     permissible range, upper limit (DC)     Reverse polarity protection     Yes  Input current  Current consumption, max.  Output voltage / header  Rated value (DC)  Power loss  Power loss, typ.  Address area  Address space per module     Address space per module, max.  1 byte  Hardware configuration  Automatic encoding  Yes	<ul> <li>DQ with energy-saving function</li> </ul>	No	
● 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. 45 mA; without load  output voltage / header  Rated value (DC) 24 V  Power loss  Power loss, typ. 1 W  Address area  Address space per module  ● Address space per module, max. 1 byte  Hardware configuration  Automatic encoding Yes	• PWM	No	
Rated value (DC)  Permissible range, lower limit (DC)  Permissible range, upper limit (DC)  Reverse polarity protection  Fes  Input current  Current consumption, max.  Current consumption, max.  Output voltage / header  Rated value (DC)  Power loss  Power loss, typ.  Address space per module  Address space per module  Address space per module, max.  I byte  Hardware configuration  Automatic encoding  Yes	<ul> <li>Oversampling</li> </ul>	No	
Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Yes  Input current  Current consumption, max.  Output voltage / header  Rated value (DC)  Power loss  Power loss, typ.  Address area  Address space per module  • Address space per module, max.  Automatic encoding  Yes	• MSO	No	
permissible range, lower limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Yes  Input current  Current consumption, max.  Output voltage / header  Rated value (DC)  Power loss  Power loss, typ.  Address area  Address space per module  • Address space per module, max.  1 byte  Hardware configuration  Automatic encoding  Yes	Supply voltage		
permissible range, upper limit (DC)  Reverse polarity protection  Yes  Input current  Current consumption, max.  Output voltage / header  Rated value (DC)  Power loss  Power loss, typ.  1 W  Address area  Address space per module  • Address space per module, max.  1 byte  Hardware configuration  Automatic encoding  Yes	Rated value (DC)	24 V	
Reverse polarity protection  Input current  Current consumption, max.  Output voltage / header  Rated value (DC)  Power loss  Power loss, typ.  1 W  Address area  Address space per module  • Address space per module, max.  1 byte  Hardware configuration  Automatic encoding  Yes  45 mA; without load  0 1 W  45 mA; without load  1 W  45 mA; without load  1 W  45 mA; without load  1 byte	permissible range, lower limit (DC)	19.2 V	
Input current  Current consumption, max. 45 mA; without load  output voltage / header  Rated value (DC) 24 V  Power loss  Power loss, typ. 1 W  Address area  Address space per module  • Address space per module, max. 1 byte  Hardware configuration  Automatic encoding Yes	permissible range, upper limit (DC)	28.8 V	
Current consumption, max.  Output voltage / header  Rated value (DC)  Power loss  Power loss, typ.  Address area  Address space per module  • Address space per module, max.  Hardware configuration  Automatic encoding  45 mA; without load	Reverse polarity protection	Yes	
output voltage / header Rated value (DC)  Power loss  Power loss, typ.  Address area  Address space per module  • Address space per module, max.  Hardware configuration  Automatic encoding  Yes	Input current		
Rated value (DC)  Power loss  Power loss, typ.  1 W  Address area  Address space per module  • Address space per module, max.  1 byte  Hardware configuration  Automatic encoding  Yes	Current consumption, max.	45 mA; without load	
Power loss Power loss, typ. 1 W  Address area  Address space per module  • Address space per module, max. 1 byte  Hardware configuration  Automatic encoding Yes	output voltage / header		
Power loss, typ. 1 W  Address area  Address space per module  • Address space per module, max. 1 byte  Hardware configuration  Automatic encoding Yes	Rated value (DC)	24 V	
Address area  Address space per module  • Address space per module, max. 1 byte  Hardware configuration  Automatic encoding Yes	Power loss		
Address space per module  • Address space per module, max.  1 byte  Hardware configuration  Automatic encoding  Yes	Power loss, typ.	1 W	
Address space per module, max.  Hardware configuration  Automatic encoding  Yes	Address area		
Hardware configuration Automatic encoding  Yes	Address space per module		
Hardware configuration Automatic encoding  Yes	Address space per module, max.	1 byte	
3			
Mechanical coding element     Yes	Automatic encoding	Yes	
	Mechanical coding element	Yes	

Type of mechanical coding element	Type A
Selection of BaseUnit for connection variants	Туре А
1-wire connection	BU type A0
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	8
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	Yes; per channel, electronic
Response threshold, typ.	1 A
Limitation of inductive shutdown voltage to	Typ. L+ (-50 V)
Controlling a digital input	Yes
Switching capacity of the outputs	
<ul><li>with resistive load, max.</li></ul>	0.5 A
on lamp load, max.	5 W
Load resistance range	
• lower limit	48 Ω
upper limit	100 kΩ
Output current	
• for signal "1" rated value	0.5 A
• for signal "1" permissible range, max.	0.5 A
• for signal "0" residual current, max.	10 μA
Output delay with resistive load	400 year at retail load
• "0" to "1", max.	100 µs; at rated load
• "1" to "0", max.	150 µs; at rated load
Parallel switching of two outputs	No
for uprating     for redundant control of a load	Yes
Switching frequency	100
with resistive load, max.	100 Hz
with resistive load, max.      with inductive load, max.	2 Hz
• on lamp load, max.	10 Hz
Total current of the outputs	
Current per channel, max.	0.5 A
Current per module, max.	4 A
Total current of the outputs (per module)	
horizontal installation	
— up to 60 °C, max.	4 A
vertical installation	
— up to 50 °C, max.	4 A
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
Diagnoses	
<ul> <li>Monitoring the supply voltage</li> </ul>	Yes
Wire-break	No
Short-circuit	No
Group error	Yes
Diagnostics indication LED	
<ul> <li>Monitoring of the supply voltage (PWR-LED)</li> </ul>	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	
<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	707 V DC (type test)
Standards, approvals, certificates	
Suitable for safety functions	No
Suitable for safety-related tripping of standard modules	Yes; see FAQ Entry ID: 39198632
Highest safety class achievable in safety mode	
<ul> <li>Performance level according to ISO 13849-1</li> </ul>	PL d
SIL acc. to IEC 61508	SIL 2
Ambient conditions	
Ambient temperature during operation	
<ul> <li>horizontal installation, min.</li> </ul>	-30 °C; < 0 °C as of FS02
<ul> <li>horizontal installation, max.</li> </ul>	60 °C
<ul> <li>vertical installation, min.</li> </ul>	-30 °C; < 0 °C as of FS02
vertical installation, max.	50 °C
Altitude during operation relating to sea level	
Installation altitude above sea level, max.	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Dimensions	
Width	15 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	30 g
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