## **SIEMENS**

## **Data sheet**

## 6AG1132-6BF00-7CA0



SIPLUS ET 200SP DQ 8x24VDC/0.5A HF based on 6ES7132-6BF00-0CA0 with conformal coating, -40...+70  $^{\circ}$ C, digital output module, suitable for BU type A0, color code CC02, channel diagnostics,

Figure similar

Product type designation   DQ 8x24 V DC/0.5 A HF	riguresiiiia		
Firmware version	General information		
	Product type designation	DQ 8x24 V DC/0.5 A HF	
Dased on   SES7132-SBF00-0CAQ     usable BaseUnits	Firmware version	V1.2	
usable BaseUnits Color code for module-specific color identification plate CC02  Product function  I &M data Sischronous mode Fingineering with STEP 7 TIA Portal configurable/integrated from version Operating mode  DQ Yes DQ Yes DQ with energy-saving function PPWM Oversampling No Oversampling No Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Pervere polarity protection Pupt urrent Current consumption, max.  45 mA; without load  Output voltage / header Rated value (DC) Power loss Power loss, typ. 1 W Address space per module Address space per modul	FW update possible	Yes	
Color code for module-specific color identification plate Product function  I 8M data Sochronous mode Product function  I 8M data Sochronous mode Product function  STEP 7 TIA Portal configurable/integrated from version Perating mode  Dearting mode  Do Wes Do with energy-saving function PWM No Oversampling No MSO Pyes  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 with the function of the fu	based on	6ES7132-6BF00-0CA0	
Product function  • I&M data • Isochronous mode  Engineering with • STEP 7 TIA Portal configurable/integrated from version Operating mode  • DQ • DQ Yes • 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) 28.8 V Reverse polarity protection Tyes Input current Current consumption, max. 45 mA; without load output voltage / header Rated value (DC) Power loss, typ. Address space per module, max. 1 byte; + 1 byte for QI information Digital outputs Type of digital outputs Volume of digital outputs Ves	usable BaseUnits	BU type A0	
● I&M data ● Isochronous mode Persimeering with ● STEP 7 TIA Portal configurable/integrated from version Operating mode  ● DQ Yes ● DC with energy-saving function No ● PWM No ● Oversampling No ● MSO Yes  Supply voltage Rated value (DC) 24 V permissible range, lower 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 space per module, max. 1 byte; + 1 byte for QI information Digital outputs Type of digital outputs Function of the process of t	Color code for module-specific color identification plate	CC02	
Step 7 TIA Portal configurable/integrated from version  See entry ID: 109746275  See entry ID: 10974627  See entry ID: 10974627  See entry ID: 10974627  See entry ID: 10974627  See entry ID: 1097	Product function		
Engineering with  STEP 7 TIA Portal configurable/integrated from version Operating mode  DQ Yes  DQ Yes  DQ Yes  DQ With energy-saving function  No  PWM No  Oversampling  MSO Yes  Supply voltage  Rated value (DC)  Permissible range, lower limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Yes  Current consumption, max.  Output voltage / header  Rated value (DC)  24 V  Power loss  Power loss, typ.  Address space per module  Address space per module, max.  1 byte; + 1 byte for QI information  Digital outputs  Type of digital outputs  No  Current-sourcing  No  Current-sourcing  No  Current-sourcing  Yes	● I&M data	Yes; I&M0 to I&M3	
STEP 7 TIA Portal configurable/integrated from version Operating mode  DQ Yes DQ with energy-saving function No PWM No Oversampling No MSO Yes  Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range, with protection 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 Address space per module, max.  1 byte; + 1 byte for QI information Digital outputs Type of digital outputs Source output (PNP, current-sourcing) Number of digital outputs Current-sourcing Yes	Isochronous mode	Yes	
Operating mode  No  Oversampling  No  Operating mode  Operatin	Engineering with		
DQ with energy-saving function PWM No Oversampling MSO Yes  Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissib	<ul> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>	see entry ID: 109746275	
DQ with energy-saving function PWM No Oversampling No MSO Yes  Supply voltage Rated value (DC) 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; + 1 byte for QI information  Digital outputs  Type of digital output Source output (PNP, current-sourcing) Number of digital outputs  Current-sinking No Current-sourcing Yes	Operating mode		
PWM Oversampling No MSO Yes  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; + 1 byte for Ql information  Digital outputs  Type of digital output Source output (PNP, current-sourcing) Number of digital outputs  Current-sourcing Yes	• DQ	Yes	
● Oversampling ● MSO  MSO  Yes  Supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  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; +1 byte for Ql information  Digital outputs  Type of digital output  Number of digital outputs  Current-sinking  No  Current-sourcing  Yes	<ul> <li>DQ with energy-saving function</li> </ul>	No	
MSO 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; + 1 byte for QI information Digital outputs Type of digital output Source output (PNP, current-sourcing) Number of digital outputs 8 Current-sinking No Current-sourcing Yes	• PWM	No	
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; +1 byte for QI information Digital outputs Type of digital output Source output (PNP, current-sourcing) Number of digital outputs 8 Current-sinking No Current-sourcing Yes	<ul> <li>Oversampling</li> </ul>	No	
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; +1 byte for QI information  Digital outputs  Type of digital output Source output (PNP, current-sourcing)  Number of digital outputs  Current-sinking No Current-sourcing Yes	• MSO	Yes	
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; +1 byte for QI information  Digital outputs  Type of digital output  Number of digital outputs  Current-sourcing  No  Current-sourcing  Yes	Supply voltage		
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; + 1 byte for QI information  Digital outputs  Type of digital output  Source output (PNP, current-sourcing)  Number of digital outputs  Current-sinking  Current-sourcing  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.  Address area  Address space per module  • Address space per module, max.  Digital outputs  Type of digital output  Number of digital outputs  Current-sinking  Current-sourcing  Yes  45 mA; without load  40 mA; without load	permissible range, lower limit (DC)	19.2 V	
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; + 1 byte for QI information  Digital outputs  Type of digital output  Source output (PNP, current-sourcing)  Number of digital outputs  Current-sinking  No  Current-sourcing  Yes	permissible range, upper limit (DC)	28.8 V	
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; + 1 byte for QI information  Digital outputs  Type of digital output  Number of digital outputs  Current-sinking  Current-sourcing  Yes	Reverse polarity protection	Yes	
output voltage / header   Rated value (DC) 24 V   Power loss   Power loss, typ. 1 W   Address area   Address space per module <ul> <li>Address space per module, max.</li> <li>1 byte; + 1 byte for QI information</li> </ul> Digital outputs   Type of digital output Source output (PNP, current-sourcing)   Number of digital outputs 8   Current-sinking No   Current-sourcing 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; + 1 byte for QI information  Digital outputs  Type of digital output  Source output (PNP, current-sourcing)  Number of digital outputs  Current-sinking  No  Current-sourcing  Yes	Current consumption, max.	45 mA; without load	
Power loss, typ. 1 W  Address area  Address space per module  • Address space per module, max. 1 byte; + 1 byte for QI information  Digital outputs  Type of digital output Source output (PNP, current-sourcing)  Number of digital outputs 8  Current-sinking No  Current-sourcing Yes	output voltage / header		
Power loss, typ. 1 W  Address area  Address space per module  ◆ Address space per module, max. 1 byte; + 1 byte for QI information  Digital outputs  Type of digital output Source output (PNP, current-sourcing)  Number of digital outputs 8  Current-sinking No  Current-sourcing Yes	Rated value (DC)	24 V	
Address space per module  • Address space per module, max.  1 byte; + 1 byte for QI information  Digital outputs  Type of digital output  Source output (PNP, current-sourcing)  Number of digital outputs  Current-sinking  No  Current-sourcing  Yes	Power loss		
Address space per module  • Address space per module, max.  Digital outputs  Type of digital output  Number of digital outputs  Current-sinking  Current-sourcing  Yes	Power loss, typ.	1 W	
● Address space per module, max.  Digital outputs  Type of digital output  Number of digital outputs  Current-sinking  Current-sourcing  Yes	Address area		
Type of digital output  Source output (PNP, current-sourcing)  Number of digital outputs  8  Current-sinking  No  Current-sourcing  Yes	Address space per module		
Type of digital output  Number of digital outputs  8  Current-sinking  No  Current-sourcing  Yes	Address space per module, max.	1 byte; + 1 byte for QI information	
Number of digital outputs     8       Current-sinking     No       Current-sourcing     Yes	Digital outputs		
Current-sinking No Current-sourcing Yes	Type of digital output	Source output (PNP, current-sourcing)	
Current-sourcing Yes	Number of digital outputs	8	
	Current-sinking	No	
Digital outputs, parameterizable Yes	Current-sourcing	Yes	
	Digital outputs, parameterizable	Yes	
Short-circuit protection Yes	Short-circuit protection	Yes	

<ul> <li>Response threshold, typ.</li> </ul>	0.7 to 1.3 A
Limitation of inductive shutdown voltage to	Typ. L+ (-50 V)
Controlling a digital input	Yes
Switching capacity of the outputs	
with resistive load, max.	0.5 A
• on lamp load, max.	5 W
Load resistance range	
• lower limit	48 Ω
upper limit	12 kΩ
Output current	
for signal "1" rated value	0.5 A
	0.1 mA
Output delay with resistive load	
• "0" to "1", typ.	50 μs
• "1" to "0", typ.	100 μs
Parallel switching of two outputs	
• for uprating	No
for redundant control of a load	Yes
Switching frequency	
with resistive load, max.	100 Hz
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 60 °C, max.	4 A
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Isochronous mode	
Execution and activation time (TCO), min.	48 μs
Bus cycle time (TDP), min.	500 µs
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
Diagnostic alarm	Yes
Diagnoses	
Monitoring the supply voltage	Yes
Wire-break	Yes; channel by channel
Short-circuit	Yes; channel by channel
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	Yes; red LED
for module diagnostics	Yes; green/red DIAG LED
Potential separation	
Potential separation channels	
between the channels	No
between the channels and backplane bus	Yes
Permissible potential difference	
between different circuits	75 V DC/60 V AC (base isolation)
Isolation	
Isolation tested with	
	707 V DC (type test)
Standards, approvals, certificates	707 V DC (type test)

Suitable for safety functions	No		
Suitable for safety functions  Ecological footprint	INO		
environmental product declaration	Yes		
Global warming potential	165		
— global warming potential, (total) [CO2 eq]	20.4 kg		
— global warming potential, (total) [CO2 eq]  — global warming potential, (during production) [CO2			
eq]	3.16 kg		
— global warming potential, (during operation) [CO2 eq]	17.5 kg		
<ul><li>— global warming potential, (after end of life cycle) [CO2 eq]</li></ul>	-0.221 kg		
Ambient conditions			
Ambient temperature during operation			
<ul> <li>horizontal installation, min.</li> </ul>	-40 °C; = Tmin (incl. condensation/frost)		
<ul> <li>horizontal installation, max.</li> </ul>	70 °C; = Tmax; > +60 °C max. total current 1.0 A		
<ul> <li>vertical installation, min.</li> </ul>	-40 °C; = Tmin		
<ul> <li>vertical installation, max.</li> </ul>	50 °C; = Tmax		
Altitude during operation relating to sea level			
<ul> <li>Installation altitude above sea level, max.</li> </ul>	5 000 m		
Ambient air temperature-barometric pressure-altitude	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)		
Relative humidity			
<ul> <li>With condensation, tested in accordance with IEC 60068- 2-38, max.</li> </ul>	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation		
Resistance			
Coolants and lubricants			
<ul> <li>Resistant to commercially available coolants and lubricants</li> </ul>	Yes; Incl. diesel and oil droplets in the air		
Use in stationary industrial systems			
<ul> <li>to biologically active substances according to EN 60721-3-3</li> </ul>	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request		
<ul> <li>to chemically active substances according to EN 60721-3-3</li> </ul>	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); $^{\star}$		
<ul> <li>to mechanically active substances according to EN 60721-3-3</li> </ul>	Yes; Class 3S4 incl. sand, dust, *		
<ul> <li>— Against mechanical environmental conditions acc. to EN 60721-3-3</li> </ul>	Yes; Class 3M8 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)		
Use on ships/at sea			
<ul> <li>to biologically active substances according to EN 60721-3-6</li> </ul>	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request		
<ul> <li>to chemically active substances according to EN 60721-3-6</li> </ul>	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); $^{\star}$		
<ul> <li>to mechanically active substances according to EN 60721-3-6</li> </ul>	Yes; Class 6S3 incl. sand, dust; *		
<ul> <li>— Against mechanical environmental conditions acc. to EN 60721-3-6</li> </ul>	Yes; Class 6M4 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)		
Usage in industrial process technology			
<ul> <li>Against chemically active substances acc. to EN 60654-4</li> </ul>	Yes; Class 3 (excluding trichlorethylene)		
<ul> <li>Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04</li> </ul>	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)		
Remark	(51)		
Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!		
Conformal coating			
Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability		
<ul> <li>Protection against fouling acc. to EN 60664-3</li> </ul>	Yes; Type 1 protection		
<ul> <li>Military testing according to MIL-I-46058C, Amendment 7</li> <li>Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC- CC-830A</li> </ul>	Yes; Discoloration of coating possible during service life Yes; Conformal coating, Class A		
VACO 3UA			
Dimensions Width	15 mm		

Depth	58 mm				
Weights					
Weight, approx.	30 g				
Classifications					
		Version	Classification		
	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 8 27-24-26-04 eClass eClass 27-24-26-04 6 27-24-26-04 eClass ETIM 9 EC001599 EC001599 ETIM 8 ETIM EC001599 7 **IDEA** 4 3566 UNSPSC 15 32-15-17-05

Approvals / Certificates

General Product Approval

Miscellaneous

Manufacturer Declaration









For use in hazardous locations

Marine / Shipping Environment











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