## **SIEMENS**

## **Data sheet**

## 6ES7142-6BG00-0AB0



SIMATIC DP, ET 200ECO PN, 8 DO 24 V DC/1.3 A; 8xM12, Degree of protection IP67  $\,$ 

Figure similar

Vendor identification (VendorID)  Device identifier (DeviceID)  Supply voltage Rated value (DC)  Reverse polarity protection  Pes  power supply according to NEC Class 2 required  Ves  Load voltage 11+  Rated value (DC)  permissible range, lower limit (DC)  permissible range, lower limit (DC)  Reverse polarity protection  permissible range, lower limit (DC)  Reverse polarity protection  Reverse polarity protection  Yes  Load voltage 21+  Rated value (DC)  Reverse polarity protection  Yes  Load voltage 21+  Rated value (DC)  permissible range, lower limit (DC)  permissible range, lower limit (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Pes  Reverse polarity protection  Yes  Linut current  Current consumption, typ.  from supply voltage 11+, max.  4 A  from load voltage 11+, max.  4 A  From load voltage 21+, max.  4 A  Power loss  Power loss, typ.  Digital outputs  Number of digital outputs  Power loss, typ.  Digital outputs  Number of digital outputs  Response threshold, typ.  1.8 A  Limitation of inductive shutdown voltage to  Typ. (L1+, L2+) -47 V  Controlling a digital input  Yes  Switching capacity of the outputs  o na lamp load, max.  5 W  Output current	General information	
Rated value (DC) Reverse polarity protection power supply according to NEC Class 2 required Load voltage 11+ Rated value (DC) permissible range, lower limit (DC) permissible range, lower limit (DC) Reverse polarity protection Pes Rated value (DC) Permissible range, lower limit (DC) Reverse polarity protection Reverse polarity protection Pes Load voltage 21+ Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Reverse polarity protection Pes Input current Current consumption, typ. Ton supply voltage 11+, max. AA  from load voltage 11+, max. AA  from load voltage 11+, max. AA  Fower loss Power loss, typ. Power loss, typ.  Power loss, typ.  Poigital outputs  Number of digital outputs Response threshold, typ. 1.8 A  Limitation of inductive shutdown voltage to Controlling a digital input Pes Switching capacity of the outputs Output current  Output current  Pyes  Switching capacity of the outputs Output current  SW  Output current	Vendor identification (VendorID)	002AH
Rated value (DC)	Device identifier (DeviceID)	0306H
Reverse polarity protection power supply according to NEC Class 2 required Load voltage 1L+  • Rated value (DC) • permissible range, lower limit (DC) • permissible range, upper limit (DC) • Reverse polarity protection Load voltage 2L+ • Rated value (DC) • permissible range, lower limit (DC) • Reverse polarity protection Load voltage 2L+ • Rated value (DC) • permissible range, lower limit (DC) • permissible range, upper limit (DC) • Reverse polarity protection  Form current  Current consumption, typ.  100 mA from supply voltage 1L+, max.  4 A from load voltage 2L+, max.  4 A  from load voltage 2L+, max.  4 A  Power loss  Power loss, typ.  Digital outputs  Number of digital outputs • in groups of  4 Short-circuit protection • Response threshold, typ. 1.8 A  Limitation of inductive shutdown voltage to  Typ. (L1+, L2+) -47 V  Controlling a digital input • on lamp load, max.  Output current	Supply voltage	
power supply according to NEC Class 2 required  Load voltage 1L+  • Rated value (DC)  • permissible range, lower limit (DC)  • permissible range, upper limit (DC)  • Reverse polarity protection  Load voltage 2L+  • 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, typ.  from load voltage 1L+, max.  from load voltage 1L+, max.  from load voltage 2L+, max.  Power loss  Power loss  Power loss, typ.  Digital outputs  Number of digital outputs  • in groups of  • Response threshold, typ.  Limitation of inductive shutdown voltage to  Controlling a digital input  Yes  Switching capacity of the outputs  • on lamp load, max.  • on lamp load, max.  • on lamp load, max.  Output current	Rated value (DC)	24 V
Load voltage 1L+  • Rated value (DC) • permissible range, lower limit (DC) • permissible range, upper limit (DC) • Reverse polarity protection  • Reverse polarity protection  • Rated value (DC) • permissible range, lower limit (DC) • permissible range, lower limit (DC) • permissible range, upper limit (DC) • permissible range, upper limit (DC) • Reverse polarity protection  • Reverse polarity protection  • Reverse polarity protection  Current consumption, typ.  Input current  Current consumption, typ.  from supply voltage 1L+, max.  4 A  from load voltage 1L+ (unswitched voltage)  from load voltage 2L+, max.   Power loss  Power loss, typ.  Digital outputs  Number of digital outputs  • in groups of  A  Short-circuit protection  • Response threshold, typ.  Limitation of inductive shutdown voltage to  Controlling a digital input  Yes  Switching capacity of the outputs  • on lamp load, max.  Output current	Reverse polarity protection	Yes
Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Pes  Rated value (DC)  permissible range, upper limit (DC)  permissible range, lower limit (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  permissible ra	power supply according to NEC Class 2 required	Yes
• permissible range, lower limit (DC)     • permissible range, upper limit (DC)     • permissible range, upper limit (DC)     • Reverse polarity protection     Pated value (DC)     • Permissible range, lower limit (DC)     • permissible range, lower limit (DC)     • permissible range, upper limit (DC)     • permissible range, upper limit (DC)     • Reverse polarity protection     Pess  Input current  Current consumption, typ.     from supply voltage 1L+, max.     from load voltage 1L+ (unswitched voltage)     from load voltage 2L+, max.  Power loss  Power loss, typ.  Digital outputs  Number of digital outputs      • in groups of     Short-circuit protection     Yes     • Response threshold, typ.  Limitation of inductive shutdown voltage to Controlling a digital input Switching capacity of the outputs  • on lamp load, max.  Output current	Load voltage 1L+	
permissible range, upper limit (DC)     Reverse polarity protection     Yes  Load voltage 2L+     Rated value (DC)     permissible range, lower limit (DC)     permissible range, upper limit (DC)     Peverse polarity protection     Reverse polarity protection     Yes  Input current  Current consumption, typ.     100 mA  from supply voltage 1L+, max.     4 A  from load voltage 1L+ (unswitched voltage)     4 A  from load voltage 2L+, max.  Power loss  Power loss, typ.  Digital outputs  Number of digital outputs     Response threshold, typ.  Ingroups of  Response threshold, typ.  Limitation of inductive shutdown voltage to  Typ. (L1+, L2+) -47 V  Controlling a digital input  Switching capacity of the outputs  on lamp load, max.  5 W  Output current	<ul> <li>Rated value (DC)</li> </ul>	24 V
Reverse polarity protection  Load voltage 2L+  Rated value (DC)  permissible range, lower limit (DC)  Reverse polarity protection  Reverse polarity protection  Pess  Input current  Current consumption, typ.  100 mA  from supply voltage 1L+, max.  from load voltage 1L+ (unswitched voltage)  from load voltage 2L+, max.  Power loss  Power loss  Power loss, typ.  Digital outputs  Number of digital outputs  Response threshold, typ.  Ingure of logital outputs  Response threshold, typ.  Limitation of inductive shutdown voltage to  Switching capacity of the outputs  Output current  Power loss  For logital outputs  Response threshold, typ.  Limitation of inductive shutdown voltage to  Typ. (L1+, L2+) -47 V  Controlling a digital input  Switching capacity of the outputs  Output current	<ul> <li>permissible range, lower limit (DC)</li> </ul>	20.4 V
Load voltage 2L+  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  rosupply voltage 1L+, max.  from load voltage 1L+, max.  from load voltage 2L+, max.  Power loss  Power loss, typ.  Digital outputs  Number of digital outputs  Response threshold, typ.  Response threshold, typ.  In group of the outputs on land of inductive shutdown voltage to the controlling a digital input  Ves  Switching capacity of the outputs  on lamp load, max.  FW  Output current	<ul> <li>permissible range, upper limit (DC)</li> </ul>	28.8 V
Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Pes  Input current  Current consumption, typ. from supply voltage 1L+, max. from load voltage 1L+ (unswitched voltage) from load voltage 2L+, max.  Power loss Power loss, typ.  Digital outputs  Number of digital outputs  in groups of Short-circuit protection Pessponse threshold, typ. Limitation of inductive shutdown voltage to Controlling a digital input  Switching capacity of the outputs  on lamp load, max.  FW  Output current  24 V  20.4 V  4 A  4 A  4 A  4 A  4 A  FOWER  5.5 W  Digital outputs  8  • in groups of 4  Short-circuit protection Yes • Response threshold, typ. 1.8 A  Limitation of inductive shutdown voltage to Typ. (L1+, L2+) -47 V  Yes  Switching capacity of the outputs • on lamp load, max.  5 W  Output current	Reverse polarity protection	Yes
<ul> <li>permissible range, lower limit (DC)</li> <li>permissible range, upper limit (DC)</li> <li>Reverse polarity protection</li> <li>Yes</li> </ul> Input current Current consumption, typ. <ul> <li>from supply voltage 1L+, max.</li> <li>from load voltage 1L+ (unswitched voltage)</li> <li>from load voltage 2L+, max.</li> </ul> Power loss, typ. <ul> <li>5.5 W</li> </ul> Digital outputs <ul> <li>in groups of</li> <li>Response threshold, typ.</li> <li>Limitation of inductive shutdown voltage to</li> <li>Typ. (L1+, L2+) -47 V</li> </ul> Controlling a digital input <ul> <li>Yes</li> <li>Switching capacity of the outputs</li> <li>on lamp load, max.</li> </ul> 5 W Output current	Load voltage 2L+	
<ul> <li>permissible range, upper limit (DC)</li> <li>Reverse polarity protection</li> <li>Yes</li> </ul> Input current Current consumption, typ. <ul> <li>from supply voltage 1L+, max.</li> <li>from load voltage 1L+ (unswitched voltage)</li> <li>from load voltage 2L+, max.</li> <li>4 A</li> </ul> Power loss Power loss, typ. Digital outputs Number of digital outputs <ul> <li>in groups of</li> <li>Response threshold, typ.</li> <li>Emitation of inductive shutdown voltage to</li> <li>Typ. (L1+, L2+) -47 V</li> </ul> Controlling a digital input <ul> <li>Yes</li> <li>Switching capacity of the outputs</li> <li>on lamp load, max.</li> <li>Output current</li> </ul>	<ul> <li>Rated value (DC)</li> </ul>	24 V
Reverse polarity protection  Input current  Current consumption, typ.  from supply voltage 1L+, max.  from load voltage 1L+ (unswitched voltage)  from load voltage 2L+, max.  Power loss  Power loss, typ.  Digital outputs  Number of digital outputs  in groups of  Response threshold, typ.  Limitation of inductive shutdown voltage to  Controlling a digital input  Switching capacity of the outputs  on lamp load, max.  Output current  100 mA  4 A  A  A  B  A  A  A  B  A  A  A  A  A  B  A  A	<ul> <li>permissible range, lower limit (DC)</li> </ul>	20.4 V
Input current  Current consumption, typ. 100 mA  from supply voltage 1L+, max. 4 A  from load voltage 1L+ (unswitched voltage) 4 A  from load voltage 2L+, max. 4 A  Power loss  Power loss, typ. 5.5 W  Digital outputs  Number of digital outputs 8  • in groups of 4  Short-circuit protection Yes  • Response threshold, typ. 1.8 A  Limitation of inductive shutdown voltage to Typ. (L1+, L2+) -47 V  Controlling a digital input Yes  Switching capacity of the outputs  • on lamp load, max. 5 W  Output current	<ul> <li>permissible range, upper limit (DC)</li> </ul>	28.8 V
Current consumption, typ.  from supply voltage 1L+, max.  from load voltage 1L+ (unswitched voltage)  from load voltage 2L+, max.  4 A  Power loss  Power loss, typ.  Digital outputs  Number of digital outputs  • in groups of  Response threshold, typ.  Limitation of inductive shutdown voltage to  Controlling a digital input  Switching capacity of the outputs  • on lamp load, max.  Output current	Reverse polarity protection	Yes
from supply voltage 1L+, max.  from load voltage 1L+ (unswitched voltage)  from load voltage 2L+, max.  4 A  Power loss  Power loss, typ.  Digital outputs  Number of digital outputs  Number of digital outputs  • in groups of  Short-circuit protection • Response threshold, typ.  Limitation of inductive shutdown voltage to  Typ. (L1+, L2+) -47 V  Controlling a digital input  Yes  Switching capacity of the outputs  • on lamp load, max.  Output current	Input current	
from load voltage 1L+ (unswitched voltage)  from load voltage 2L+, max.  4 A  Power loss  Power loss, typ.  5.5 W  Digital outputs  Number of digital outputs  in groups of  Short-circuit protection  Response threshold, typ.  Limitation of inductive shutdown voltage to  Typ. (L1+, L2+) -47 V  Controlling a digital input  Yes  Switching capacity of the outputs  on lamp load, max.  5 W  Output current	Current consumption, typ.	100 mA
from load voltage 2L+, max.  Power loss  Power loss, typ.  Digital outputs  Number of digital outputs  Number of digital outputs  in groups of  Short-circuit protection  Response threshold, typ.  Limitation of inductive shutdown voltage to  Controlling a digital input  Switching capacity of the outputs  on lamp load, max.  Output current	from supply voltage 1L+, max.	4 A
Power loss Power loss, typ. 5.5 W  Digital outputs  Number of digital outputs 8  • in groups of 4  Short-circuit protection Yes  • Response threshold, typ. 1.8 A  Limitation of inductive shutdown voltage to Typ. (L1+, L2+) -47 V  Controlling a digital input Yes  Switching capacity of the outputs  • on lamp load, max. 5 W  Output current	from load voltage 1L+ (unswitched voltage)	4 A
Power loss, typ.  Digital outputs  Number of digital outputs  ● in groups of  Short-circuit protection  ● Response threshold, typ.  Limitation of inductive shutdown voltage to  Controlling a digital input  Switching capacity of the outputs  ● on lamp load, max.  Output current  5.5 W   7 yes  1.8 A  Typ. (L1+, L2+) -47 V  Yes  5 W  Output current	from load voltage 2L+, max.	4 A
Digital outputs         Number of digital outputs       8         ● in groups of       4         Short-circuit protection       Yes         ● Response threshold, typ.       1.8 A         Limitation of inductive shutdown voltage to       Typ. (L1+, L2+) -47 V         Controlling a digital input       Yes         Switching capacity of the outputs       5 W         Output current       5 W	Power loss	
Number of digital outputs	Power loss, typ.	5.5 W
<ul> <li>in groups of</li> <li>Short-circuit protection</li> <li>Response threshold, typ.</li> <li>Limitation of inductive shutdown voltage to</li> <li>Controlling a digital input</li> <li>Switching capacity of the outputs</li> <li>on lamp load, max.</li> <li>Output current</li> </ul>	Digital outputs	
<ul> <li>in groups of</li> <li>Short-circuit protection</li> <li>Response threshold, typ.</li> <li>Limitation of inductive shutdown voltage to</li> <li>Controlling a digital input</li> <li>Switching capacity of the outputs</li> <li>on lamp load, max.</li> <li>Output current</li> </ul>	Number of digital outputs	8
<ul> <li>Response threshold, typ.</li> <li>Limitation of inductive shutdown voltage to</li> <li>Typ. (L1+, L2+) -47 V</li> <li>Controlling a digital input</li> <li>Yes</li> <li>Switching capacity of the outputs</li> <li>on lamp load, max.</li> <li>5 W</li> <li>Output current</li> </ul>	-	4
Limitation of inductive shutdown voltage to  Typ. (L1+, L2+) -47 V  Controlling a digital input  Yes  Switching capacity of the outputs  ● on lamp load, max.  5 W  Output current	Short-circuit protection	Yes
Controlling a digital input  Switching capacity of the outputs  on lamp load, max.  5 W  Output current	<ul> <li>Response threshold, typ.</li> </ul>	1.8 A
Switching capacity of the outputs  • on lamp load, max.  5 W  Output current	Limitation of inductive shutdown voltage to	Typ. (L1+, L2+) -47 V
on lamp load, max.  Output current  5 W	Controlling a digital input	Yes
Output current	Switching capacity of the outputs	
	on lamp load, max.	5 W
for almost HAU material violation	Output current	
• for signal "1" rated value 1.3 A; Maximum	<ul><li>for signal "1" rated value</li></ul>	1.3 A; Maximum
• for signal "0" residual current, max.  1.5 mA	for signal "0" residual current, max.	1.5 mA
Parallel switching of two outputs	Parallel switching of two outputs	
• for uprating No	• for uprating	No

a for radius dont control of a load	Voc
for redundant control of a load	Yes
Switching frequency	400 Hz
with resistive load, max.	100 Hz
with inductive load, max.	0.5 Hz
• on lamp load, max.	1 Hz
Total current of the outputs (per group)	
all mounting positions — up to 60 °C, max.	3.9 A
	5.9 A
Cable length  • unshielded, max.	30 m
Interfaces	30 111
	100DASE TV
Transmission procedure  Number of PROFINET interfaces	100BASE-TX
1. Interface	
Interface types	Van
• integrated switch	Yes
Interface types	
M12 port	Voc
Autonogotiation	Yes
Autocrossing     Transmission rate, may	Yes
Transmission rate, max.	100 Mbit/s
Protocols	
Supports protocol for PROFINET IO	Yes
PROFINET CBA	No
PROFIsafe	No
PROFINET IO Device	
Services	v
— IRT with the option "high flexibility"	Yes
— Prioritized startup	Yes
Redundancy mode	
Media redundancy	Van
— MRP Open IE communication	Yes
TCP/IP	No
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
• ping	Yes
• ARP	Yes
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	100
Diagnostic alarm	Yes
Diagnoses	100
Diagnostic information readable	Yes
Monitoring the supply voltage	Yes; green "ON" LED
Wire-break in actuator cable	Yes
Short-circuit	Yes
Group error	Yes; Red/yellow "SF/MT" LED
Potential separation	
between the load voltages	Yes
between load voltages between load voltage and all other switching components	No
between Ethernet and electronics	Yes
Potential separation channels	100
between the channels	No
Isolation	
tested with	
24 V DC circuits	707 V DC (type test)
Test voltage for interface, rms value [Vrms]	1 500 V; According to IEEE 802.3
■ rest voltage for interface, fills value [viiiis]	1 300 V, According to ILLE 602.3

Degree and class of protection		
IP degree of protection	IP65/67	
Standards, approvals, certificates		
Suitable for safety-related tripping of standard modules	Yes	
Highest safety class achievable for safety-related tripping of standard modules		
<ul> <li>Performance level according to ISO 13849-1</li> </ul>	PL d	
<ul> <li>Category according to ISO 13849-1</li> </ul>	Cat. 3	
<ul> <li>SIL acc. to IEC 62061</li> </ul>	SIL 2	
connection method / header		
Design of electrical connection	4/5-pin M12 circular connectors	
Dimensions		
Width	60 mm	
Height	175 mm	
Depth	49 mm	
Weights		
Weight, approx.	910 g	

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