## **SIEMENS**

## **Product data sheet**

6ES7223-1PH32-0XB0



SIMATIC S7-1200, DIGITAL I/O SM 1223, 8DI / 8DO, 8DI DC 24 V, SINK/SOURCE, 8DO, RELAY 2A

Supply voltage	_	
24 V DC	Yes	
permissible range, upper limit (DC)	28.8 V	
Input current		
from backplane bus 5 V DC, max.	145 mA	
Digital inputs		
from load voltage L+ (without load), max.	4 mA/input 11 mA/relay	
Output voltage		
Power supply to the transmitters		
present	Yes	
Power losses		
Power loss, typ.	5.5 W	
Digital inputs		
Number/binary inputs	8	
In groups of	2	
Input characteristic curve acc. to IEC 61131, Type 1	Yes	
Number of simultaneously controllable inputs		
all mounting positions		

up to 40 °C, max.	8	
horizontal installation		
up to 40 °C, max.	8	
up to 50 °C, max.	8	
vertical installation		
up to 40 °C, max.	8	
Input voltage		
Type of input voltage	DC	
Rated value, DC	24 V	
for signal "0"	5 V DC at 1 mA	
Input current		
for signal "0", max. (permissible quiescent current)	1 mA	
for signal "1", min.	2.5 mA	
for signal "1", typ.	4 mA ; Typical	
Input delay (for rated value of input voltage)		
for standard inputs		
Parameterizable	Yes; 0.2, 0.4, 0.8, 1.6, 3.2, 6.4, and 12.8 ms, selectable in groups of four	
for interrupt inputs		
Parameterizable	Yes	
Cable length		
Cable length		
Cable length, shielded, max.	500 m	
	500 m 300 m	
Cable length, shielded, max.		
Cable length, shielded, max.  Cable length unshielded, max.		
Cable length, shielded, max.  Cable length unshielded, max.  Digital outputs	300 m	
Cable length, shielded, max.  Cable length unshielded, max.  Digital outputs  Number/binary outputs	300 m	
Cable length, shielded, max.  Cable length unshielded, max.  Digital outputs  Number/binary outputs  In groups of	300 m 8 2	
Cable length, shielded, max.  Cable length unshielded, max.  Digital outputs  Number/binary outputs  In groups of  Functionality/short-circuit strength	300 m 8 2	
Cable length, shielded, max.  Cable length unshielded, max.  Digital outputs  Number/binary outputs  In groups of  Functionality/short-circuit strength  Switching capacity of the outputs	300 m  8 2 No ; to be provided externally	
Cable length, shielded, max.  Cable length unshielded, max.  Digital outputs  Number/binary outputs  In groups of  Functionality/short-circuit strength  Switching capacity of the outputs  with resistive load, max.	300 m  8 2 No; to be provided externally  2 A	
Cable length, shielded, max.  Cable length unshielded, max.  Digital outputs  Number/binary outputs  In groups of  Functionality/short-circuit strength  Switching capacity of the outputs  with resistive load, max.  on lamp load, max.	300 m  8 2 No; to be provided externally  2 A	
Cable length, shielded, max.  Cable length unshielded, max.  Digital outputs  Number/binary outputs  In groups of  Functionality/short-circuit strength  Switching capacity of the outputs  with resistive load, max.  on lamp load, max.  Output current	300 m  8 2 No; to be provided externally  2 A 30 W with DC, 200 W with AC	
Cable length, shielded, max.  Cable length unshielded, max.  Digital outputs  Number/binary outputs  In groups of  Functionality/short-circuit strength  Switching capacity of the outputs  with resistive load, max.  on lamp load, max.  Output current  for signal "1" permissible range, max.	300 m  8 2 No; to be provided externally  2 A 30 W with DC, 200 W with AC	
Cable length, shielded, max.  Cable length unshielded, max.  Digital outputs  Number/binary outputs  In groups of  Functionality/short-circuit strength  Switching capacity of the outputs  with resistive load, max.  on lamp load, max.  Output current  for signal "1" permissible range, max.  Output delay with resistive load	300 m  8 2 No; to be provided externally  2 A 30 W with DC, 200 W with AC	
Cable length unshielded, max.  Cable length unshielded, max.  Digital outputs  Number/binary outputs  In groups of  Functionality/short-circuit strength  Switching capacity of the outputs  with resistive load, max.  on lamp load, max.  Output current  for signal "1" permissible range, max.  Output delay with resistive load  "0" to "1", max.	300 m  8 2 No; to be provided externally  2 A 30 W with DC, 200 W with AC  2 A  10 ms	
Cable length unshielded, max.  Cable length unshielded, max.  Digital outputs  Number/binary outputs  In groups of  Functionality/short-circuit strength  Switching capacity of the outputs  with resistive load, max.  on lamp load, max.  Output current  for signal "1" permissible range, max.  Output delay with resistive load  "0" to "1", max.  "1" to "0", max.	300 m  8 2 No; to be provided externally  2 A 30 W with DC, 200 W with AC  2 A  10 ms	

Relay outputs	
Number of relay outputs	8
Rated input voltage of relay coil L+ (DC)	24 V
Number of operating cycles, max.	mechanically 10 million, at rated load voltage 100,000
Switching capacity of contacts	
with inductive load, max.	2 A
on lamp load, max.	30 W with DC, 200 W with AC
Switching frequency/contacts/at ohmic load/maximum	2 A
Cable length	
Cable length, shielded, max.	500 m
Cable length unshielded, max.	150 m
Interrupts/diagnostics/status information	
Alarms	
Alarms	Yes
Diagnostic alarm	Yes
Diagnostic messages	
Diagnostic functions	Yes
Monitoring the supply voltage	Yes
Diagnostics indication LED	
for status of the inputs	Yes
For status of the outputs	Yes
for maintenance	Yes
Status indicator digital output (green)	Yes
Status indicator digital input (green)	Yes
Galvanic isolation	
Galvanic isolation digital inputs	
between the channels, in groups of	2
Galvanic isolation digital outputs	
between the channels	Relay
between the channels, in groups of	2
between the channels and the backplane bus	1500 V AC for 1 minute
Degree and class of protection	
IP20	Yes
Standards, approvals, certificates	
CE mark	Yes
CSA approval	Yes
UL	Yes
cULus	Yes

Climatic conditions for storage and transport  Free fall  Drop height, max. (in packaging)  Temperature  Permissible temperature range  Air pressure acc. to IEC 60068-2-13  Permissible air pressure  1080 to 660 hPa  Mechanical and climatic conditions during operation  Climatic conditions in operation  Temperature  Permissible temperature range  -20 °C to +60 °C horizontal mounting -20 °C to 50 °C vertical mounting 95% humidity, non-condensing  Min.  -20 °C  max.  60 °C  Permissible temperature change  5°C to 55°C, 3°C / minute  Connection method  required front connector  Yes  Mechanics/material  Type of housing (front)  Plastic  Yes  Dimensions  Width  45 mm			
Marine approval  Climatic and mechanical conditions for storage and transport  Free fall  Drop height, max. (in packaging)  Temperature  Permissible temperature range Alir pressure acc. to IEC 60068-2-13  Permissible air pressure  Mechanical and climatic conditions during operation  Climatic conditions in operation  Temperature  Permissible temperature range Alin operature  Permissible temperature range Alir pressure  Mechanical and climatic conditions during operation  Climatic conditions in operation  Temperature  Permissible temperature range Alin operation  Temperature  Permissible temperature range Alin operation  Temperature  Permissible temperature range Alir operation  Temperature  Permissible temperature change Alir operation  Temperature  Permissible temperature range Alir operation  Temperature  Permissible temperature range  Alir operation  Temperature  Permissible temperature range  Alir operation  Temperature  Permissible temperature range  Alir operation  Temperature  Permissible temperature range  Alir operation  Temperature  Permissible temperature range  Alir operation  Temperature  Permissible temperature range  Alir operation  Temperature  Permissible temperature range  Alir operation  Temperature  Permissible temperature range  Alir operation  Temperature  Permissible temperature range  Alir operation  Temperature  Permissible temperature range  Alir operation  Temperature  Permissible temperature range  Alir operation  Temperature  Permissible temperature range			
Climatic and mechanical conditions for storage and transport  Free fall  Drop height, max. (in packaging)  Drop height, max. (in packaging)  Temperature  Permissible temperature range Air pressure acc. to IEC 60068-2-13  Permissible air pressure  I 1080 to 660 hPa  Mechanical and climatic conditions during operation  Climatic conditions in operation  Temperature  Permissible temperature range -20 °C to +60 °C horizontal mounting -20 °C to 50 °C vertical mounting 95% humidity, non-condensing  Min20 °C max. 60 °C  Permissible temperature change  Connection method  required front connector  Yes  Mechanics/material  Type of housing (front) Plastic  Ves  Dimensions  Width  45 mm	FM approval	Yes	
Climatic conditions for storage and transport  Free fall  Drop height, max. (in packaging)  Temperature  Permissible temperature range  Air pressure acc. to IEC 60068-2-13  Permissible air pressure  1080 to 660 hPa  Mechanical and climatic conditions during operation  Climatic conditions in operation  Temperature  Permissible temperature range  -20 °C to +60 °C horizontal mounting -20 °C to 50 °C vertical mounting 95% humidity, non-condensing  Min.  -20 °C  max.  60 °C  Permissible temperature change  5°C to 55°C, 3°C / minute  Connection method  required front connector  Yes  Mechanics/material  Type of housing (front)  Plastic  Yes  Dimensions  Width  45 mm	Marine approval	Yes	
Free fall  Drop height, max. (in packaging)  Temperature  Permissible temperature range  Air pressure acc. to IEC 60068-2-13  Permissible air pressure  Mechanical and climatic conditions during operation  Climatic conditions in operation  Temperature  Permissible temperature range  -20 °C to +60 °C horizontal mounting -20 °C to 50 °C vertical mounting 95% humidity, non-condensing  Min.  -20 °C  max.  60 °C  Permissible temperature change  5°C to 55°C, 3°C / minute  Connection method  required front connector  Mechanics/material  Type of housing (front)  Plastic  Yes  Dimensions  Width  45 mm	Climatic and mechanical conditions for storage and transport		
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Temperature  Permissible temperature range  -40 °C to +70 °C  Air pressure acc. to IEC 60068-2-13  Permissible air pressure  1080 to 660 hPa  Mechanical and climatic conditions during operation  Climatic conditions in operation  Temperature  Permissible temperature range  -20 °C to +60 °C horizontal mounting -20 °C to 50 °C vertical mounting 95% humidity, non-condensing  Min.  -20 °C  max.  60 °C  Permissible temperature change  5°C to 55°C, 3°C / minute  Connection method  required front connector  Yes  Mechanics/material  Type of housing (front)  Plastic  Ves  Dimensions  Width  45 mm	Free fall		
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Air pressure acc. to IEC 60068-2-13  Permissible air pressure  Mechanical and climatic conditions during operation  Climatic conditions in operation  Temperature  Permissible temperature range  Min.  -20 °C to +60 °C horizontal mounting -20 °C to 50 °C vertical mounting 95% humidity, non-condensing  Min.  -20 °C  max.  60 °C  Permissible temperature change  5°C to 55°C, 3°C / minute  Connection method  required front connector  Yes  Mechanics/material  Type of housing (front)  Plastic  Yes  Dimensions  Width  45 mm	Temperature		
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Permissible temperature change 5°C to 55°C, 3°C / minute  Connection method required front connector Yes  Mechanics/material  Type of housing (front)  Plastic Yes  Dimensions  Width 45 mm	Min.	-20 °C	
required front connector Yes  Mechanics/material  Type of housing (front) Plastic Ves  Dimensions  Width 45 mm	max.	60 °C	
required front connector  Mechanics/material  Type of housing (front)  Plastic  Yes  Dimensions  Width  45 mm	Permissible temperature change	5°C to 55°C, 3°C / minute	
Type of housing (front)  Plastic  Pimensions  Width  45 mm	Connection method		
Type of housing (front)  Plastic  Yes  Dimensions  Width  45 mm	required front connector	Yes	
Plastic Yes  Dimensions  Width 45 mm	Mechanics/material		
Dimensions Width 45 mm	Type of housing (front)		
Width 45 mm	Plastic	Yes	
	Dimensions		
	Width	45 mm	
Height 100 mm	Height	100 mm	
Depth 75 mm	Depth	75 mm	
Weight	Weight		
Weight, approx. 230 g	Weight, approx.	230 g	
Status Jul 24, 2013	Status	Jul 24, 2013	