## **SIEMENS**

## **Data sheet**

6ES7222-1HF32-0XB0



SIMATIC S7-1200, Digital output SM 1222, 8 DO, relay 2 A

Figure similar

riguresiiina		
General information		
Product type designation	SM 1222, DQ 8x relay/2 A	
Supply voltage		
permissible range, lower limit (DC)	20.4 V	
permissible range, upper limit (DC)	28.8 V	
Input current		
from backplane bus 5 V DC, max.	120 mA	
Digital outputs		
<ul> <li>from load voltage L+, max.</li> </ul>	11 mA/relay coil	
Power loss		
Power loss, typ.	4.5 W	
Digital outputs		
Number of digital outputs	8	
• in groups of	2	
Short-circuit protection	No; to be provided externally	
Switching capacity of the outputs		
<ul> <li>with resistive load, max.</li> </ul>	2 A	
on lamp load, max.	30 W with DC, 200 W with AC	
Output voltage		
<ul> <li>Rated value (DC)</li> </ul>	5 V DC to 30 V DC	
Rated value (AC)	5 V AC to 250 V AC	
Output current		
for signal "1" rated value	2 A	
Output delay with resistive load		
• "0" to "1", max.	10 ms	
• "1" to "0", max.	10 ms	
Total current of the outputs (per group)		
horizontal installation		
— up to 50 °C, max.	10 A; Current per mass	
Relay outputs		
Number of relay outputs	8	
<ul> <li>Rated supply voltage of relay coil L+ (DC)</li> </ul>	24 V	
Number of operating cycles, max.	mechanically 10 million, at rated load voltage 100 000	
Switching capacity of contacts		
<ul><li>— with inductive load, max.</li></ul>	2 A	
— on lamp load, max.	30 W with DC, 200 W with AC	
— with resistive load, max.	2 A	
Cable length		
• shielded, max.	500 m	

Interrupt's diagnostic Status information  Alarms	<ul><li>unshielded, max.</li></ul>	150 m	
Poliphostic alarm   Yes   Diagnostic alarm   Yes   Diagnostic alarm   Yes   Diagnostic alarm   Yes	,		
Diagnostic alarm Diagnostics indication LED of to status of the outputs between the channels in groups of 2 between other channels in groups of 3 between other channels of 3 between other chan			
Diagnesia: indication. LED		Vac	
• for status of the outputs  Potential separation digital outputs  • between the channels in groups of 2 • between the channels in groups of 2 • between the channels in groups of 2 • between the channels and backplaine bus  Permissible potential difference  Degree and class of protection  IP degree of protection  Standards, approvals, cortificates  CE mark  Yes  CSA approval  UL approval  CULUS  FM approval  CULUS  FM approval  FM approval  FM approval  FM approval  Ambient conditions  Free fall  • Fall height, max.  Ambient conditions  Free fall  • Fall height, max.  Ambient conditions  Free fall  • Fall height, max.  • horizontal installation, min.  • horizontal installation, max.  • vertical installation, max.  • vertical installation, max.  • vertical installation, max.  • remains the emperature change  Ambient conditions  Free fall  • Fall height, max.  • horizontal installation, max.  • horizontal installation, max.  • vertical installation, max.  • vertical installation, max.  • vertical installation, max.  • permissable temperature change  Five to 5°		165	
Potential separation Potential separation digital outputs		Voc	
Potential separation digital outputs  • between the channels in groups of 2 • between the channels in groups of 2 • between the channels in groups of 2 • between the channels in groups of 1500 V AC for 1 minute  Permissible potential difference  between different circuits 750 V AC for 1 minute  Degree and class of protection  IP degree of protection  IP degree of protection  IP degree of protection  CE mark Yes  CSA approval Yes  CULus Yes  CULus Yes  FM approval Yes  CRA (CRA)  RCM (formerly C-TICK)  KC approval Yes  Marine approval Yes  Marine approval Yes  Ambient conditions  Free fall  • Fall height, max  Anhient conditions  Free fall  • Fall height, max  Anhient temperature during operation  • min. • horizontal installation, min. • horizontal installation, min. • vertical installation, min. • paramissible temperature change  Anibient connector  **All pressure acc. to IEC 80069-2-13 • Storagetransport, min. • Storagetransport min. • Storagetr	·	165	
between the channels in groups of 2 between the channels in groups of 2 between the channels and backplane bus 1500 V AC for 1 minute  Permissible potential difference between difference inclusis 750 V AC for 1 minute  Degree and class of protection IP degree of protection IP-20  Standards, approvals, certificates  CE mark Yes CSA approval Yes UL approval Yes UL approval Yes CKI (ormerly C-TICK) Yes RCM (formerly C-TICK) Yes RCM (formerly C-TICK) Yes Ambient conditions  Free fall  Fall height, max. 0.3 m, five times, in product package  Ambient temperature during operation  • min20 °C • horizontal installation, min20 °C • vertical installation, min20 °C • ver			
between the channels, in groups of 2 1500 V AC for 1 minute  Permissible potential difference  between different circuits  Degree and class of protection  IP degree of protection  IP degree of protection  Standards, approvals, certificates  CE mark  CSA approval  Ut. approval  Other approval  FM approval  FM approval  Ambient conditions  Free fall  Fall height, max.  Anbient temperature during operation  I min.  I enzicontal installation, min.  I evertical installation, mi	·	Dalarra	
- between the channels and backplane bus  Permissible potential difference  Between different circuits  Pegree and class of protection  IP20  Standards, approvals, certificates  CE mark  CSA approval  UL approval  Ves  UL sproval  Ves  CUlus  Yes  RCM (formerly C-TICK)  KC approval  Ambient conditions  Free fall  File height, max.  Ambient temperature during operation  • min.  • nortzontal installation, min.  • overtical installation, min.  • vertical installation, min.  • 20 °C  • vertical installation, min.  • vertical		•	
Detween different circuits 750 V AC for 1 minute Degree and class of protection IP degree of the IP			
between different circuits Degree and class of protection  IP degree of protection  Standards, approvals, certificates  CE mark CSA approval Yes UL approval Ves UL approval Ves CULus Yes PM approval Yes RCM (formerly C-TICK) Yes RCM (formerly C-TICK) Yes RCM approval Yes Ambient conditions Free fall Fall height, max. 0.3 m; five times, in product package Ambient temperature during operation  • min. • min. • horizontal installation, min. • horizontal installation, max. • vertical installation, max. • vertical installation, max. • permissible temperature change Ambient temperature during storage/transportation • min. • principal installation, max. • vertical installation, max. • permissible temperature change Ambient temperature during storage/transportation • min. • principal installation, max. • permissible temperature during storage/transportation • min. • anax. Appressible temperature during storage/transportation • min. • storage/transport, min. • Storage/transport min. • S		1 500 V AC for 1 minute	
Degree and class of protection   IP20		750)/407 4 1 1	
IP degree of protection		750 V AC for 1 minute	
Standards, approvals, certificates  CE mark  CSA approval  UL approval  UL approval  Ves  CULus  Yes  RCM (formerly C-TICK)  Yes  RCM (formerly C-TICK)  Yes  Roman approval  Ambient conditions  Free fall  • Fall height, max.  Anbient temperature during operation  • min.  • nax.  • horizontal installation, min.  • vertical installation, min.  • vertical installation, min.  • vertical installation, max.  • permissible temperature change  Ambient temperature during storage/transportation  • min.  • vertical installation, max.  • of 0° C  • vertical installation, max.  • of 0° C  • thorizontal installation, max.  • permissible temperature change  Ambient temperature during storage/transportation  • min.  • of 0° C  • thorizontal installation, max.  • permissible temperature during storage/transportation  • min.  • thorizontal installation, max.  • permissible temperature of the companies of the com			
CE mark		IP20	
CSA approval UL approval Yes CULus Yes FM approval Yes RCM (formerly C-TICK) Yes KC approval Wes Marine approval Yes Ambient conditions Free fall • Fall height, max. O.3 m; five times, in product package Ambient temperature during operation • min. • Act of C • max. • horizontal installation, min. • horizontal installation, min. • horizontal installation, min. • vertical installation, min. • vertical installation, min. • vertical installation, min. • yerical installation, min.			
UL approval  CULus  Yes  FM approval  Yes  RCM (formerly C-TiCK)  Yes  RCM (formerly C-TiCK)  Yes  Ambient conditions  Free fall  Free fall  Fill height, max.  Ambient conditions  Free fall  Free fall  Fill height, max.  Anoient temperature during operation  Min.  Fill height, max.  Anoient temperature during operation  Fill height, max.  Fill height, m			
CULUS  FM approval  FM approval  FM approval  FVes  RCM (formerly C-TICK)  KC approval  Marine approval  Ambient conditions  Free fall  • Fall helpht, max.  Ambient temperature during operation  • min. • max. • horizontal installation, min. • horizontal installation, min. • horizontal installation, min. • vertical installation, min. • vertical installation, min. • vertical installation, mix. • yerrical installation, mix. • permissible temperature change  Ambient temperature during storage/transportation  • min. • permissible temperature change  Ambient temperature during storage/transportation  • min. • max.  50° C  Air pressure acc. to IEC 60068-2-13 • Storage/transport, min. • Storage/transport, min. • Storage/transport, max.  Relative humidity  • Operation at 25 °C without condensation, max.  gone connection method required front connector  Yes  Mochanics/matorial  Enclosure material (front) • Plastic  Ves  Dimensions  Width  Height  100 mm  Depth  75 mm  Weight, approx.  190 g			
FM approval  RCM (formerly C-TICK)  Yes  RCA approval  Yes  Marine approval  Ambient conditions  Free fail  Fall height, max.  O.3 m; five times, in product package  Ambient temperature during operation  inin.  max.  60 °C  horizontal installation, min.  -20 °C  horizontal installation, max.  envirical installation, max.  vertical installation, max.  permissible temperature change  Ambient temperature during storage/transportation  inin.  -20 °C  -20			
RCM (formerly C-TICK)  KC approval  Marine approval  Ambient conditions  Free fall  Free fall  Frall height, max.  O.3 m; five times, in product package  Ambient temperature during operation  min.  min.  -20 °C  max.  horizontal installation, min.  horizontal installation, min.  vertical installation, min.  vertical installation, max.  permissible temperature change  permissible temperature change  Ambient temperature during storage/transportation  min.  -20 °C  vertical installation, max.  permissible temperature change  for C to 55°C, 3°C / minute  Ambient temperature during storage/transportation  min.  -40 °C  max.  70 °C  Air pressure acc. to IEC 60068-2-13  Storage/transport, min.  Storage/transport, max.  1 080 hPa  Relative humidity  Operation at 25 °C without condensation, max.  g5 %  connection method  required front connector  Mechanics/material  Enclosure material (front)  Plastic  Yes  Dimensions  Width  45 mm  Height  100 mm  Depth  75 mm  Weights  Weight, approx.  190 g			
Marine approval  Ambient conditions  Free fall  Fall height, max.  Ambient temperature during operation  imax.  horizontal installation, min.  horizontal installation, min.  vertical installation, min.  vertical installation, min.  vertical installation, min.  vertical installation, max.  horizontal installation, min.  vertical installation, min.  vertical installation, max.  for "C  permissible temperature change  Ambient temperature during storage/transportation  min.  min.  min.  Storage/transport, min.  Storage/transport, min.  Storage/transport, min.  Operation at 25 "C without condensation, max.  possible temperature  required front connector  Mechanics/material  Enclosure material (front)  Plastic  Plastic  Yes  Dimonsions  Width  A5 mm  Height  Depth  75 mm  Weights  Weight, approx.  190 g			
Marine approval  Ambient conditions  Free fall  Fall height, max.  O.3 m; five times, in product package  Ambient temperature during operation  min.  max.  60 °C  horizontal installation, min.  horizontal installation, min.  vertical installation, min.  vertical installation, min.  vertical installation, min.  vertical installation, max.  permissible temperature change  Ambient temperature during storage/transportation  min.  max.  70 °C  Air pressure acc. to IEC 60068-2-13  Storage/transport, min.  Storage/transport, min.  Storage/transport, max.  Poperation at 25 °C without condensation, max.  popration at 25 °C without condensation, max.  ye for max.  Connection method  required front connector  Mechanics/material  Enclosure material (front)  Plastic  Yes  Dimensions  Width  45 mm  Height  100 mm  Depth  75 mm  Weights  Weight, approx.  190 g	RCM (formerly C-TICK)	Yes	
Ambient conditions  Free fall  Free fall  Fall height, max.  Ambient temperature during operation  min.  max.  horizontal installation, min.  horizontal installation, max.  vertical installation, min.  permissible temperature change  Ambient temperature during storage/transportation  min.  min.  permissible temperature change  Ambient temperature during storage/transportation  min.  min.  max.  70 °C  All of C  max.  To °C  Storage/transport, min.  Storage/transport, min.  Storage/transport, max.  Poperation at 25 °C without condensation, max.  green storage/transport max.  Relative humidity  Operation at 25 °C without condensation, max.  connection method  required front connector  Wechanics/material  Enclosure material (front)  Plastic  Plastic  Yes  Michander Maximum  To mm  Depth  75 mm  Weights  Weight, approx.  190 g	KC approval	Yes	
Free fall  Free fall  Fall height, max.  Ambient temperature during operation  min.  max.  60 °C  horizontal installation, min.  vertical installation, max.  permissible temperature change  Ambient temperature during operation  **To "C	Marine approval	Yes	
Fall height, max.  Ambient temperature during operation  • min. • max. • horizontal installation, min. • horizontal installation, min. • vertical installation, min. • permissible temperature change  Ambient temperature during storage/transportation  • min. • max. • 70 °C  Air pressure acc. to IEC 60068-2-13 • Storage/transport, min. • Storage/transport, min. • Storage/transport, min. • Storage/transport, max.  1 080 hPa  Relative humidity • Operation at 25 °C without condensation, max.  95 %  connection method  required front connector  Wes  Mechanics/material  Enclosure material (front) • Plastic  Ves  Dimensions  Width  Height  100 mm  Depth  Weights  Weight, approx.  190 g	Ambient conditions		
Ambient temperature during operation  • min. • max. • horizontal installation, min. • horizontal installation, max. • horizontal installation, max. • vertical installation, max. • vertical installation, max. • vertical installation, max. • permissible temperature change  Ambient temperature during storage/transportation • min. • min. • max. • 70 °C  Air pressure acc. to IEC 60068-2-13 • Storage/transport, min. • Storage/transport, max.  • Storage/transport, max.  Relative humidity • Operation at 25 °C without condensation, max.  connection method required front connector  Mochanics/material  Enclosure material (front) • Plastic  Dimensions  Width Height 100 mm  Depth Weights  Weight, approx.  190 g	Free fall		
<ul> <li>min.</li> <li>max.</li> <li>horizontal installation, min.</li> <li>vertical installation, max.</li> <li>permissible temperature change</li> <li>for c 55°C, 3°C / minute</li> <li>Ambient temperature during storage/transportation</li> <li>min.</li> <li>max.</li> <li>max.</li> <li>To °C</li> <li>amax.</li> <li>Storage/transport, min.</li> <li>Storage/transport, max.</li> <li>storage/transport, max.</li> <li>poperation at 25 °C without condensation, max.</li> <li>operation method</li> <li>required front connector</li> <li>Plastic</li> <li>Plastic</li> <li>Yes</li> <li>Dimensions</li> <li>Width</li> <li>Height</li> <li>Dipenth</li> <li>75 mm</li> <li>Weights</li> <li>Weight, approx.</li> <li>190 g</li> </ul>	Fall height, max.	0.3 m; five times, in product package	
max.     horizontal installation, min.     horizontal installation, max.     horizontal installation, max.     vertical installation, min.     vertical installation, min.     vertical installation, min.     vertical installation, max.     permissible temperature change  Ambient temperature during storage/transportation      min.     -40 °C     max.  Air pressure acc. to IEC 60068-2-13      Storage/transport, min.     Storage/transport, min.     Storage/transport, max.  Relative humidity      Operation at 25 °C without condensation, max.  connection method  required front connector  Mechanics/material  Enclosure material (front)     Plastic  Plastic  Yes  Dimensions  Width  45 mm  Height  Depth  75 mm  Weights  Weight, approx.  190 g	Ambient temperature during operation		
<ul> <li>horizontal installation, min.</li> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> <li>permissible temperature change</li> <li>5°C to 55°C, 3°C / minute</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>max.</li> <li>max.</li> <li>Storage/transport, min.</li> <li>660 hPa</li> <li>Storage/transport, max.</li> <li>1080 hPa</li> </ul> Relative humidity <ul> <li>Operation at 25 °C without condensation, max.</li> <li>connection method</li> <li>required front connector</li> <li>Yes</li> </ul> Mechanics/material Enclosure material (front) <ul> <li>Plastic</li> <li>Pimensions</li> </ul> Width <ul> <li>45 mm</li> <li>Height</li> <li>Domm</li> <li>Depth</li> <li>75 mm</li> </ul> Weight, approx. <ul> <li>190 g</li> </ul>	• min.	-20 °C	
<ul> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> <li>vertical installation, max.</li> <li>vertical installation, max.</li> <li>vertical installation, max.</li> <li>fo °C</li> <li>permissible temperature change</li> <li>5°C to 55°C, 3°C / minute</li> </ul> Ambient temperature during storage/transportation <ul> <li>min.</li> <li>40 °C</li> <li>max.</li> <li>70 °C</li> </ul> Air pressure acc. to IEC 60068-2-13 <ul> <li>Storage/transport, min.</li> <li>Storage/transport, max.</li> <li>1 080 hPa</li> </ul> Relative humidity <ul> <li>Operation at 25 °C without condensation, max.</li> <li>g5 %</li> </ul> connection method <ul> <li>required front connector</li> <li>Yes</li> </ul> Machanics/material <ul> <li>Enclosure material (front)</li> <li>Plastic</li> <li>Yes</li> </ul> Dimensions Width <ul> <li>45 mm</li> <li>Height</li> <li>100 mm</li> <li>Depth</li> <li>75 mm</li> </ul> Weights <ul> <li>Weight, approx.</li> <li>190 g</li> </ul>	• max.	60 °C	
vertical installation, min.     vertical installation, max.      vertical installation, installation      vertical installation.      vertical installatio	<ul> <li>horizontal installation, min.</li> </ul>		
vertical installation, max.     permissible temperature change  Ambient temperature during storage/transportation      min.	<ul> <li>horizontal installation, max.</li> </ul>	60 °C	
permissible temperature change  Ambient temperature during storage/transportation  min.  min.  max.  70 °C  Air pressure acc. to IEC 60068-2-13  Storage/transport, min.  Storage/transport, max.  1 080 hPa  Relative humidity  Operation at 25 °C without condensation, max.  pressure front connector  required front connector  Mechanics/material  Enclosure material (front)  Plastic  Plastic  Yes  Dimensions  Width  Height  100 mm  Depth  75 mm  Weights  Weight, approx.  190 g	<ul> <li>vertical installation, min.</li> </ul>		
Ambient temperature during storage/transportation  Image: min.	<ul> <li>vertical installation, max.</li> </ul>	50 °C	
<ul> <li>min.</li> <li>-40 °C</li> <li>max.</li> <li>70 °C</li> </ul> Air pressure acc. to IEC 60068-2-13 <ul> <li>Storage/transport, min.</li> <li>Storage/transport, max.</li> <li>1 080 hPa</li> </ul> Relative humidity <ul> <li>Operation at 25 °C without condensation, max.</li> <li>95 %</li> </ul> connection method required front connector <ul> <li>Yes</li> </ul> Mechanics/material <ul> <li>Enclosure material (front)</li> <li>Plastic</li> <li>Yes</li> </ul> Dimensions Width <ul> <li>45 mm</li> <li>Height</li> <li>Do mm</li> <li>Depth</li> <li>75 mm</li> </ul> Weights <ul> <li>Weight, approx.</li> <li>190 g</li> </ul>	permissible temperature change	5°C to 55°C, 3°C / minute	
<ul> <li>max.</li> <li>Air pressure acc. to IEC 60068-2-13</li> <li>Storage/transport, min.</li> <li>Storage/transport, max.</li> <li>1 080 hPa</li> <li>Relative humidity</li> <li>Operation at 25 °C without condensation, max.</li> <li>95 %</li> <li>connection method</li> <li>required front connector</li> <li>Yes</li> <li>Mechanics/material</li> <li>Enclosure material (front)</li> <li>Plastic</li> <li>Yes</li> <li>Dimensions</li> <li>Width</li> <li>Height</li> <li>Depth</li> <li>75 mm</li> <li>Weights</li> <li>Weight, approx.</li> <li>190 g</li> </ul>	Ambient temperature during storage/transportation		
Air pressure acc. to IEC 60068-2-13  Storage/transport, min. Storage/transport, max.  1 080 hPa  Relative humidity  Operation at 25 °C without condensation, max.  5 %  Connection method  required front connector  Yes  Mechanics/material  Enclosure material (front) Plastic  Plastic  Yes  Dimensions  Width  45 mm  Height 100 mm  Depth 75 mm  Weights  Weight, approx.  190 g	• min.	-40 °C	
Storage/transport, min. Storage/transport, max.  1 080 hPa  1 080 hPa  Relative humidity  Operation at 25 °C without condensation, max.  connection method required front connector  Mechanics/material  Enclosure material (front) Plastic Yes  Dimensions  Width 45 mm Height 100 mm Depth 75 mm  Weights  Weight, approx.  190 g	• max.	70 °C	
Storage/transport, max.  Relative humidity  Operation at 25 °C without condensation, max.  95 %  connection method  required front connector  Mechanics/material  Enclosure material (front)  Plastic  Plastic  Yes  Dimensions  Width  45 mm  Height  100 mm  Depth  75 mm  Weights  Weight, approx.  190 g	Air pressure acc. to IEC 60068-2-13		
Relative humidity  Operation at 25 °C without condensation, max.  95 %  connection method  required front connector  Mechanics/material  Enclosure material (front)  Plastic  Plastic  Yes  Dimensions  Width  45 mm  Height  100 mm  Depth  75 mm  Weights  Weight, approx.  190 g		660 hPa	
Operation at 25 °C without condensation, max.      connection method     required front connector      Mechanics/material  Enclosure material (front)		1 080 hPa	
required front connector  Mechanics/material  Enclosure material (front)  Plastic  Yes  Dimensions  Width  Height  Depth  Depth  T5 mm  Weights  Weight, approx.  190 g	Relative humidity		
required front connector  Mechanics/material  Enclosure material (front)  Plastic  Pimensions  Width  45 mm  Height  100 mm  Depth  75 mm  Weights  Weight, approx.  190 g	• Operation at 25 °C without condensation, max.	95 %	
Mechanics/material   Enclosure material (front) Yes   Plastic Yes   Dimensions   Width 45 mm   Height 100 mm   Depth 75 mm   Weights   Weight, approx. 190 g	connection method		
Enclosure material (front)	required front connector	Yes	
● Plastic Yes    Dimensions	Mechanics/material		
Dimensions           Width         45 mm           Height         100 mm           Depth         75 mm           Weights         190 g	Enclosure material (front)		
Width       45 mm         Height       100 mm         Depth       75 mm         Weights       190 g	Plastic	Yes	
Height 100 mm  Depth 75 mm  Weights  Weight, approx. 190 g	Dimensions		
Depth 75 mm  Weights  Weight, approx. 190 g	Width	45 mm	
Weights Weight, approx. 190 g	Height	100 mm	
Weights Weight, approx. 190 g	Depth	75 mm	
Weight, approx. 190 g	Weights		
		190 g	
last modified: 8/23/2023 🗗		_	
	last modified:	8/23/2023 🖸	