MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Selected official pages for procurement and maintenance review

PRODUCT BRAND

Siemens

PRODUCT MODEL

6ES7288-1CR60-0AA1

CPU CR60s Relay Controller. Relevant section pages: 877, 878, 880. Adjacent model text on shared pages is outside this product reference.

OFFICIAL SOURCE

S7-200 SMART System Manual; V2.8, 08/2023

Siemens original documentation and product reference

Selected technical-reference pages for 6ES7288-1CR60-0AA1; not a complete installation manual. Other models remain visible in source tables. Follow the exact CPU column.

AMIKON PRODUCT SUPPORT

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Amikon Limited prepared this independent reference package. Selected manufacturer pages follow with their original content and pagination visible.

A.2.4 CPU ST60, CPU SR60, CPU CR60s, and CPU CR60

A.2.4.1 General specifications and features

Table A-56 General specifications

Technical data	CPU ST60 DC/DC/DC	CPU SR60 AC/DC/Relay	CPU CR60s AC/DC/Relay	CPU CR60 AC/DC/Relay
Article number	6ES7288-1ST60-0AA1	6ES7288-1SR60-0AA1	6ES7288-1CR60-0AA1	6ES7288-1CR60-0AA0
Dimensions W x H x D (mm)	175 x 100 x 81	175 x 100 x 81	175 x 100 x 81	175 x 100 x 81
Weight	528.2 grams	611.5 grams	605 grams	621.9 grams
Power dissipation	20 W	25 W	10 W	10 W
Current available (EM bus)	1400 mA max. (5 V DC)	1400 mA max. (5 V DC)	Not available	Not available
Current available (24 V DC)	300 mA max. (sensor power)	300 mA max. (sensor power)	300 mA max. (sensor power)	300 mA max. (sensor power)
Digital input current consumption (24 V DC)	4 mA/input used	4 mA/input used	4 mA/input used	4 mA/input used

Table A-57 CPU features

Technical data		CPU ST60 DC/DC/DC	CPU SR60 AC/DC/Relay	CPU CR60s AC/DC/Relay	CPU CR60 AC/DC/Relay
User memory	Program	30 Kbytes	30 Kbytes	12 Kbytes	
	User data (V)	24 Kbytes	24 Kbytes	8 Kbytes	
	Retentive	12 Kbytes max.[1]	12 Kbytes max.[1]	2 Kbytes max.[1]	
On-board digital I/O		36 inputs/24 outputs	36 inputs/24 outputs	36 inputs/24 outputs	
Process image		256 bits of inputs (I) / 256 bits of outputs (Q)	256 bits of inputs (I) / 256 bits of outputs (Q)	256 bits of inputs (I) / 256 bits of outputs (Q)	
Analog image		56 words of inputs (AI) / 56 words of outputs (AQ)	56 words of inputs (AI) / 56 words of outputs (AQ)	Not available	
Bit memory (M)		256 bits	256 bits	256 bits	
Temporary (local) memory (L)		64 bytes in the main program and 64 bytes in each subroutine and interrupt routine 60 bytes when programming in LAD or FBD (STEP 7-Micro/WIN reserves 4 bytes)	64 bytes in the main program and 64 bytes in each subroutine and interrupt routine 60 bytes when programming in LAD or FBD (STEP 7-Micro/WIN reserves 4 bytes)	64 bytes in the main program and 64 bytes in each subroutine and interrupt routine 60 bytes when programming in LAD or FBD (STEP 7-Micro/WIN reserves 4 bytes)	
Sequential control relays (S)		256 bits	256 bits	256 bits	
Expansion modules expansion		6 max.	6 max.	Not available	

Technical data		**CPU ST60 DC/DC/DC**	**CPU SR60 AC/DC/Relay**	**CPU CR60s AC/DC/Relay**	**CPU CR60 AC/DC/Relay**
Signal board expansion		1 max.	1 max.	Not available	
High-speed counters	Total	6	6	4	
	Single phase	4 at 200 kHz 2 at 30 kHz	4 at 200 kHz 2 at 30 kHz	4 at 100 kHz	
	A/B phase	2 at 100 kHz 2 at 20 kHz	2 at 100 kHz 2 at 20 kHz	2 at 50 kHz	
Pulse outputs [2]		3 at 100 kHz	3 at 100 kHz	Not available	
Pulse catch inputs		14	14	Not available	
Cyclic interrupts		2 at 1 ms resolution	2 at 1 ms resolution	2 at 1 ms resolution	
Edge interrupts		4 rising and 4 falling (6 and 6 with optional signal board)	4 rising and 4 falling (6 and 6 with optional signal board)	4 rising and 4 falling	
Memory card		microSDHC card (optional)	microSDHC card (optional)	Not available	
Real time clock accuracy		120 seconds/month	120 seconds/month	Not available	
Real time clock retention time		7 days typ./6 days min. at 25 °C	7 days typ./6 days min. at 25 °C	Not available	

[1] You can configure areas of V memory, M memory, C memory (current values) and portions of T memory (current values on retentive timers) to be retentive, up to the specified maximum amount.

[2] The specified maximum pulse frequency is possible only for CPU models with transistor outputs. Pulse output operation is not recommended for CPU models with relay outputs.

Table A-58 PROFINET features

Description	**CPU ST60 DC/DC/DC**	**CPU SR60 AC/DC/Relay**
Support Controller function for PROFINET communication	Yes	
Support I-Device function for PROFINET communication	Yes	
Maximum number of PROFINET device	8	
Device number of PROFINET device	1 to 8	
Maximum input size of each PROFINET device	128 Bytes	
Maximum output size of each PROFINET device	128 Bytes	
Maximum input size of PROFINET I-Device	128 Bytes	
Maximum output size of PROFINET I-Device	128 Bytes	
Maximum number of modules	64	
Minimum cyclic update time of PROFINET device	The minimum value of the update time also depends on the communication component set for PROFINET, on the number of PROFINET devices, and the quantity of configured user data.	
CPU address range of PROFINET process image input register	I128.0 to I1279.7	
CPU address range of PROFINET process image output register	Q128.0 to Q1279.7	

Table A-61 Communication

Technical data	CPU ST60 DC/DC/DC	CPU SR60 AC/DC/Relay	CPU CR60s AC/DC/ Relay	CPU CR60 AC/DC/Relay
Number of ports	PROFINET (LAN): 1 Serial ports: 1 (RS485) Add-on serial ports: 1 (with optional RS232/485 signal board)	PROFINET (LAN): 1 Serial ports: 1 (RS485) Add-on serial ports: 1 (with optional RS232/485 signal board)	PROFINET (LAN): 0 Serial ports: 1 (RS485) Add-on serial ports: 0	PROFINET (LAN): 1 Serial ports: 1 (RS485) Add-on serial ports: 0
HMI device	PROFINET (LAN): 8 connections Serial ports: 4 connections per port	PROFINET (LAN): 8 connections Serial ports: 4 connections per port	PROFINET (LAN): Not available Serial ports: 4 connections per port	PROFINET (LAN): 8 connections Serial ports: 4 connections per port
Programming device (PG)	PROFINET (LAN): 1 connection Serial ports: 1 connection	PROFINET (LAN): 1 connection Serial ports: 1 connection	PROFINET (LAN): Not available Serial ports: 1 connection	PROFINET (LAN): 1 connection Serial ports: 1 connection
CPUs (PUT/ GET)	PROFINET (LAN): 8 client and 8 server connections	PROFINET (LAN): 8 client and 8 server connections	PROFINET (LAN): Not available	PROFINET (LAN): 8 client and 8 server connections
Open user communication	PROFINET (LAN): 8 active and 8 passive connections	PROFINET (LAN): 8 active and 8 passive connections	PROFINET (LAN): Not available	PROFINET (LAN): 8 active and 8 passive connections
Data rates	PROFINET (LAN): 10/100 Mb/s RS485 system protocols: 9600, 19200, and 187500 b/s RS485 freeport: 1200 to 115200 b/s	PROFINET (LAN): 10/100 Mb/s RS485 system protocols: 9600, 19200, and 187500 b/s RS485 freeport: 1200 to 115200 b/s	PROFINET (LAN): Not available RS485 system protocols: 9600, 19200, and 187500 b/s RS485 freeport: 1200 to 115200 b/s	PROFINET (LAN): 10/100 Mb/s RS485 system protocols: 9600, 19200, and 187500 b/s RS485 freeport: 1200 to 115200 b/s
Isolation (external signal to PLC logic)	PROFINET (LAN): Transformer isolated, 1500 V AC RS485: RS485 signal to chassis ground, 500 V AC/ 707 V DC; RS485 signal to CPU logic common, 500 V AC/ 707V DC;	PROFINET (LAN): Transformer isolated, 1500 V AC RS485: RS485 signal to chassis ground, 500 V AC/ 707 V DC; RS485 signal to CPU logic common, 500 V AC/ 707V DC;	PROFINET (LAN): Not available RS485: RS485 signal to chassis ground, 500 V AC/ 707 V DC; RS485 signal to CPU logic common, 500 V AC/ 707V DC;	PROFINET (LAN): Transformer isolated, 1500 V AC RS485: RS485 signal to chassis ground, 500 V AC/ 707 V DC; RS485 signal to CPU logic common, 500 V AC/ 707V DC;
Cable type	PROFINET (LAN): CAT5e shielded RS485: PROFIBUS network cable	PROFINET (LAN): CAT5e shielded RS485: PROFIBUS network cable	PROFINET (LAN): Not available RS485: PROFIBUS network cable	PROFINET (LAN): CAT5e shielded RS485: PROFIBUS network cable
PROFINET Communication				
PROFINET controller	Yes	Yes	No	No
PROFINET device	Yes	Yes	No	No
PROFINET controller				
Services				