SIEMENS

Data sheet 6NH7800-4BA00



SINAUT ST7, TIM 4R-IE COMMUNICATIONS MODULE FOR SIMATIC S7-300, S7-400, C7, PC; WITH TWO RS232/RS485 INTERFACES FOR SINAUT COMMUNICATION VIA CLASSIC WAN NETWORKS AND TWO RJ45-INTERFACES FOR SINAUT COMMUNICATION VIA IP-BASED NETWORKS (WAN OR LAN)

Figure similar

Transmission rate	
Transfer rate	
 for Industrial Ethernet 	10 100 Mbit/s
• acc. to RS 232	50 38400 bit/s

Interfaces	
Number of interfaces / acc. to Industrial Ethernet	2
Number of electrical connections	
• for external data transmission / acc. to RS 232	2
• for power supply	1
Type of electrical connection	
 of Industrial Ethernet interface 	RJ45 port
• at interface 1 / for external data transmission	9 pin Sub-D-connector, RS232 switchable to RS485
• at interface 2 / for external data transmission	9-pole D-sub connector, RS232 can be switched to RS485
• for power supply	2-pole plugable terminal block
design of the removable storage / C-PLUG	Yes

Supply voltage, current consumption, power loss	
Type of voltage / of the supply voltage	DC
Supply voltage	24 V
Supply voltage	20.4 28.8 V
Consumed current	
 from backplane bus / for DC / at 24 V / maximum 	0.2 A
• from external supply voltage / for DC / at 24 V / maximum	0.17 A

Product expansion / optional / Backup battery Type of battery Lithium AA / 3,6 V / 2.3 Ah Backup current • typical • maximum 160 µA Permitted ambient conditions Ambient temperature • during operation • during storage • during peration / during peration / during operation / during operation / during operation / maximum Protection class IP Pessign, dimensions and weight Module format Width 80 mm Poleph 120 mm Net weight • Note Product properties, functions, components / general Number of units • Note Au	Active power loss	4.6 W
Backup current • typical • maximum 100 µA - maximum 160 µA Permitted ambient conditions Ambient temperature • during operation • during peration • during storage • during transport Relative humidity / at 25 °C / without condensation / during operation / maximum Protection class IP Pesign, dimensions and weight Module format Module format Module format Module format 125 mm Depth 120 mm Net weight Number of units • Note Product properties, functions, components / general Number of units • Note Cable length • with RS 232 interface / maximum • with RS 485 interface / maximum • with RS 485 interface / maximum • with PG connections / for S7 communication • maximum • with PG connections / with multi-protocol mode	Product expansion / optional / Backup battery	Yes
• typical • maximum 100 μA 160 μA Permitted ambient conditions Ambient temperature • during operation • during storage • during transport Relative humidity / at 25 °C / without condensation / during operation / maximum Protection class IP Pesign, dimensions and weight Module format Compact module \$7-300 double width Width 80 mm Height 120 mm Net weight Product properties, functions, components / general Number of units • Note Number of units • Note Cable length • with RS 232 interface / maximum • with RS 485 interface / maximum • with RS 485 interface / maximum • with RS 485 interface / maximum • with PG connections / for S7 communication • maximum • with PG connections / maximum • Performance data / so communication • Performance data / so communication • Performance data / multi-protocol mode Performance data / telecontrol	Type of battery	Lithium AA / 3.6 V / 2.3 Ah
• maximum Permitted ambient conditions Ambient temperature • during operation • during storage • during transport Relative humidity / at 25 °C / without condensation / during operation / maximum Protection class IP Pesign, dimensions and weight Module format Module format Module format Depth 125 mm 120 mm Net weight Note Note Number of units • Note Number of TIM 4R-IE per S7-300/S7-400: multiple, number depends on the connection resources of the CPU Cable length • with RS 232 interface / maximum • with RS 485 interface / maximum • with RS 485 interface / maximum • with RS 485 interface / maximum • with PG connections / for S7 communication Number of possible connections / for S7 communication Number of possible connections / maximum • with PG connections / with multi-protocol mode Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	Backup current	
Ambient temperature • during operation • during storage • during transport Relative humidity / at 25 °C / without condensation / during operation / during operation / maximum Protection class IP Pesign, dimensions and weight Module format Compact module S7-300 double width Width Bo mm Height 125 mm Depth 120 mm Net weight Note Product properties, functions, components / general Number of units • Note Number of TIM 4R-IE per S7-300/S7-400: multiple, number depends on the connection resources of the CPU Cable length • with RS 232 interface / maximum • with RS 485 interface / maximum • with RS 485 interface / maximum • with RS 485 interface / maximum • with PS connections / for S7 communication Number of possible connections / maximum • with PG connections / maximum • With PG connections / maximum • PG/OP communication Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	• typical	100 μΑ
Ambient temperature • during operation • during storage • during transport Relative humidity / at 25 °C / without condensation / during operation / maximum Protection class IP Pesign, dimensions and weight Module format Compact module S7-300 double width 80 mm Height 125 mm Depth 120 mm Net weight Product properties, functions, components / general Number of units • Note Number of units • Note Cable length • with RS 232 interface / maximum • with RS 485 interface / maximum • with RS 485 interface / maximum • with RS 485 interface / maximum • with PG connections / for S7 communication • maximum • with PG connections / with multi-protocol mode Number of active connections / with multi-protocol mode Number of active connections / with multi-protocol mode	• maximum	160 μΑ
 during operation during storage during transport 40 *70 °C during transport 40 *70 °C Relative humidity at 25 °C / without condensation / during operation / maximum Protection class IP IP20 Design, dimensions and weight Module format Compact module S7-300 double width Width 80 mm Height 125 mm Depth 120 mm Net weight Note Number of units Note Number of units Note With RS 232 interface / maximum with RS 485 interface / maximum with RS 485 interface / maximum with RS 485 interface / maximum with PG connections / for S7 communication maximum maximum with OP connections / maximum with OP connections / maximum PG/OP communication Yes Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Number of active connections / with multi-protocol mode Number of active connections / with multi-protocol mode 	Permitted ambient conditions	
during storage during transport during transport during transport during transport during operation / maximum Protection class IP Posign, dimensions and weight Module format Compact module S7-300 double width Width B0 mm Height 125 mm Depth 120 mm Net weight Product properties, functions, components / general Number of units Note Note Note Note with RS 232 interface / maximum with RS 485 interface / maximum with RS 485 interface / maximum with PG connections / for S7 communication Number of possible connections / maximum with PG connections / maximum with PG connections / maximum with OP connections / maximum Performance data / sommunication Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	Ambient temperature	
• during transport Relative humidity / at 25 °C / without condensation / during operation / maximum Protection class IP Design, dimensions and weight Module format Module format Service • SINAUT ST7 via S7 communication Number of active connections / with multi-protocol mode Number of active connections / with multi-protocol Performance data / multi-protocol mode Number of active connections / with multi-protocol Relative humidity / at 25 °C / without condensation / yes 95 % Service Performance data / telecontrol Performance data / telecontrol	during operation	0 60 °C
Relative humidity / at 25 °C / without condensation / during operation / maximum Protection class IP Design, dimensions and weight Module format Width Bo mm Height 125 mm Depth 120 mm Net weight Product properties, functions, components / general Number of units Note Note Number of TIM 4R-IE per \$7-300/\$7-400: multiple, number depends on the connection resources of the CPU Cable length with RS 232 interface / maximum with RS 485 interface / maximum with RS 485 interface / maximum with PG connections / for \$7 communication Number of possible connections / maximum with PG connections / maximum with PG connections / maximum with OF connections / maximum with OF connections / maximum Performance data / \$7 communication Yes Service SINAUT \$T7 via \$7 communication Yes Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Number of active connections / with multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	during storage	-40 +70 °C
during operation / maximum Protection class IP Posign, dimensions and weight Module format Compact module S7-300 double width Width Bo mm Height 125 mm Depth 120 mm Net weight O.4 kg Product properties, functions, components / general Number of units Note Note Number of TIM 4R-IE per S7-300/S7-400: multiple, number depends on the connection resources of the CPU Cable length with RS 232 interface / maximum with RS 485 interface / maximum with RS 485 interface / maximum with RS 485 interface / maximum with RG connections / for S7 communication Number of possible connections / for S7 communication maximum with PG connections / maximum a with PG connections / maximum b with PG connections / maximum c with PG connections / with multi-protocol mode Number of active connections / with multi-protocol mode Number of active connections / with multi-protocol mode Number of active connections / with multi-protocol mode Number of active connections / with multi-protocol mode	during transport	-40 +70 °C
Protection class IP Design, dimensions and weight Module format Compact module S7-300 double width Width 80 mm 125 mm Depth 120 mm Net weight Product properties, functions, components / general Number of units Note Note Number of IIM 4R-IE per S7-300/S7-400: multiple, number depends on the connection resources of the CPU Cable length with RS 232 interface / maximum with RS 485 interface / maximum with RS 485 interface / maximum mumber of possible connections / for S7 communication Number of possible connections / maximum with PG connections / maximum with PG connections / maximum Service Service SINAUT ST7 via S7 communication Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	Relative humidity / at 25 °C / without condensation /	95 %
Module format Somm 125 mm 120 mm Net weight 120 mm Net weight Product properties, functions, components / general Number of units Number of units Number of IIM 4R-IE per S7-300/S7-400: multiple, number depends on the connection resources of the CPU Cable length with RS 232 interface / maximum with RS 485 interface / maximum with RS 485 interface / maximum with RS 485 interface / maximum with PG connections / for S7 communication Number of possible connections / for S7 communication with PG connections / maximum with PG connections / maximum pwith OP connections / maximum swith OP connections / maximum pwith OP connections / with multi-protocol Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	during operation / maximum	
Module format Width Width Bo mm Height 125 mm Depth 120 mm Net weight 0.4 kg Product properties, functions, components / general Number of units Note Note Note Number of TIM 4R-IE per S7-300/S7-400: multiple, number depends on the connection resources of the CPU Cable length with RS 232 interface / maximum with RS 485 interface / maximum with RS 485 interface / maximum maximum with PG connections / for S7 communication maximum with PG connections / maximum with PG connections / maximum pwith OP connections / maximum suith OP connections / maximum pwith OP connections / maximum suith OP connections / maximum performance data / multi-protocol mode Number of active connections / with multi-protocol mode Number of active connections / with multi-protocol mode	Protection class IP	IP20
Width 80 mm Height 125 mm Depth 120 mm Net weight 0.4 kg Product properties, functions, components / general Number of units Number of units Number of TIM 4R-IE per S7-300/S7-400: multiple, number depends on the connection resources of the CPU Cable length with RS 232 interface / maximum 6 m with RS 485 interface / maximum 30 m Performance data / S7 communication Number of possible connections / for S7 communication number of possible connections / maximum 64 with PG connections / maximum 62 Service SINAUT ST7 via S7 communication Yes Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	Design, dimensions and weight	
Height 125 mm Depth 120 mm Net weight 0.4 kg Product properties, functions, components / general Number of units Number of Units Number of TIM 4R-IE per S7-300/S7-400: multiple, number depends on the connection resources of the CPU Cable length with RS 232 interface / maximum 6 m with RS 485 interface / maximum 30 m Performance data / S7 communication Number of possible connections / for S7 communication number of possible connections / maximum 64 with PG connections / maximum 62 Service SINAUT ST7 via S7 communication Yes Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	Module format	Compact module S7-300 double width
Depth Net weight 0.4 kg Product properties, functions, components / general Number of units Note Number of TIM 4R-IE per S7-300/S7-400: multiple, number depends on the connection resources of the CPU Cable length with RS 232 interface / maximum with RS 485 interface / maximum with RS 485 interface / maximum maximum maximum maximum mith PG connections / for S7 communication Service SINAUT ST7 via S7 communication Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	Width	80 mm
Net weight Product properties, functions, components / general Number of units Number of TIM 4R-IE per S7-300/S7-400: multiple, number depends on the connection resources of the CPU Cable length with RS 232 interface / maximum with RS 485 interface / maximum mumber of possible connections / for S7 communication Number of possible connections / for S7 communication maximum with PG connections / maximum with OP connections / maximum Performance data / s7 communication Performance data / multi-protocol mode Number of possible connections / with multi-protocol mode Number of possible connections / maximum 12 with OP connections / maximum Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Number of active connections / with multi-protocol mode	Height	125 mm
Number of units Number of units Number of TIM 4R-IE per S7-300/S7-400: multiple, number depends on the connection resources of the CPU Cable length with RS 232 interface / maximum with RS 485 interface / maximum Number of possible connections / for S7 communication maximum with PG connections / maximum with PG connections / maximum with OP connections / maximum Performance data / s7 communication Performance data / multi-protocol mode Number of TIM 4R-IE per S7-300/S7-400: multiple, number depends on the connection resources of the CPU 6 maximum 6 m 6 4 with PG connections / maximum 62 Service SINAUT ST7 via S7 communication Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	Depth	120 mm
Number of units Number of TIM 4R-IE per S7-300/S7-400: multiple, number depends on the connection resources of the CPU Cable length with RS 232 interface / maximum with RS 485 interface / maximum Number of possible connections / for S7 communication Number of possible connections / maximum maximum minum min	Net weight	0.4 kg
Number of TIM 4R-IE per S7-300/S7-400: multiple, number depends on the connection resources of the CPU Cable length with RS 232 interface / maximum with RS 485 interface / maximum Performance data / S7 communication Number of possible connections / for S7 communication maximum with PG connections / maximum with OP connections / maximum service SINAUT ST7 via S7 communication Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	Product properties, functions, components / genera	al
depends on the connection resources of the CPU Cable length • with RS 232 interface / maximum • with RS 485 interface / maximum 30 m Performance data / S7 communication Number of possible connections / for S7 communication • maximum • with PG connections / maximum • with OP connections / maximum 52 • with OP connections / maximum Ferformance data / S7 communication • PG/OP communication Yes Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	Number of units	
with RS 232 interface / maximum with RS 485 interface / maximum Performance data / S7 communication Number of possible connections / for S7 communication maximum maximum with PG connections / maximum with OP connections / maximum service Service SINAUT ST7 via S7 communication PG/OP communication Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	• Note	
with RS 485 interface / maximum Performance data / S7 communication Number of possible connections / for S7 communication maximum	Cable length	
Performance data / S7 communication Number of possible connections / for S7 communication • maximum • with PG connections / maximum • with OP connections / maximum 62 Service • SINAUT ST7 via S7 communication • PG/OP communication Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	• with RS 232 interface / maximum	6 m
Number of possible connections / for S7 communication • maximum • with PG connections / maximum • with OP connections / maximum 62 Service • SINAUT ST7 via S7 communication • PG/OP communication • PG/OP communication Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	• with RS 485 interface / maximum	30 m
communication • maximum • with PG connections / maximum • with OP connections / maximum 62 Service • SINAUT ST7 via S7 communication • PG/OP communication • PG/OP communication Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	Performance data / S7 communication	
maximum with PG connections / maximum with OP connections / maximum Service SINAUT ST7 via S7 communication PG/OP communication Yes Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	·	
with PG connections / maximum with OP connections / maximum Service SINAUT ST7 via S7 communication PG/OP communication Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol		0.4
with OP connections / maximum Service SINAUT ST7 via S7 communication PG/OP communication Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol Performance data / telecontrol		
Service • SINAUT ST7 via S7 communication • PG/OP communication Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol		
SINAUT ST7 via S7 communication PG/OP communication Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol Performance data / telecontrol		62
Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol Performance data / telecontrol		
Performance data / multi-protocol mode Number of active connections / with multi-protocol mode Performance data / telecontrol	 SINAUT ST7 via S7 communication 	
Number of active connections / with multi-protocol mode 128 Performance data / telecontrol	 PG/OP communication 	Yes
mode Performance data / telecontrol	<u>`</u>	
	•	128
	Performance data / telecontrol	

* substation * TIM control center * Protocol / is supported * TCP/IP * DNP3 * SINAUT ST1 protocol * SINAUT ST7 protocol * SINAUT ST7 protocol * SINAUT ST7 protocol * SINAUT ST7 protocol * Note * Storage capacity * of 57 CPU RAM / for TD7onCPU mode data blocks on CPU / required * of 57 CPU RAM / for TD7onTIM mode data blocks on TIM / required * Note * Note * TD7onCPU: at least 20 KB, actual requirement determined by data volume and functional scope	Node station	Yes
Protocol / is supported • TCP/IP • DNP3 • DNP3 • SINAUT ST1 protocol • SINAUT ST7 protocol Product function / data buffering if connection is aborted • Note Storage capacity • of S7 CPU RAM / for TD7onCPU mode data blocks on CPU / required • Note TD7onCPU: at least 20 KB, actual requirement determined by data volume and functional scope TD7onTIM: 0 bytes in most favorable case Product property / Buffered message frame memory Transmission format • for SINAUT ST1 protocol with polling / 11 bit for SINAUT ST1 protocol with spontaneous / 10-bit or 11-bit for SINAUT ST7 protocol with multi-master polling / 10-bit for SINAUT ST7 protocol with sinaut ST1 protocol • with dedicated line/radio link / with SINAUT ST1 protocol • with dedicated line/radio link / with SINAUT ST1 protocol • with dial-up network / with SINAUT ST1 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol	• substation	Yes
TCP/IP DNP3 No SINAUT ST1 protocol SINAUT ST7 protocol Product function / data buffering if connection is aborted Note Storage capacity of S7 CPU RAM / for TD7onCPU mode data blocks on CPU / required Note Note TD7onCPU: at least 20 KB, actual requirement determined by data volume and functional scope TD7onTIM: 0 bytes in most favorable case Product property / Buffered message frame memory Transmission format for SINAUT ST1 protocol with polling / 11 bit for SINAUT ST1 protocol with spontaneous / 10-bit or 11-bit for SINAUT ST7 protocol with multi-master polling / 10-bit for SINAUT ST7 protocol with polling or spontaneous / 10-bit or 11-bit Operating mode for scanning of data transmission with dedicated line/radio link / with SINAUT ST7 protocol with dedicated line/radio link / with SINAUT ST7 protocol with dial-up network / with SINAUT ST7 protocol	TIM control center	Yes
No SINAUT ST1 protocol SINAUT ST7 protocol SINAUT ST7 protocol SINAUT ST7 protocol Yes Product property / Buffered message frame memory Transmission format for SINAUT ST1 protocol with polling / 11 bit for SINAUT ST7 protocol with spontaneous / 10-bit or 11-bit for SINAUT ST7 protocol with polling or spontaneous / 10-bit or 11-bit with dedicated line/radio link / with SINAUT ST7 protocol with dial-up network / with SINAUT ST1 protocol with dial-up network / with SINAUT ST7 protocol Wath dial-up network / with SINAUT	Protocol / is supported	
SINAUT ST1 protocol SINAUT ST7 protocol Yes Product function / data buffering if connection is aborted Note Storage capacity of 57 CPU RAM / for TD7onCPU mode data blocks on CPU / required of 57 CPU RAM / for TD7onTIM mode data blocks on TIM / required of 57 CPU RAM / for TD7onTIM mode data blocks on TIM / required Note TD7onCPU: at least 20 KB, actual requirement determined by data volume and functional scope TD7onTIM: 0 bytes in most favorable case Product property / Buffered message frame memory Transmission format of or SINAUT ST1 protocol with polling / 11 bit of or SINAUT ST1 protocol with spontaneous / 10-bit or 11-bit Operating mode for scanning of data transmission with dedicated line/radio link / with SINAUT ST1 protocol with dedicated line/radio link / with SINAUT ST1 protocol with dedicated line/radio link / with SINAUT ST1 protocol with dai-up network / with SINAUT ST1 protocol with dial-up network / with SINAUT ST7 protocol with dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol	• TCP/IP	Yes
SINAUT ST7 protocol Product function / data buffering if connection is aborted Note Storage capacity of S7 CPU RAM / for TD7onCPU mode data blocks on CPU / required of S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required of S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required on S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required on S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required on S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required on S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required on S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required on S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required on S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required on S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required on S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required on S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required on S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required on S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required on S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required on S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required on S7 CPU RAM / for TD7onTIM mode data blocks on TD7onTIM: 0 bytes in most favorable case Yes TD7onCPU: at least 20 KB, actual requirement determined by data volume and functional scope	• DNP3	No
Product function / data buffering if connection is aborted Note Storage capacity of ST CPU RAM / for TD7onCPU mode data blocks on CPU / required of ST CPU RAM / for TD7onTIM mode data blocks on TIM / required Note TD7onCPU: at least 20 KB, actual requirement determined by data volume and functional scope TD7onTIM: 0 bytes in most favorable case Product property / Buffered message frame memory Transmission format of or SINAUT ST1 protocol with polling / 11 bit for SINAUT ST1 protocol with multi-master polling / 10-bit or 11-bit for SINAUT ST7 protocol with multi-master polling / 10-bit or 11-bit for SINAUT ST7 protocol with dedicated line/radio link / with SINAUT ST1 protocol with dedicated line/radio link / with SINAUT ST1 protocol with dedicated line/radio link / with SINAUT ST1 protocol with dai-up network / with SINAUT ST7 protocol with dial-up network / with SINAUT ST7 protocol	SINAUT ST1 protocol	Yes
Note Storage capacity of S7 CPU RAM / for TD7onCPU mode data blocks on CPU / required or S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required or S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required Note TD7onCPU: at least 20 KB, actual requirement determined by data volume and functional scope TD7onTIM: 0 bytes in most favorable case Product property / Buffered message frame memory Transmission format or SINAUT ST1 protocol with polling / 11 bit or SINAUT ST1 protocol with spontaneous / 10-bit or 11-bit or SINAUT ST7 protocol with multi-master polling / 10-bit or 11-bit or SINAUT ST7 protocol with polling or spontaneous / 10-bit or 11-bit Operating mode for scanning of data transmission with dedicated line/radio link / with SINAUT ST1 protocol with dedicated line/radio link / with SINAUT ST7 protocol with dial-up network / with SINAUT ST7 protocol with dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol	SINAUT ST7 protocol	Yes
Storage capacity • of S7 CPU RAM / for TD7onCPU mode data blocks on CPU / required • of S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required • Note TD7onCPU: at least 20 KB, actual requirement determined by data volume and functional scope TD7onTIM: 0 bytes in most favorable case Product property / Buffered message frame memory Transmission format • for SINAUT ST1 protocol with polling / 11 bit of SINAUT ST1 protocol with spontaneous / 10-bit or 11-bit • for SINAUT ST7 protocol with multi-master polling / 10-bit or 11-bit Operating mode for scanning of data transmission • with dedicated line/radio link / with SINAUT ST1 protocol • with dedicated line/radio link / with SINAUT ST1 protocol • with dial-up network / with SINAUT ST1 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol	-	Yes
of S7 CPU RAM / for TD7onCPU mode data blocks on CPU / required of S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required Note TD7onCPU: at least 20 KB, actual requirement determined by data volume and functional scope	• Note	56,000 data messages
of S7 CPU RAM / for TD7onTIM mode data blocks on TIM / required Note TD7onCPU: at least 20 KB, actual requirement determined by data volume and functional scope TD7onTIM: 0 bytes in most favorable case Product property / Buffered message frame memory Transmission format of or SINAUT ST1 protocol with polling / 11 bit	Storage capacity	
Note TD7onCPU: at least 20 KB, actual requirement determined by data volume and functional scope TD7onTIM: 0 bytes in most favorable case Product property / Buffered message frame memory Transmission format • for SINAUT ST1 protocol with polling / 11 bit		20 Kibyte
data volume and functional scope TD7onTIM: 0 bytes in most favorable case Product property / Buffered message frame memory Yes Transmission format • for SINAUT ST1 protocol with polling / 11 bit		0 Kibyte
Transmission format • for SINAUT ST1 protocol with polling / 11 bit • for SINAUT ST1 protocol with spontaneous / 10-bit or 11-bit • for SINAUT ST7 protocol with multi-master polling / 10-bit • for SINAUT ST7 protocol with polling or spontaneous / 10-bit or 11-bit Operating mode for scanning of data transmission • with dedicated line/radio link / with SINAUT ST1 protocol • with dedicated line/radio link / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST1 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol	Note	data volume and functional scope TD7onTIM: 0 bytes in most
for SINAUT ST1 protocol with polling / 11 bit for SINAUT ST1 protocol with spontaneous / 10-bit or 11-bit for SINAUT ST7 protocol with multi-master polling / 10-bit for SINAUT ST7 protocol with polling or spontaneous / 10-bit or 11-bit Operating mode for scanning of data transmission with dedicated line/radio link / with SINAUT ST1 protocol with dedicated line/radio link / with SINAUT ST7 protocol with dial-up network / with SINAUT ST1 protocol with dial-up network / with SINAUT ST7 protocol with dial-up network / with SINAUT ST7 protocol With dial-up network / with SINAUT ST7 protocol Hamming distance for SINAUT ST1 protocol Yes Yes Yes Yes Yes Yes Yes Ye	Product property / Buffered message frame memory	Yes
• for SINAUT ST1 protocol with spontaneous / 10-bit or 11-bit • for SINAUT ST7 protocol with multi-master polling / 10-bit • for SINAUT ST7 protocol with polling or spontaneous / 10-bit or 11-bit Operating mode for scanning of data transmission • with dedicated line/radio link / with SINAUT ST1 protocol • with dedicated line/radio link / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST1 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol Hamming distance • for SINAUT ST1 protocol Yes Yes Yes Polling, polling with time slot procedure Polling, polling with time slot procedure, multi-master polling with time slot procedure spontaneous **pontaneous** **ponta	Transmission format	
10-bit or 11-bit • for SINAUT ST7 protocol with multi-master polling / 10-bit • for SINAUT ST7 protocol with polling or spontaneous / 10-bit or 11-bit Operating mode for scanning of data transmission • with dedicated line/radio link / with SINAUT ST1 protocol • with dedicated line/radio link / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST1 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol	• for SINAUT ST1 protocol with polling / 11 bit	Yes
polling / 10-bit • for SINAUT ST7 protocol with polling or spontaneous / 10-bit or 11-bit Operating mode for scanning of data transmission • with dedicated line/radio link / with SINAUT ST1 protocol • with dedicated line/radio link / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST1 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • for SINAUT ST1 protocol 4	· · · · · · · · · · · · · · · · · · ·	Yes
spontaneous / 10-bit or 11-bit Operating mode for scanning of data transmission • with dedicated line/radio link / with SINAUT ST1 protocol • with dedicated line/radio link / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST1 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 spontaneous • for SINAUT ST1 protocol 4	·	Yes
 with dedicated line/radio link / with SINAUT ST1 protocol with dedicated line/radio link / with SINAUT ST7 protocol with dial-up network / with SINAUT ST1 protocol with dial-up network / with SINAUT ST7 protocol with dial-up network / with SINAUT ST7 protocol Hamming distance for SINAUT ST1 protocol 		Yes
protocol • with dedicated line/radio link / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST1 protocol • with dial-up network / with SINAUT ST7 protocol • with dial-up network / with SINAUT ST7 protocol Hamming distance • for SINAUT ST1 protocol 4	Operating mode for scanning of data transmission	
protocol time slot procedure • with dial-up network / with SINAUT ST1 spontaneous • with dial-up network / with SINAUT ST7 protocol Hamming distance • for SINAUT ST1 protocol • time slot procedure spontaneous 4		Polling, polling with time slot procedure
protocol • with dial-up network / with SINAUT ST7 spontaneous Hamming distance • for SINAUT ST1 protocol 4		
 with dial-up network / with SINAUT ST7 protocol Hamming distance for SINAUT ST1 protocol 	•	spontaneous
Hamming distance • for SINAUT ST1 protocol 4	• with dial-up network / with SINAUT ST7	spontaneous
	-	
• for SINAUT ST7 protocol 4	• for SINAUT ST1 protocol	4
	• for SINAUT ST7 protocol	4

Configuration software

• required SINAUT ST7 ES

 for CPU configuring / required / SINAUT TD7 block library for CPU 	Yes
 for PG configuring / required / SINAUT ST7 configuration software for PG 	Yes
Storage location / of TIM configuration data	On internal TIM flash memory, or on TIM in optional C-PLUG, or on MMC of the S7-300 CPU if TIM installed in S7-300 controller

Product functions / Security	
Suitability for operation / Virtual Private Network	Yes
Type of authentication / with Virtual Private Network / PSK	Yes
Product function	
 password protection for VPN 	Yes
 MSC client via GPRS modem with MSC capability 	Yes
Protocol	
• is supported / MSC protocol	Yes
• with Virtual Private Network MSC / is supported	TCP/IP
Key length / for MSC / with Virtual Private Network	128 bit
Number of possible connections	
as MSC client / with VPN connection	1
as MSC server / with VPN connection	128

Product functions / Time	
Product component / Hardware real-time clock	Yes
Product property / Hardware real-time clock w. battery backup	Yes
Accuracy / of the hardware real-time clock / per day / maximum	4 s
time synchronization	
• from NTP-server	Yes

Further Information / Internet Links

Internet-Link

• to website: Selector SIMATIC NET http://www.siemens.com/snst SELECTION TOOL

• to website: Industrial communication http://www.siemens.com/simatic-net

• to website: Industry Mall https://mall.industry.siemens.com

• to website: Information and Download Center http://www.siemens.com/automation/net/catalog

• to website: Image database http://automation.siemens.com/bilddb

• to website: CAx Download Manager http://www.siemens.com/cax

• to website: Industry Online Support

https://support.industry.siemens.com

Security information

Security information

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