SIEMENS

Data sheet

7SR1813-1NC12-0CA0



Solkor 7SR18 differential protection, E6 case size, 6 binary inputs, 8 binary outputs, 18 LEDs, measuring input: 4 CTs (1A/5A), 24-250 V DC, 100 - 230 V AC, binary input threshold 88 V DC, signal: optical fibre link (1300 nm) (LC connection) 40 km, communication interface: USB front, RS485 rear, IEC 60870-5-103 + Modbus RTU + DNP3 (user selectable), protection function packages: standard version

Product details		
product feature / conformal coating	No	
number of function keys	5	
number of LEDs	19	
Product Functions	Product Functions	
type of measured value detection / of operational measured value / standard	Yes	
type of measured value detection / expanded / min./max. values, mean values	Yes	
switching statistics	Yes	
product feature / logic editor	Yes	
control	Yes	
fault recording for analog and digital signals	Yes	
sequence-of-events recorder	Yes	
monitoring	Yes	
number of parameter sets	4	
Protection Functions		
three-pole tripping	Yes	
undercurrent protection (ANSI 37)	Yes	
overcurrent-time protection negative sequence system (ANSI 46)	Yes	
thermal overload protection (ANSI 49)	Yes	
definite overcurrent-time protection (ANSI 50/50N)	Yes	
Switch On To Fault (ANSI SOTF)	Yes	
circuit breaker failure protection (ANSI 50BF)	Yes	
dependent overcurrent-time protection (ANSI 51/51N)	Yes	
dynamic response value changeover (ANSI 51C)	Yes	
voltage-dependent overcurrent-time protection (ANSI 51V)	No	
directional overcurrent-time protection, phases (ANSI 67)	No	
directional ground fault protection (ANSI 67N)	No	
trip-circuit supervision (ANSI 74TC)	Yes	
automatic reclosing (ANSI 79)	No	
closing lock-out (ANSI 86)	Yes	
differential protection (ANSI 87)	Yes	
inrush current detection	Yes	
external trip initiation	Yes	
Supply voltage		
supply voltage / at AC	100 230 V	
supply voltage / at DC	24 250 V	
Inputs / Outputs		

product component / operating interface (on the front) number of interfaces / according to RS 485 number of interfaces / according to Ethernet product component / optical interface product component / optical interface yes product component / optical interface / the product component / optical interface / note protocol / is supported / IEC 61850 No protocol / is supported / IEC 60870-5-103 yes protocol / is supported / Modbus RTU slave yes protocol / is supported / DNP 3, serial yes protocol / is supported / PRP No protocol / is supported / RSTP No protocol / is supported / HSR No prot			
number of voltage inputs / maximum 0 number of current inputs / maximum 4 Communication product component / operating interface (on the front) Yes number of interfaces / according to RS 485 1 number of interfaces / according to Ethernet 0 product component / optical interface Yes product component / optical interface / note 40 km protocol / is supported / IEC 61850 No protocol / is supported / IEC 60870-5-103 Yes protocol / is supported / Modbus RTU slave Yes protocol / is supported / DNP 3, serial Yes protocol / is supported / RSTP No protocol / is supported / RSTP No protocol / is supported / HSR No Time synchronization Synchronization Wedchanical Design Width 155.5 mm height 168 mm depth 169 ms frame size of enclosure E6 design of the display Text, 4 lines x 20 characters product feature / plug-in terminal blocks Text, 4 lines x 20 characters product feature / during operation - 10 +55 °C	number of digital inputs / maximum	6	
number of current inputs / maximum Communication product component / operating interface (on the front) number of interfaces / according to RS 485 number of interfaces / according to Ethernet product component / optical interface product component / optical interface / ves product component / optical interface / note protocol / is supported / IEC 61850 No protocol / is supported / IEC 60870-5-103 yes protocol / is supported / IEC 60870-5-103 yes protocol / is supported / DNP 3, serial yes protocol / is supported / PRP No protocol / is supported / PRP No protocol / is supported / HSR No Time synchronization type of time synchronization width 155.5 mm height depth 168 mm depth frame size of enclosure design of the display product feature / plug-in terminal blocks product feature / plug-in terminal blocks Text, 4 lines x 20 characters product feature / plug-in terminal blocks ambient temperature / during operation -10 +55 °C	number of digital outputs / incl. signaling contact / maximum	8	
product component / operating interface (on the front) product component / operating interface (on the front) number of interfaces / according to RS 485 number of interfaces / according to Ethernet product component / optical interface product component / optical interface / Yes product component / optical interface / No protocol / is supported / IEC 61850 No protocol / is supported / IEC 60870-5-103 Yes protocol / is supported / Modbus RTU slave yes protocol / is supported / DNP 3, serial Yes protocol / is supported / PRP No protocol / is supported / RSTP No protocol / is supported / HSR No Time synchronization type of time synchronization type of time synchronization supported / BSR Mechanical Design width 155.5 mm height depth 216.5 mm frame size of enclosure design of the display product feature / plug-in terminal blocks Yes Environmental conditions ambient temperature / during operation -10 +55 °C	number of voltage inputs / maximum	0	
product component / operating interface (on the front) number of interfaces / according to RS 485 number of interfaces / according to Ethernet product component / optical interface product component / optical interface yes product component / optical interface / the product component / optical interface / note protocol / is supported / IEC 61850 No protocol / is supported / IEC 60870-5-103 yes protocol / is supported / Modbus RTU slave yes protocol / is supported / DNP 3, serial yes protocol / is supported / PRP No protocol / is supported / RSTP No protocol / is supported / HSR No prot	number of current inputs / maximum	4	
number of interfaces / according to RS 485 1 number of interfaces / according to Ethernet 0 product component / optical interface Yes product component / optical interface Yes product component / optical interface / note 40 km protocol / is supported / IEC 61850 No protocol / is supported / IEC 60870-5-103 Yes protocol / is supported / Modbus RTU slave Yes protocol / is supported / DNP 3, serial Yes protocol / is supported / PRP No protocol / is supported / PRP No protocol / is supported / RSTP No protocol / is supported / HSR No Time synchronization type of time synchronization 1sec/1min Pulse, Serial Comms Mechanical Design width 155.5 mm height 168 mm depth 168 mm depth 168 mm frame size of enclosure E6 design of the display Text, 4 lines x 20 characters product feature / plug-in terminal blocks Yes Environmental conditions ambient temperature / during operation -10 +55 °C	Communication		
number of interfaces / according to Ethernet 0 product component / optical interface Yes product component / optical interface / note 40 km protocol / is supported / IEC 61850 No protocol / is supported / IEC 60870-5-103 Yes protocol / is supported / Modbus RTU slave Yes protocol / is supported / Modbus RTU slave Yes protocol / is supported / DNP 3, serial Yes protocol / is supported / PRP No protocol / is supported / RSTP No protocol / is supported / HSR No Time synchronization type of time synchronization 1sec/1min Pulse, Serial Comms Mechanical Design width 155.5 mm height 168 mm depth 168 mm depth 168 mm depth 168 ms isze of enclosure E6 design of the display Text, 4 lines x 20 characters product feature / plug-in terminal blocks Yes Environmental conditions ambient temperature / during operation -10 +55 °C	product component / operating interface (on the front)	Yes	
product component / optical interface Yes product component / optical interface / note 40 km protocol / is supported / IEC 61850 No protocol / is supported / IEC 60870-5-103 Yes protocol / is supported / Modbus RTU slave Yes protocol / is supported / DNP 3, serial Yes protocol / is supported / PRP No protocol / is supported / RSTP No protocol / is supported / HSR No Time synchronization 1sec/1min Pulse, Serial Comms Mechanical Design width 155.5 mm height 168 mm depth 216.5 mm frame size of enclosure E6 design of the display Text, 4 lines x 20 characters product feature / plug-in terminal blocks Yes Environmental conditions ambient temperature / during operation -10 +55 °C	number of interfaces / according to RS 485	1	
product component / optical interface / note 40 km protocol / is supported / IEC 61850 No protocol / is supported / IEC 60870-5-103 Yes protocol / is supported / Modbus RTU slave Yes protocol / is supported / DNP 3, serial Yes protocol / is supported / PRP No protocol / is supported / RSTP No protocol / is supported / HSR No Time synchronization 1sec/1min Pulse, Serial Comms Mechanical Design width 155.5 mm height 168 mm depth 216.5 mm frame size of enclosure E6 design of the display Text, 4 lines x 20 characters product feature / plug-in terminal blocks Yes Environmental conditions ambient temperature / during operation -10 +55 °C	number of interfaces / according to Ethernet	0	
protocol / is supported / IEC 61850 No protocol / is supported / IEC 60870-5-103 Yes protocol / is supported / Modbus RTU slave Yes protocol / is supported / DNP 3, serial Yes protocol / is supported / PRP No protocol / is supported / RSTP No protocol / is supported / RSTP No protocol / is supported / HSR No Time synchronization type of time synchronization 1sec/1min Pulse, Serial Comms Mechanical Design width 155.5 mm height 168 mm depth 216.5 mm frame size of enclosure E6 design of the display Text, 4 lines x 20 characters product feature / plug-in terminal blocks Yes Environmental conditions ambient temperature / during operation -10 +55 °C	product component / optical interface	Yes	
protocol / is supported / IEC 60870-5-103 protocol / is supported / Modbus RTU slave protocol / is supported / DNP 3, serial yes protocol / is supported / PRP No protocol / is supported / PRP No protocol / is supported / RSTP No protocol / is supported / HSR No Time synchronization type of time synchronization width 155.5 mm height 168 mm depth 168 mm depth 216.5 mm frame size of enclosure design of the display product feature / plug-in terminal blocks Environmental conditions ambient temperature / during operation Yes Yes No 1sec/1min Pulse, Serial Comms Mechanical Design Text, 4 lines x 20 characters Yes Environmental conditions -10 +55 °C	product component / optical interface / note	40 km	
protocol / is supported / Modbus RTU slave protocol / is supported / DNP 3, serial protocol / is supported / PRP No protocol / is supported / RSTP No protocol / is supported / RSTP No protocol / is supported / HSR No Time synchronization type of time synchronization width 155.5 mm height 168 mm depth 216.5 mm frame size of enclosure E6 design of the display product feature / plug-in terminal blocks Environmental conditions ambient temperature / during operation Yes No No 1sec/1min Pulse, Serial Comms Mechanical Design 1sec/1min Pulse, Serial Comms No 1sec/1min P	protocol / is supported / IEC 61850	No	
protocol / is supported / DNP 3, serial protocol / is supported / PRP No protocol / is supported / RSTP No protocol / is supported / HSR No Time synchronization type of time synchronization width 155.5 mm height 168 mm depth 216.5 mm frame size of enclosure design of the display product feature / plug-in terminal blocks Environmental conditions ambient temperature / during operation Yes No 1sec/1min Pulse, Serial Comms No 1sec/1min Pulse, Serial Comms No 1sec/1min Pulse, Serial Comms 1sec/1min P	protocol / is supported / IEC 60870-5-103	Yes	
protocol / is supported / PRP No protocol / is supported / RSTP No protocol / is supported / HSR No Time synchronization type of time synchronization 1sec/1min Pulse, Serial Comms Mechanical Design width 155.5 mm height 168 mm depth 216.5 mm frame size of enclosure E6 design of the display Text, 4 lines x 20 characters product feature / plug-in terminal blocks Yes Environmental conditions ambient temperature / during operation -10 +55 °C	protocol / is supported / Modbus RTU slave	Yes	
protocol / is supported / RSTP protocol / is supported / HSR No Time synchronization type of time synchronization Wechanical Design width 155.5 mm height 168 mm depth 216.5 mm frame size of enclosure design of the display product feature / plug-in terminal blocks Environmental conditions ambient temperature / during operation No	protocol / is supported / DNP 3, serial	Yes	
protocol / is supported / HSR No Time synchronization type of time synchronization Mechanical Design width 155.5 mm height depth 216.5 mm frame size of enclosure design of the display product feature / plug-in terminal blocks Environmental conditions ambient temperature / during operation No 1sec/1min Pulse, Serial Comms 1	protocol / is supported / PRP	No	
type of time synchronization type of time synchronization 1sec/1min Pulse, Serial Comms Mechanical Design width 155.5 mm height 168 mm depth 216.5 mm frame size of enclosure design of the display product feature / plug-in terminal blocks Environmental conditions ambient temperature / during operation 1sec/1min Pulse, Serial Comms 1s	protocol / is supported / RSTP	No	
type of time synchronization Mechanical Design width 155.5 mm height 168 mm depth 216.5 mm frame size of enclosure E6 design of the display Text, 4 lines x 20 characters product feature / plug-in terminal blocks Yes Environmental conditions ambient temperature / during operation 155.5 mm 155.5 mm 168 mm 216.5 mm 216.5 mm Text, 4 lines x 20 characters Yes	protocol / is supported / HSR	No	
width 155.5 mm height 168 mm depth 216.5 mm frame size of enclosure E6 design of the display Text, 4 lines x 20 characters product feature / plug-in terminal blocks Yes Environmental conditions ambient temperature / during operation -10 +55 °C	Time synchronization		
width 155.5 mm height 168 mm depth 216.5 mm frame size of enclosure E6 design of the display Text, 4 lines x 20 characters product feature / plug-in terminal blocks Yes Environmental conditions ambient temperature / during operation -10 +55 °C	type of time synchronization	1sec/1min Pulse, Serial Comms	
height depth 216.5 mm frame size of enclosure E6 design of the display Text, 4 lines x 20 characters product feature / plug-in terminal blocks Yes Environmental conditions ambient temperature / during operation -10 +55 °C	Mechanical Design		
depth 216.5 mm frame size of enclosure E6 design of the display Text, 4 lines x 20 characters product feature / plug-in terminal blocks Yes Environmental conditions ambient temperature / during operation -10 +55 °C	width	155.5 mm	
frame size of enclosure design of the display Text, 4 lines x 20 characters product feature / plug-in terminal blocks Yes Environmental conditions ambient temperature / during operation -10 +55 °C	height	168 mm	
design of the display Text, 4 lines x 20 characters product feature / plug-in terminal blocks Yes Environmental conditions ambient temperature / during operation -10 +55 °C	depth	216.5 mm	
product feature / plug-in terminal blocks Environmental conditions ambient temperature / during operation -10 +55 °C	frame size of enclosure	E6	
Environmental conditions ambient temperature / during operation -10 +55 °C	design of the display	Text, 4 lines x 20 characters	
ambient temperature / during operation -10 +55 °C	product feature / plug-in terminal blocks	Yes	
	Environmental conditions		
Further information	ambient temperature / during operation	-10 +55 °C	
	Further information		

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information- and Downloadcenter (catalogues, leaflets,...)

http://www.siemens.com/energy-automation

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=7SR1813-1NC12-0CA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

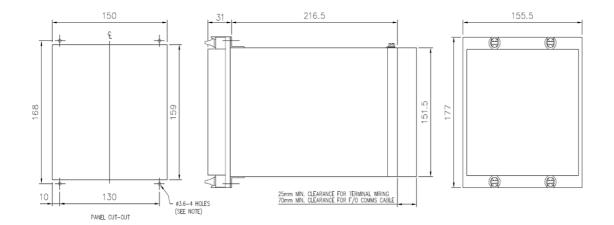
https://support.industry.siemens.com/cs/ww/en/ps/7SR1813-1NC12-0CA0

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=7SR1813-1NC12-0CA0

Tender specifications

http://www.siemens.com/specifications

Power Academy - Your training and consulting partner in the area of power transmission and distribution https://www.siemens.com/poweracademy



NOTE:
THE #3.6 HOLES ARE FOR M4 THREAD FORMING (TRILOBULAR) SCREWS.
THESE ARE SUPPLIES AS STANDARD AND ARE SUITABLE FOR USE IN
FERROLS/ALUMINUM PANELS I FIRM THICK AND ABOVE, FOR OTHER
PANELS, HOLES TO BE M4 CLEARANCE (TYPICALLY #4.5) AND RELAYS
MOUNTED USING M4 MACHINE SCREWS, NUTS AND LOCKWASHERS
(SUPPLIED IN PANEL FIXING KIT).

