

# Overcurrent Protection

## SIPROTEC 7SJ81

**Protection** SIPROTEC Compact

Product description	Variants	Order No.
<b>Overcurrent protection device for connection to low-power transformers</b>		
	7 S J 8 1 □ 3 - □ □ □ □ □ □ - 3 F □ □ □	Short code
<u>Housing, binary inputs and outputs</u>		
Housing 1/6 19", 4 x I, 3 BI, 5 BO <sup>1)</sup> , 1 Life contact	1	
Housing 1/6 19", 4 x I, 7 BI, 8 BO <sup>1)</sup> , 1 Life contact	2	
Housing 1/6 19", 4 x I, 3 x V, 3 BI, 5 BO <sup>1)</sup> , 1 Life contact	3	
Housing 1/6 19", 4 x I, 3 x V, 7 BI, 8 BO <sup>1)</sup> , 1 Life contact	4	
<u>Measuring inputs</u>		
Low Power Input	3	
<u>Auxiliary voltage</u>		
DC 24 V / 48 V	1	
DC 60 to 250 V; AC 115 V; AC 230 V	5	
<u>Unit version</u>		
Flush-mounting housing, screw-type terminal	E	
<u>Region-specific default- and language settings</u>		
Region DE, IEC, language German (language changeable)	A	
Region World, IEC/ANSI, language Englisch (language changeable)	B	
<u>Port B (at bottom of device, rear)</u>		
No port	0	
IEC 60870-5-103 or DIGSI 4/modem, electrical RS232	1	
IEC 60870-5-103 or DIGSI 4/modem, electrical RS485	2	
IEC 60870-5-103 or DIGSI 4/modem, optical 820 nm, ST-connector	3	
Further protocols see supplement L	9	
PROFIBUS DP slave, electrical RS485	L	
PROFIBUS DP slave, optical, double ring,	0	
ST-connector		
Modbus, electrical RS485	A	
Modbus, optical 820 nm, ST-connector	B	
DNP3, electrical RS485	D	
DNP3, optical 820 nm, ST-connector	E	
IEC 60870-5-103, redundant, electrical RS485, RJ45 con.	G	
IEC 61850, 100 Mbit Ethernet, electrical, double, RJ45 con.	H	
IEC 61850, 100 Mbit Ethernet, optical, double, LC-connector	P	
<u>Port A (at bottom of device, in front)</u>		
No port	R	
With Ethernet interface (DIGSI, not IEC 61850), RJ45-connector	S	
<u>Measuring / fault recording</u>		
With fault recording, average values, min/max values	3	

(continued on next page)

1) 2 changeover/Form C.

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Product description	Variants	Order No.
<b>Overcurrent protection relay</b> (continued from previous page)		 7 <b>S J 8 1</b> <input type="checkbox"/> 3 - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> - <b>3 F</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <b>A</b> <b>B</b> <b>C</b>
	ANSI-No.	
Basic version (contained in all options)	50/51	Overcurrent protection phase $I>$ , $I>>$ , $I>>>$ , $I_p$ ,
	50N/51N	Overcurrent protection ground $I_E>$ , $I_E>>$ , $I_E>>>$ , $I_{Ep}$
	50N(s)/51N(s) <sup>1)</sup>	Sensitive ground fault protection $I_{EE>}$ , $I_{EE>>}$ , $I_{EEp}$
	49	Overload protection
	74TC	Trip circuit supervision
	50BF	Circuit breaker failure protection
	46	Negative-sequence protection
	37	Undercurrent monitoring
	86	Lock out
		Parameter changeover
		Monitoring functions
		Control of circuit breaker
		Flexible protection functions (current parameters)
		Inrush restraint
Directional phase & ground overcurrent, directional sensitive ground fault, voltage and frequency protection	67	Directional overcurrent protection phase $I>$ , $I>>$ , $I_p$
■	67N	Directional overcurrent protection ground $I_E>$ , $I_E>>$ , $I_E$ , $I_{Ep}$
	67N(s) <sup>1)</sup>	Directional sensitive ground fault protection $I_{EE>}$ , $I_{EE>>}$ , $I_{EEp}$
	59N	Displacement voltage
	27/59	Under/Oversupply
	81 U/O	Under/Oversupply, $f<$ , $f>$
	47	Phase rotation
	32/55/81R	Flexible protection functions (current and voltage parameters)): Protective function for voltage, power, power factor, frequency change
ARC / Fault locator	Without	0
	79	With autoreclose
	21FL	With fault locator <sup>3)</sup>
	79/21FL	With autoreclose, with fault locator <sup>3)</sup>

■ Basic version included.

Depending on the connected low-power current transformer the function will be either sensitive (INs) or non-sensitive (IN).  
Only with position 6 = 1 or 2.  
Only with position 6 = 3 or 4.