

Motor Protection SIPROTEC 7SK81

Protection
SIPROTEC Compact

Product description

Variants

Order No.

Motor protection device for connection to low-power transformers

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 Short code
7 S K 8 1 □ 3 - □ E □ □ □ - 3 H □ 0 □ □ □ □

Housing, binary inputs and outputs

- Housing 1/6 19", 4 x I, 3 BI, 5 BO ¹⁾, 1 Life contact 1
- Housing 1/6 19", 4 x I, 7 BI, 8 BO ¹⁾, 1 Life contact 2
- Housing 1/6 19", 4 x I, 3 x V, 3 BI, 5 BO ¹⁾, 1 Life contact 3
- Housing 1/6 19", 4 x I, 3 x V, 7 BI, 8 BO ¹⁾, 1 Life contact 4
- Housing 1/6 19", 4 x I, 3 BI, 5 BO ¹⁾, 1 Life contact 5
- 5 RTD inputs |
- Housing 1/6 19", 4 x I, 3xV, 3 BI, 5 BO ¹⁾, 1 Life contact 6
- 5 RTD inputs

Measuring inputs

Low Power Input 3

Rated auxiliary voltage

- DC 24 V to 48 V 1
- DC 60 V to 250 V; AC 115 V; AC 230 V 5

Region-specific default- and language settings

- Region DE, IEC, language German ²⁾, standard front A
- Region World, IEC/ANSI, language English ²⁾, standard front B

Port B (at bottom of device)

- No port 0
- IEC 60870-5-103 or DIGSI 4/modem, electrical RS232 1
- IEC 60870-5-103, DIGSI 4/modem or RTD-box, electrical RS485 2
- IEC 60870-5-103, DIGSI 4/modem or RTD-box, optical 820 nm, ST-connector 3
- Further protocols see supplement L 9

- PROFIBUS DP slave, electrical RS485
- PROFIBUS DP slave, optical, double ring, ST-connector
- Modbus, electrical RS485
- Modbus, optical 820 nm, ST-connector
- DNP3, electrical RS485
- DNP3, optical 820 nm, ST-connector
- IEC 60870-5-103, redundant, electrical RS485, RJ45-connector
- IEC 61850, 100 Mbit Ethernet, electrical, double, RJ45-connector
- IEC 61850, 100 Mbit Ethernet, optical, double, LC-connector

Port A (at bottom of device)

- No port 0
- With Ethernet interface (DIGSI, RTD-box, not IEC 61850), RJ45-connector 6

Measuring / fault recording

With fault recording, average values, min/max values 3

L 0 □
↑
A
B
D
E
G
H
P
R
S

(continued on next page)

1) 2 changeover/Form C.
2) Language selectable.

Product description	Variants	Order No.
Motor protection device for connection to low-power transformers (continued from previous page)		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 7 S K 8 1 □ 3 - □ E □ □ □ - 3 □ □ 0
	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) ¹⁾	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 / unbalanced load protection
	86	Lockout
	48	Starting time supervision
	37	Undercurrent monitoring
	66/86	Restart inhibit
	14	Locked rotor protection
	51M	Load jam protection
		Motor statistics
		Parameter changeover
		Monitoring functions
		Control of circuit-breaker
		Flexible protection functions (current parameters)
		Inrush restraint
Directional sensitive ground fault, voltage and frequency protection	67N	Directional overcurrent protection ground, $I_{E>}$, $I_E >>$, I_{EP}
	67N(s) ¹⁾	Directional sensitive ground fault protection, $I_{EE>}$, $I_{EE} >>$, I_{EEP}
	59N	Displacement voltage
	27/59	Under/Overvoltage
	81 U/O	Under-/overfrequency, $f<$, $f>$
	47	Phase rotation
	32/55/81R	Flexible protection functions (current and voltage parameters): Protective function for voltage, power, power factor, frequency change

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■ Basic version included.

1) Depending on the connected low-power current transformer the function will be either sensitive (I_{Ns}) or non-sensitive (I_n).
 2) Only with position 6 = 1, 2 or 5.
 3) Only with position 6 = 3, 4 or 6.