

Overcurrent Protection

SIPROTEC 7SJ64

Protection
SIPROTEC 4

Product description	Variants	Order No.																																
Multifunction protection relay with local control, synchronization and RTD ¹⁾ interface	7 S J 6 4	<table border="1"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td> </tr> <tr> <td></td><td>S</td><td>J</td><td>6</td><td>4</td><td>□</td><td>□</td><td>-</td><td>□</td><td>□</td><td>□</td><td>□</td><td>-</td><td>□</td><td>□</td><td>□</td> </tr> </table>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		S	J	6	4	□	□	-	□	□	□	□	-	□	□	□
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16																			
	S	J	6	4	□	□	-	□	□	□	□	-	□	□	□																			
<p><u>Housing, binary inputs and outputs</u> Housing 1/3 19", 7 BI, 5 BO, 1 Life contact text display 4*20 character (only for 7SJ640) 9th position only with: B, D, E Housing 1/2 19", 15 BI, 13 BO (1a/b contact), 1 Life contact, graphic display Housing 1/2 19", 20 BI, 8 BO, 2 High-duty relays (4 contacts) 1 Life contact, graphic display Housing 1/1 19", 33 BI, 11 BO, 4 High-duty relays (8 contacts) 1 Life contact, graphic display Housing 1/1 19", 48 BI, 21 BO, 4 High-duty relays (8 contacts) 1 Life contact, graphic display</p> <p><u>Measuring inputs (4xV, 4xI)</u> $I_{ph} = 1 A^{(2)}$, $I_e = 1 A^{(2)}$ (min. = 0,05 A) 15th position only with: A, C, E, G</p> <p>$I_{ph} = 1 A^{(2)}$, $I_e = \text{sensitive}$ (min. = 0,001 A) 15th position only with: B, D, F, H</p> <p>$I_{ph} = 5 A^{(2)}$, $I_e = 5 A^{(2)}$ (min. = 0,25 A) 15th position only with: A, C, E, G</p> <p>$I_{ph} = 5 A^{(2)}$, $I_e = \text{sensitive}$ (min. = 0,001 A) 15th position only with: B, D, F, H</p> <p>$I_{ph} = 5 A^{(2)}$, $I_e = 1 A^{(2)}$ (min. = 0,05 A) 15th position only with: A, C, E, G</p> <p><u>Auxiliary voltage</u> DC 24 V to 48 V, binary input threshold DC 19 V⁽⁴⁾ DC 60 V to 125 V⁽³⁾, binary input threshold DC 19 V⁽⁴⁾ DC 110 to 250 V⁽³⁾, AC 115 V to 230 V, input threshold DC 88 V⁽⁴⁾</p> <p><u>Construction</u> Surface-mounting housing, plug-in terminals, detached HMI, panel mounting in l.v. housing</p> <p>Surface-mounting housing, 2-tier terminals on top/bottom</p> <p>Surface-mounting housing, screw-type terminals (direct-connection/ ring-type cable lugs), detached HMI, panel mounting in l.v. housing</p> <p>Flush-mounting housing, plug-in terminals (2/3 pin connector)</p> <p>Flush-mounting housing, screw-type terminals (direct-connection/ring-type cable lugs)</p> <p>Surface-mounting housing, screw-type terminals (direct-connection/ ring-type cable lugs), without HMI, panel mounting in l.v. housing</p> <p>Surface-mounting housing, plug-in terminals, without HMI, panel mounting in l.v. housing</p>	<table border="1"> <tr><td>0</td></tr> <tr><td>1</td></tr> <tr><td>2</td></tr> <tr><td>5</td></tr> <tr><td>7</td></tr> <tr><td>1</td></tr> <tr><td>2</td></tr> <tr><td>5</td></tr> <tr><td>6</td></tr> <tr><td>7</td></tr> <tr><td>2</td></tr> <tr><td>4</td></tr> <tr><td>5</td></tr> <tr><td>A</td></tr> <tr><td>B</td></tr> <tr><td>C</td></tr> <tr><td>D</td></tr> <tr><td>E</td></tr> <tr><td>F</td></tr> <tr><td>G</td></tr> </table>	0	1	2	5	7	1	2	5	6	7	2	4	5	A	B	C	D	E	F	G													
0																																		
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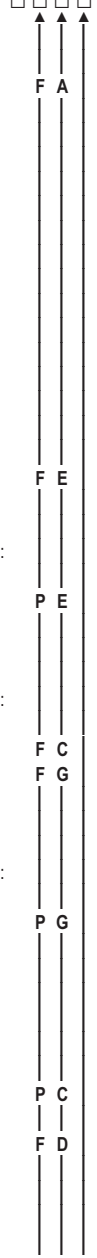
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- 1) RTD (resistance temperature detector) Box, 7XV5662-AD10 (at accessories communication)
- 2) Rated current 1/5 A can be selected by means of jumpers.
- 3) Transition between the two auxiliary voltage ranges can be selected by means of jumpers.
- 4) The thresholds of each binary input can be set via bridges. Settings deviant from the standard can be ordered via Z-variants
 Further information can be found in the MLFB sheet in the sharepoint (Intranet).

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Product description	Variants	Order No.
Multifunction protection relay with local control, synchronization and RTD¹⁾ interface		7 S J 6 4 □ □ - □ □ □ □ □ □ - □ □ □ □
Protection function packages	ANSI-No.	
(continued from previous page)	Control	
Basic version	50/51	Overcurrent protection $I>$, $I>>$, $I>>>$, I_p
(contained in all options)	50N/51N	Earth-fault protection TOC earth $I_{E>}$, $I_{E>>}$, $I_{E>>>}$, I_{Ep}
	50N/51N	Ground-fault protection via insensitive IEE-function: $I_{EE>}$, $I_{EE>>}$, $I_{EEp}^{2)}$
	50/50N	Flexible protection functions (index quantities derived from current): Additional time-overcurrent protection stages $I>>>>$
	51V	Voltage dependent inverse-time overcurrent protection
	49	Overload protection (with 2 time constants)
	46	Negative sequence protection
	37	Undercurrent monitoring
	47	Phase sequence
	59N/64	Displacement voltage
	50BF	Circuit-breaker failure protection
	74TC	Trip circuit supervision 4 setting groups; cold load pick-up Inrush blocking
	86	Lock out
■	V,P,f 27/59	Under/overvoltage
	81O/U	Under/overfrequency
	24/Q	Undervoltage controlled reactive power protection ⁴⁾
	27/47/59(N)	Flexible protection functions (index quantities derived from current & voltage):
	32/55/81R	voltage, power, p.f., rate-of-frequency-change-protection
■	IEF V,P,f	Intermittent earth-fault
	27/59	Under/overvoltage
	81O/U	Under/overfrequency
	24/Q	Undervoltage controlled reactive power protection ⁴⁾
	27/47/59(N)	Flexible protection functions (index quantities derived from current & voltage):
	32/55/81R	Voltage, power, p.f., rate-of-frequency-change-protection
■	Dir 67/67N	Direction determination for overcurrent, phase and ground
■	Dir V,P,f 67/67N	Direction determination for overcurrent, phase and ground
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	81O/U	Under/overfrequency
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	81O/U	Under-/overfrequency
	24/Q	Undervoltage controlled reactive power protection ⁴⁾
	27/47/59(N)	Flexible protection functions (quantities derived from current & voltages):
	32/55/81R	Voltage-/power-/p.f.-/rate of freq. change-protection
■	Dir IEF 67/67N	Direction determination for overcurrent, phase and ground Intermittent earth-fault
Dir. S.EF	Dir 67/67N	Direction determination for overcurrent, phase and ground
■	67Ns	Directional sensitive earth-fault detection
	67Ns	Directional intermittent ground-fault protection ⁴⁾
	87N	High-impedance restricted earth fault



(continued on next page)

- Basic version included
- V,P,f = Voltage-, Power-, frequency protection
- Dir = Directional overcurrent protection
- IEF= Intermittent earth-fault
- Dir. S.EF=Directional sensitive earth-fault detection

1) RTD (resistance temperature detector) Box, 7XV5662-AD10 (at accessories communication)
 2) Only with position 7 = 1, 5, 7 (insensitive earth current input)
 3) For isolated/compensated networks, only with position 7 = 2, 6 (sensitive earth current input)
 4) Starting from FW 4.90

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Dir. S.EF	Motor	V,P,f	67Ns	Directional sensitive earth-fault detection												H	F		3)
■			67Ns	Directional intermittent ground-fault protection ⁴⁾															
			87N	High-impedance restricted earth fault															
			48/14	Starting time supervision, locked rotor															
			66/86	Restart inhibit															
			51M	Motor load-jam protection , motor statistics															
			27/59	Under/overvoltage															
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				51M	Motor load-jam protection, motor statistics																	
ARC, fault locator					without																0	
synchronization				79	with autoreclose																1	
				21FL	Fault locator																2	
				79/21FL	Autoreclose, with fault locator																3	
				25	Synchronization																4	
				25/79/21FL	Synchronization, auto reclose, fault recorder																7	
						With ATEX 100 - certification ⁴⁾ for protection of explosion-proved machines of increased-safety type "e"																Z X 9 9

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 3) For isolated/compensated networks, only with position 7 = 2, 6 (sensitive earth current input)
 4) If no ATEX 100 - certification is required, please order without the order No. extension - ZX99
 5) Starting from FW 4.90