Overcurrent Protection
SIPROTEC 7SJ61

Product description	Variants	Order No.

Time-overcurrent, overload and motor protection relay

with control and RTD [3] interface

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

7 S J 6 1 □ □ - □ □ □ □ □ - □ □ □ □

Housing, binary inputs and outputs

Housing 1/3 19",4L-Text-Disp., 3 BI, 4 BO, 1 Life cont.	**0**
Housing 1/3 19",4L-Text-Disp., 8 BI, 8 BO, 1 Life cont.	**1**
Housing 1/3 19",4L-Text-Disp., 11 BI, 6 BO, 1 Life cont.	**2**
Housing 1/2 19", Graph.-Disp., 8 BI, 8 BO, 1 Life cont.	**3**
Housing 1/2 19", Graph.-Disp., 11 BI, 6 BO, 1 Life cont.	**4**

Measuring inputs (4x*I*)

I_{ph} = 1 A [1], I_e = 1 A [1] (min. = 0,05 A) 15th position only with: A	**1**
I_{ph} = 1 A[1], I_e = sensitive (min. = 0,001 A) 15th position only with: B	**2**
I_{ph} = 5 A[1], I_e = 5 A [1] (min. = 0,25 A) 15th position only with: A	**5**
I_{ph} = 5 A[1], I_e = sensitive (min. = 0,001 A) 15th position only with: B	**6**
I_{ph} = 5 A [1], I_e = 1 A (min. = 0,05 A) 15th position only with: A	**7**

Auxiliary voltage

DC 24 V to 48 V, binary input threshold DC 19 V [4]	**2**
DC 60 V to 125 V [2], binary input threshold DC 19 V [4]	**4**
DC 110 to 250 V [2]; AC 115 to 230 V, input threshold DC 88 V [4]	**5**
DC 110 to 250 V [2]; AC 115 to 230 V, input threshold DC 176 V [4]	**6**

Construction

Surface-mounting housing, terminals on top and bottom	**B**
Flush-mounting housing, plug-in terminal (2/3 pin connector)	**D**
Flush-mounting housing, screw-type terminal (direct-connection/ring-type cable lugs)	**E**

Region-specific default settings/ function versions and language settings

Region DE, 50 Hz, IEC-characteristics, language German (language changeable)	**A**
Region World, 50/60 Hz, ANSI/IEC-characteristics, language English (language changeable)	**B**
Region US, 60 Hz, ANSI-characteristics, language US-English (language changeable)	**C**
Region FR, ANSI/IEC-characteristics, language French (language changeable)	**D**
Region World, ANSI/IEC-characteristics, language Spanish (language changeable)	**E**
Region IT, ANSI/IEC-characteristics, language Italian (language changeable)	**F**
Region RU, ANSI/IEC-characteristics, language Russian (language changeable)	**G**

(continued on next page)

1) Rated current 1/ 5 A can be selected by means of jumpers.
2) Transition between the two auxiliary voltage ranges can be selected by means of jumpers.
3) RTD (resistance temperature detector) Box, 7XV5662-*AD10 (at accessories communication)
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).

Product description	Variants	Order No.

Time-overcurrent, overload and motor protection relay — 7SJ61 □□ - □□□□□ - □□□□□ Short code □□□

with control and RTD [1] interface

(continued from previous page)

		11	12	13	14	15	16	Short code
	System port (on rear of device)							
	No system port	0						
	IEC 60870-5-103 Protocol, electric RS232	1						
	IEC 60870-5-103 Protocol, electrical RS485	2						
	IEC 60870-5-103 Protocol, optical 820 nm, ST-connector	3						
	Further protocols see supplement L	9						L □□
	PROFIBUS DP slave, RS485							0 A
	PROFIBUS DP slave, optical 820 nm, double ring, ST-connector [2]							0 B
	Modbus, RS485							0 D
	Modbus, optical 820 nm, ST-connector [3]							0 E
	DNP3.0, RS485							0 G
	DNP3.0, optical 820 nm, ST-connector [3]							0 H
	IEC 60870-5-103 Protocol, redundant, electrical RS485 [3]							0 P
	IEC 61850, 100 Mbit Ethernet, electrical, double, RJ45-connector							0 R
	IEC 61850, 100 Mbit Ethernet, with integrated switch							0 S
	optical, double, LC-connector [3]							
	DNP3 TCP + IEC 61850, 100 Mbit Ethernet, elec., double, RJ45-connector [4]							2 R
	DNP3 TCP + IEC 61850, 100 Mbit Ethernet, optical, double, LC-connector [4]							2 S
	Profinet + IEC 61850, 100 Mbit Ethernet, elec., double, RJ45-connector [4]							3 R
	Profinet + IEC 61850, 100 Mbit Ethernet, optical, double, LC-connector [4]							3 S
	Port C							
	No port		0					
	DIGSI 4/Modem, electric RS232		1					
	DIGSI 4/Modem/RTD-Box [1] , electrical RS485		2					
	DIGSI 4/Modem/RTD-Box [1], optical 820 nm, ST-connector		3					
	Measuring/fault recording							
	Fault recording			1				
	Slave pointer, mean values, min/max values fault recording			3				

(continued on next page)

1) RTD (resistance temperature detector) Box, 7XV5662-*AD10 (at accessories communication)
2) If position 9=B (surface-mounting housing, 2-tier terminals on top/bottom), please order the relay with RS485 interface and separate fibre-optic converter
3) Not available with position 9=B
4) Starting from FW V4.90

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Product description			Variants		Order No.				
					1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16				
Time-overcurrent, overload and motor protection relay					**7 S J 6 1** □ □ - □ □ □ □ □ - □	□	□	□	
with control and RTD [1] interface									
(continued from previous page)									
Protection function packages			ANSI-No.						
Basic version				Control					
(contained in all options)			50/51	Time-overcurrent protection TOC phase $I>$, $I>>$, $I>>>$, I_p		**F**	**A**		
			50N/51N	Earth 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 $I>>>>$					
			49	Overload protection (with 2 time constants)					
			37	Undercurrent monitoring					
			46	Negative sequence protection					
			50BF	Circuit-breaker failure protection					
			74TC	Trip circuit supervision					
				4 setting groups; cold load pick-up					
				Inrush blocking					
			86	Lock out					
■		IEF		Intermittent earth-fault		**P**	**A**		
■			50Ns/51Ns	Sensitive earth-fault detection (non-directional)		**F**	**B**		[3]
			87N	High-impedance restricted earth fault					
■		IEF	50Ns/51Ns	Sensitive earth-fault detection (non-directional)		**P**	**B**		[3]
			87N	High-impedance restricted earth fault					
				Intermittent earth-fault					
■	Motor	IEF	50Ns/51Ns	Sensitive earth-fault detection (non-directional)		**R**	**B**		[3]
			87N	High-impedance restricted earth fault					
				Intermittent earth-fault					
			48/14	Starting time supervision, locked rotor					
			66/86	Restart inhibit					
			51M	Motor load-jam protection , motor statistics					
■	Motor		50Ns/51Ns	Sensitive earth-fault detection (non-directional)		**H**	**B**		[3]
			87N	High-impedance restricted earth fault					
			48/14	Starting time supervision, locked rotor					
			66/86	Restart inhibit					
			51M	Motor load-jam protection , motor statistics					
■	Motor		48/14	Starting time supervision, locked rotor		**H**	**A**		
			66/86	Restart inhibit					
			51M	Motor load-jam protection , motor statistics					
ARC				without autoreclose				**0**	
			79	with autoreclose				**1**	

■ Basic version included
IEF= Intermittent earth-fault

1) RTD (resistance temperature detector) Box 7XV5662-*AD10 (at accessories communication)
2) Only with position 7 = **1, 5, 7** (insensitive earth current input)
3) Only with position 7 = **2, 6** (sensitive earth current input)