

SIEMENS

SIPROTEC 4
7SD522/523

Multiterminal Differential Relay
for Two-Six Line Terminals



Protection Systems
Catalog SIP 5.3 • 1.0

Mechanical construction	Housing 7XP20	see dimension drawings
	1/2 x 19" or 1/1 x 19"	
	Degree of protection to EN 60 529	
	For the front of the housing	IP 51
	For the rear of the housing	
	flush mounting version	IP 50
	surface mounting version	IP 51
	For the terminals	IP 2x with terminal cover put on
	Weight	
	Flush mounting	
	1/2 x 19"	6 kg
	1/1 x 19"	10 kg
	Surface mounting	
	1/2 x 19"	11 kg
	1/1 x 19"	19 kg
Serial interfaces / front of unit		
Operating interface 1 for DIGSI 4 or browser	Connection	front panel, non isolated, RS 232, 9-pin subminiature connector
	Baud rate	4800 Baud to 115200 Baud
Serial interfaces / rear of unit		
Time synchronization with IRIG-B signal / DCF77 / SCADA or binary input impulse	Connection	9-pin subminiature connector
	Voltage levels	5 V or 12 V or 24 V
Service interface (Operating interface 2) for DIGSI 4 / Modem / Service	Isolated RS232/RS485	9-pin subminiature connector
	Dielectric test	500 V / 50 Hz
	Distance for RS232	max. 15 m
	Distance for RS485, depends on the baud rate	max. 1000 m
	Fiber-optic	integrated ST-connector
	Optical wavelength	$\lambda = 820 \text{ nm}$
Permissible attenuation	max. 8dB for glass-fiber 62.5/125 μm	
Distance	max. 1.5 km	
System interface IEC60870-5-103 PROFIBUS FMS (*) PPROFIBUS DP (*) DNP 3.0 (*)	Isolated RS232/RS485	9-pin subminiature connector
	Baud rate	4800 Baud to 38400 Baud
	Dielectric test	500 V / 50 Hz
	Distance for RS232	max. 15 m
	Distance for RS485	max. 1000 m
	Fiber-optic	integrated ST-connector
	Optical wavelength	$\lambda = 820 \text{ nm}$
	Permissible attenuation	max. 8dB for glass-fiber 62.5/125 μm
Distance	max. 1.5 km	

*) available with next firmware release

**) in preparation

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Multiterminal Differential Relay for Two-Six Line Terminals

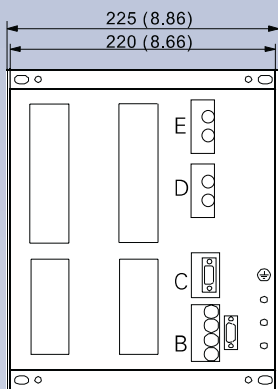
Selection and ordering data

	Position	7	S	D	5	2	6	7	-	8	9	10	11	12	-	13	14	15	16
Function package/Design																			
Multiterminal differential relay with 4-line display						2													
Device type																			
Multiterminal differential relay for two terminals operation						2													
Multiterminal differential relay for multiterminals (3 to 6)						3													
Measurement input																			
$I_{ph} = 1 A, I_e = 1 A$																			1
$I_{ph} = 5 A, I_e = 5 A$																			5
Auxiliary Voltage (Power supply, Binary indication voltage)																			
24 V to 48 V DC, binary input threshold 17 V **																			2
60 V to 125 V *, binary input threshold 17 V **																			4
110 V to 250 V DC *, 115 V AC, binary input threshold 73 V **																			5
220 V to 250 V DC, 115 V AC, binary input threshold 154 V **																			6
*) A crossover of the two auxiliary voltage ranges may be carried out by means of plug-in jumpers																			
**) The binary input thresholds are settable in three levels via plug-in jumpers, separately for each binary input																			
Housing/ quantity of inputs and outputs																			
1/2 x 19", 8 BI, 16 BO, Flush-mounting housing with screw terminals																			A
1/1 x 19", 16 BI, 24 BO, Flush-mounting housing with screw terminals																			C
1/1 x 19", 24 BI, 32 BO, Flush-mounting housing with screw terminals																			D
1/2 x 19", 8 BI, 16 BO, Surface-mounting housing with screw terminals																			E
1/1 x 19", 16 BI, 24 BO, Surface-mounting housing with screw terminals																			G
1/1 x 19", 24 BI, 32 BO, Surface-mounting housing with screw terminals																			H
1/2 x 19", 8 BI, 16 BO, Flush-mounting housing with plug-in terminals																			J
1/1 x 19", 16 BI, 24 BO, Flush-mounting housing with plug-in terminals																			L
1/1 x 19", 24 BI, 32 BO, Flush-mounting housing with plug-in terminals																			M
With 5 fast trip contacts, approx. 1 ms closing time																			N
1/1 x 19", 16 BI, 24 BO, Flush-mounting housing with screw terminals																			P
With 5 fast trip contacts, approx. 1 ms																			Q
1/1 x 19", 16 BI, 24 BO, Surface-mounting housing with two-tier terminals																			R
With 5 fast trip contacts, approx. 1 ms																			S
1/1 x 19", 16 BI, 24 BO, Flush-mounting housing with plug-in terminals																			T
With 5 fast trip contacts, approx. 1 ms																			
1/1 x 19", 24 BI, 32 BO, Flush-mounting housing with plug-in terminals																			
Region and operating language																			
Region GE, language german (language changeable)																			A
Region World, language UK-english (language changeable)																			B
Region US, language US-english (language changeable)																			C*

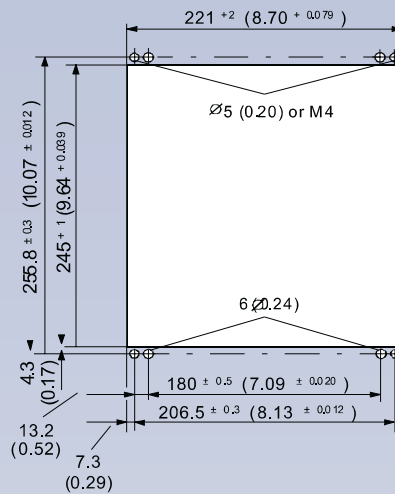
* English version except both presetting, ANSI-curves, 60 Hz

Figure 37

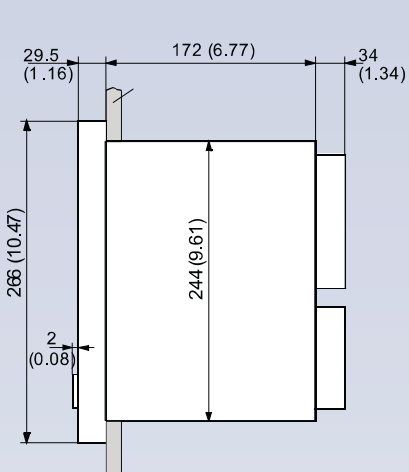
Flush mounting 1/2 x 19" with screw and plug-in terminals



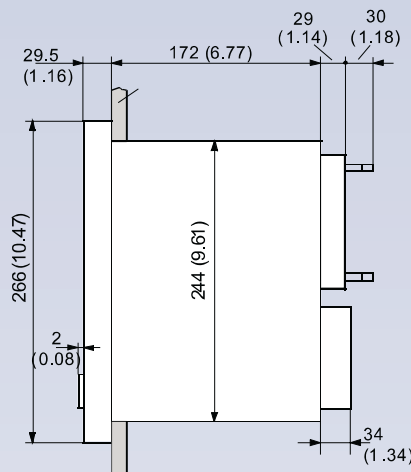
Housing 1/2 x 19"
Rear view



Housing 1/2 x 19"
Panel cutout



Side view with
screw terminals



Side view with
plug-in terminals

Note: Dimensions are indicated in millimeters; values stated in brackets are inches