

Technical specifications

Multicounters without communication interface			7KT1 310	7KT1 311	7KT1 312
Multicounters with RS485 interface (Modbus RTU, for LAN couplers)			7KT1 340	7KT1 341	7KT1 342
Multicounters with PROFIBUS DP V0 interface			7KT1 350	7KT1 351	7KT1 352
Standards			EN 61010-1, EN 62053-21, -23, -31		
Supply					
• Rated control supply voltage U_C		V AC	230		
• Operating range		$\times U_C$	0.8 ... 1.2		
• Rated frequency		Hz	50		
• Frequency ranges		Hz	45 ... 65		
• Rated power dissipation P_V		VA	≤ 10		
Overload capability					
• Voltage	continuous: phase/phase	V	480		
	1 second: phase/phase	V	800		
	continuous: phase/N	V	276		
	1 second: phase/N	V	460		
• Current	continuous	A	76	6	
	0.5 s	A	--	110	
	10 ms	A	2000	--	
Measuring inputs					
• Connection type			Direct	Transformer /5 A	
• Voltage U_e	phase/phase	V	400		
	phase/N	V	230		
• Operating range voltage	phase/phase	V	87 ... 480		
	phase/N	V	50 ... 276		
• Current I_e		A	63	5	
• Operating range current		A	0.3 ... 63	0.012 ... 5	
• Transformer current	primary current of the transformer	A	--	5 ... 5000	
	smallest input step	A	--	5	
• Frequency		Hz	50		
• Operating frequency range		Hz	45 ... 65		
Display					
• Connection errors	inverted phases		Err		
• Voltage: 3 displays, 3-digit	delta L1–L2, L2–L3, L3–L1	V AC	87 ... 480		
	star L1/N – L2/N – L3/N	V AC	50 ... 276		
	voltage > 480/276 V		H H H		
	voltage < 87/50 V		L L L		
• Current:	L1 – L2 – L3 – neutral conductor		0.3 ... 76 A	0.1 A ... 1.2 kA or	
				0.1 ... 6 A	
				$\times$ transformer conversion ratio	
	for current > 76 A or		H H H		
	6 A x transformer conversion ratio		O O O		
	for current < 0.3 A or				
	0.012 A x transformer conversion ratio				
• Frequency: 1 display, 3-digit	Σ L	Hz	45.0 ... 65.0		
• Active power: 3 displays, 3-digit	L1 – L2 – L3, display with floating decimal point	W, kW or MW	0 ... 999		
• Active power: 3 displays, 3-digit, 3 of 7 digits + display import or export	Σ L, display with floating decimal point	W, kW or MW	0 ... 999		
• Reactive power: 1 display, 3 of 7 digits + capacitive or inductive load	Σ L, display with floating decimal point	var, kvar or Mvar	0 ... 999		
• Apparent power: 3 displays, 3-digit	L1 – L2 – L3, Σ L display with floating decimal point	VA, kVA or MV	0 ... 999		
• Apparent power: 5 displays, 3-digit, adjustable	Σ L, display with floating decimal point	VA, kVA or MV	0 ... 999		
• Active energy: 1 display, 7-digit display import or export, + display rate 1 or 2	Σ L, display with floating decimal point	Wh, kWh or MW	0 ... 99999999 or 0 ... 999		
• Reactive energy: 1 indicator, 7-digit + capacitive or inductive load	Σ L, display with floating decimal point	varh, kvarh or Mvarh	0 ... 99999999 or 0 ... 999		
• Apparent energy: 5 displays, 3-digit, adjustable rate	Σ L, display with floating decimal point	VAh, kVAh or MVh	0 ... 99999999 or 0 ... 999		
• p.f.: 3 displays, 3-digit	L1 – L2 – L3, display with floating decimal point		0.01 ... 1.00		
• p.f.: 4 displays, 3-digit, adjustable	Σ L		0.01 ... 1.00		

BETA Measuring Three-Phase Measuring Devices

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Display (contd.)					
• Transformer primary current	only if set	A	--	5 ... 5000	
• Transformer secondary current	only if set	A	--	5	
• Temperature		°C	0 ... +99		
• Display period		/s	2		
• Storage of setting and energy values			EEPROM		
S0 interfaces			Class A		
• Terminal output	acc. to IEC 62053-31		10–1–0.1–0.01–0.001	--	
	for direct connection 63 A, adjustable	Imp/kWh	--	10–1–0.1–0.01–0.001	
	depending on the transformer factor, adjustable	Imp/kWh			
• Pulse duration		ms	125 ... 300		
• Minimum interval between 2 pulses		ms	300		
• Required voltage		V DC	5 ... 30		
• Current ON/OFF		mA	10 ... 27/0 ... 2		
Measuring accuracy					
• Voltage		%	1		
• Current		%	1		
• Power outputs		%	2		
• Active energy	acc. to IEC 62053-21		Class 2		
• Reactive energy	acc. to IEC 62053-23		Class 2		
• p.f.		%	2		
• Frequency		%	1		
Safety according to EN 61010-1					
• Degree of pollution			2		
• Overvoltage category			II		
• Operating voltage category		V	600		
• Clearances		mm	≥ 3.0		
• Creepage distances	in device	mm	≥ 4.3		
	on printed boards (not installed)	mm	≥ 3.0		
• Test pulse voltage	1.2/50 µs	kV	4		
• Test voltage	50 Hz, 1 min	kV	2.2		
Terminals					
• Main current paths	± screw (Pozidriv)		2	1	
• Supply and control terminals	blade for slotted screw	mm x mm	0.4 x 2.5		
• Conductor cross-sections, main current paths	rigid, maximum	mm ²	1 x 25 or 2 x 16	1 x 6 or 2 x 4	
	rigid, minimum	mm ²	1 x 1.5		
• Conductor cross-sections supply and control terminals	rigid, maximum	mm ²	1 x 6 or 2 x 4		
	flexible, with end sleeve, minimum	mm ²	1 x 0.75		
Ambient conditions					
• Temperature		°C	0 ... +55		
• Relative humidity		%	≤ 80		
• Vibrations	sinus amplitude at 50 Hz	mm	± 0.25		
• Degree of protection - front panel, 96 mm x 96 mm	acc. to EN 60529		IP20, with connected conductors		IP54
• Safety class	acc. to EN 61010-1		II		