Control Components

	Control	Components
	Timers	
	Electromechanical	
Туре	KKH	KOE
Characteristics	 open, manual start timer manual time setting elapsed time indicator 	 additional functions elapsed time indicator
Mounting	flush mountingfront or side mounting	 surface mounting snap on or screws flush mounting with clip
Dimensions (mm)	55 x 73 x 65	surface: 45 x 70 x 99 flush: 45 x 45 x 93
Functions*	no	11, 12, 21, 22, 23 by external wiring
Time ranges	1, 5, 15, 30 min 1, 2, 3, 12, 24 h	6 time ranges, selected 0.1 s60 h
Outputs	2 snap-action as change-over, 250 VAC, 16 A	1 timed and 1 instantaneous change-over contact, 250 VAC, 2/5 A
Supply voltage	230 VAC, 50 Hz	230 VAC, 50 Hz
Page	14	17

Timers

Туре	Electronic	KOL	KOP.J	KOP.K
	 large rotary dial DIN dimensions multifunction multi time range multi voltage 	 17.5 mm multifunction multi time range multi voltage 	 22.5 mm mono or multifunction high immunity to interference 	 wide range of capabilities LED
	flush mountingplug-in on 11 pin socket	 surface mounting snap-on DIN rail 35 mm 	■ surface mounting ■ snap-on DIN rail 35 mm	 surface mounting snap-on DIN rail 35 mm
Dimensions (mm)	45 x 45 x 95	17.5 x 80 x 70	22.5 x 75 x 109	22.5 x 75 x 109
	211, 212, 217, 221, 223, 247 by external wiring	11, 12, 21, 42, 51, 60	11, 12, 16, 19, 21, 22, 23, 24, 28, 31, 32, 33, 34, 41, 42, 51	11, 12, 16, 21, 22, 23, 24, 42, 19
	12 time ranges, selected 0.01 s10 h	6 time ranges, 0.05 s up to 10 h	12 time ranges, 0.05 s up to 60 h	10 time ranges, 0.05 s up to 60 h multi time 0.05 up to 60 h
	1 relay with two contacts as change-over, 250 VAC, 5 A	1 relay NO, KOL1 1 relay as change-over, KOL3 250 VAC, 5 A	1 relay as change-over, 250 VAC, 8 A	2 relays as change-over, instantaneous and/or timer, 250 VAC, 8 A
Supply voltage	24230 VDC/VAC, 50/60 Hz	2448 VDC or 24240 VAC, 50/60 Hz	2448 VDC or 24240 VAC, 50/60 Hz	2448 VDC or 24240 VAC, 50/60 Hz
Page	20	24	28	32

* 11: delayed operation; 12: delayed release; 16: delayed operation and release; 21: fleeting-on delay timer; 22: fleeting-off delay timer; 23: impulse converter; 24: impulse generator; 42: flasher relay; 28: watchdog; 31/70: asymmetrical timer; 51: star-delta timer; 19: power off delayed release

Hour Meters

	Electromechanical	ununte	
Туре	СМС	СМТ	CMU
Characteristics	micro counterminimal power consumption	DIN dimension	■ cut-out 46 x 46 mm or Ø 50.5 mm
Mounting	flush mounting with clip	flush mounting with clip or 2 screws M3	 flush mounting with clip
Dimensions (mm)	30 x 13 x 33	45 x 22 x 49	48 x 48
Counting capacity	99.999.99 h	DC: 999.999.99 h AC: 99.999.99 h	99.999.99 h
Display	 mechanical, 4 mm high digit decimal places in red 	 mechanical, 4 mm high digit decimal places in red 	mechanical, 4 mm high digit
Supply voltage	5 VDC and 12 VDC	1224 VDC and 230 VAC	1224 VDC 24 or 230 VAC 50 Hz
Page	38	42	44

Hour Meters

	Electronic	888888	201	
Туре	CXR	CXG 23, 28	CXE	
Characteristics	 large display standard DIN housing 	 single, double or combined meter programmable 	 LCD display preset value programmable resolution 	
Mounting	flush mounting with clip	flush mounting with clip	flush mounting with clip	
Dimensions (mm)	90 x 42 x 105	45 x 22 x 59	45 x 45 x 86	
Counting capacity	999.999, time units: h:min:s, s, 0.01 h or 0.01 s	999.999, time units: h:min:s or s:min:h	999.999, time units: h:min:s or s, min, h	
Display	LED, 13 mm high digit	LED, 8 mm high digit	 LCD, backlight 9 mm high digit – counting 8 mm high digit – preset 	
Supply voltage	1130 VDC and 90250 VAC	1030 VDC	1130 VDC and 90250 VAC	
Page	46	48	51	

Counters

	Electromechanical, Totalis	sing		
				T DOLLARS
Туре	СМВ	СМА	CBG	СММ
Characteristics	 micro size for PCB machine solder washable 	 small size low current consumption 	 robust totalising counter, proven over many years 	 robust totalising counter with no, manual or electrical reset
Mounting	 surface or PCB mounting flush mounting with clip snap-on DIN rail 35 mm 	 surface mounting with nut flush mounting with clamping spring 	 flush mounting with clamping spring 	 surface mounting flush mounting with clamping spring
Dimensions (mm)	29 x 14 x 35 27 x 35 x 12 30 x 58 x 53	31 x 20 x 55 (50)	37 x 24 x 57	28 x 52 x 72
Counting capacity	9.999.999	999.999 without reset 99.999 with reset	9.999.999 without reset 99.999 with reset	99.999.999 without reset 999.999 with reset
Display	 mechanical, 4 mm high digit optical 	mechanical, 4 mm high digit	mechanical, 4 mm high digit	mechanical, 4 mm high digit
Supply voltage	12 VDC, 24 VDC and 230 VAC	24 VDC and 230 VAC	6, 12, 24, 110, 220 VDC 24, 115, 230 VAC	12, 24 VDC and 24, 115, 230 VAC
Page	56	59	62	64

Counters

	Electromechanical, Preset	Electronic, Totalising	888888	Electronic, Differential
Туре	СММ	СХВ	CXG 20, 26	CXG 21
Characteristics	 up counting, manual reset down counting, manual and electrical reset 	 battery operated (lithium) 	 single, double or combi counter programmable 	 differential counter programmable
Mounting	flush mounting with clip	 flush mounting with clamping spring screw mounting on front 	flush mounting with clip	flush mounting with clip
Dimensions (mm)	52 x 52 x 72	45 x 22 x 40	45 x 22 x 59	45 x 22 x 59
Counting capacity	99.999 CMM152 999.999 CMM362 CMM152 counting up with permanent display of the preset value CMM362 counting down	99.999.999	999.999	-199.999999.999
Display	mechanical, 4 mm high digit	LCD, 7 mm high digit	LED, 8 mm high digit	LED, 8 mm high digit
Supply voltage	24 VDC and 24, 115, 230 VAC	independent	1030 VDC	1030 VDC
Page	66	69	72	74

Counters

	-	Electronic, Preset	0.00	
Туре	CXR	CXP	CXE	BBBBB CXD
Characteristics	 large display standard DIN housing 	 1 preset value stationary display battery operated (lithium) 	 1 or 2 preset values or batch function multifunction 	 counting up and down reset to zero or preset value
Mounting	flush mounting with clip	flush mounting with clip	flush mounting with clip	flush mounting with clip
Dimensions (mm)	90 x 42 x 105	45 x 45 x 86	45 x 45 x 86	45 x 45 x 86
Counting capacity	999.999 h, min, s 0.01 h or 0.01 s	-19.99999.999	-999.999999.999	-19.99999.999
Display	LED, 13 mm high digit	LCD, 7.5 mm high digit	LCD backlite, 9 mm high digit	■ 7-segment LED
Supply voltage	1130 VDC and 90250 VAC	independent	12.530 VDC, 230 VAC	24 VDC, 230 VAC
Page	77	80	82	85

Counters

	Digital, Tachometers	1000000	
	888888	88888	105
Туре	CXG 22, 25	CXD	CXE
Characteristics	 CXG22: tachometer/frequency counter CXG25: totalising counter and tachometer 	 monitors revolutions/velocity flow rate control 1 limit value 	 multifunction 1 or 2 limit values
Mounting	flush mounting with clip	 surface mounting flush mounting with clamping spring 	flush mounting with clip
Dimensions (mm)	45 x 22 x 59	45 x 45 x 86	45 x 45 x 86
Counting capacity	999.999 h, min. s 0.01 h or 0.01 s	099.999	999.999 h, min, s 0.01 h or 0.01 s
Display	LED, 8 mm high digit	LED, 7.5 mm high digit	LCD backlight, 9 mm high digit
Supply voltage	1030 VDC	12.530 VDC and 230 VAC	1130 VDC and 90250 VAC
Page	88	91	94



Control Relays

• mono fixed /adjustable • none/three phases for 10 min encod/three phases • AC voltage • KFE 103 measures current. Mounting encod/three phases encode/three fixed for three mono/three phases encode/three fixed for three encode/three fixed for three fixed		Control Relays			
Characteristic monofitors loss of phase control. phase order; phase asymmetry • three phase surveillance of AC voltage • KFE 102 measures current. Mounting • snap-on DIN rail 35 mm Setting KFE 103 measures current. • three phase surveillance of AC voltage • KFE 103 measures current. Mounting • snap-on DIN rail 35 mm • snap-on DIN rail 35 mm • snap-on DIN rail 35 mm Setting KFE 100, mig 12 bit (fild) + mig 12 bit (fild) + mig 12 bit (fild) + mig 12 bit (fild) + mig voltage over contact). • control asymmetry 51 a 203. • a 250 VAC • soap or DIN rail 35 mm • snap-on DIN rail 35 mm Time range • for 10 min, selection by wire bridge or switch • a 200 VAC. 50/60 Hz; P 5 4 VA 400 VAC; 50/60 Hz; P 5 4 VA 200 VAC Supply voltage • fault and power supply LED • phase fault, fault asymmetry end power supply LED • fault and power supply LED • display Page • there phase and DIN rail 35 mm • surface mounting enage on DIN rail 35 mm <td< th=""><th></th><th>Analog</th><th></th><th>1000</th><th>Digital</th></td<>		Analog		1000	Digital
Characteristic monofitors loss of phase control. phase order; phase asymmetry • three phase surveillance of AC voltage • KFE 102 measures current. Mounting • snap-on DIN rail 35 mm Setting KFE 103 measures current. • three phase surveillance of AC voltage • KFE 103 measures current. Mounting • snap-on DIN rail 35 mm • snap-on DIN rail 35 mm • snap-on DIN rail 35 mm Setting KFE 100, mig 12 bit (fild) + mig 12 bit (fild) + mig 12 bit (fild) + mig 12 bit (fild) + mig voltage over contact). • control asymmetry 51 a 203. • a 250 VAC • soap or DIN rail 35 mm • snap-on DIN rail 35 mm Time range • for 10 min, selection by wire bridge or switch • a 200 VAC. 50/60 Hz; P 5 4 VA 400 VAC; 50/60 Hz; P 5 4 VA 200 VAC Supply voltage • fault and power supply LED • phase fault, fault asymmetry end power supply LED • fault and power supply LED • display Page • there phase and DIN rail 35 mm • surface mounting enage on DIN rail 35 mm <td< th=""><th></th><th>and the second s</th><th>etete :</th><th>*****</th><th>2010</th></td<>		and the second s	etete :	*****	2010
Characteristic monofitors loss of phase control. phase order; phase asymmetry • three phase surveillance of AC voltage • KFE 102 measures current. Mounting • snap-on DIN rail 35 mm Setting KFE 103 measures current. • three phase surveillance of AC voltage • KFE 103 measures current. Mounting • snap-on DIN rail 35 mm • snap-on DIN rail 35 mm • snap-on DIN rail 35 mm Setting KFE 100, mig 12 bit (fild) + mig 12 bit (fild) + mig 12 bit (fild) + mig 12 bit (fild) + mig voltage over contact). • control asymmetry 51 a 203. • a 250 VAC • soap or DIN rail 35 mm • snap-on DIN rail 35 mm Time range • for 10 min, selection by wire bridge or switch • a 200 VAC. 50/60 Hz; P 5 4 VA 400 VAC; 50/60 Hz; P 5 4 VA 200 VAC Supply voltage • fault and power supply LED • phase fault, fault asymmetry end power supply LED • fault and power supply LED • display Page • there phase and DIN rail 35 mm • surface mounting enage on DIN rail 35 mm <td< th=""><th></th><th></th><th>2000 C</th><th></th><th></th></td<>			2000 C		
• mono Rice/adjustable • nono/three phases or 10 min • snap-on DIN rail 35 mm • snap rol N rail 35 mm <	Туре	KFE 100/101/301	KFE 300	KFE 302	KFE 102/103
Mounting= snap-on DIN rail 35 mm= snap-on DIN rail 35 mm= snap-on DIN rail 35 mm= snap-on DIN rail 35 mmDimensions (m)35 x 85 x 5835 x 85 x 5835 x 85 x 5835 x 85 x 58SettingKFE 100 U _{min} 0.5 U _{kin} U _{min} 1.2 U _{ki} Wire bridge or switch= ontroid voitagementry 5 to 20X = hase order (fixed)= U _{min} 1.15 U _{ki} = memory option = over voitage fix 1.15 U _{ki} = memory option = ver voitage fix 1.15 U _{ki} = Mounting = No UAC, 50/60 Hz; P ≤ 4 VA= 0.1 to 12 sec = Ver voitage fix 1.15 U _{ki} = Mounting = No UAC, 50/60 Hz; P ≤ 4 VA= 0.1 to 12 sec = Ver voitage fix 1.15 U _{ki} = No UAC, 50/60 Hz; P ≤ 4 VA= 0.1 to 12 sec = VER Voitage-over contact) = fault fault asymmetry = fault fault asymmetry= 0.1 to 12 sec = VER Voitage-over contact) = neary (hange-over contact) = fault fault asymmetry = fault fault asymmetry= 0.1 to 12 sec = VER VOID = VER VOID = NO VAC, 50/60 Hz; P ≤ 4 VA= 0.1 to 12 sec = VER VOID = VER VOID = fault fault asymmetry = fault fault fault asymmetry<	Characteristics	 mono fixed/adjustable mono/three phase: 5 or 10 min 	phase order, phase asymmetry and under voltage		 KFE 102 measures voltage AC/DC KFE 103 measures current AC/DC
Setting KFE 100: U _{min} 0.75 U _k : U _{max} 1.2 U _k (fib) (max 1.2 U _k (fib) (max 1.2 U _k) = ontrol asymmetry 5 to 20% = onder voltage (fixed) = U _{min} 0.8 U _k (fib) (max 1.15 U _k) = hysteresis 5 to 50% = memory option (fixed) Time range = or 10 min, selection by wire bridge or switch wire bridge or switch (fixed) = 300 ms (fixed) = 0.1 to 12 sec = KFE 102. U _{min} 1.5 U _k (fix) (fix) = memory option = KFE 102. U _{min} 1.5 U _k (fix) = memory option Supply voltage = or 10 min, selection by wire bridge or switch s A 250 VAC = 300 ms (fixed) = 0.1 to 12 sec = KFE 102. U _{min} 1.5 U _k (fix) = memory option = KFE 102. U _{min} 1.5 U _k (fix) = memory option = KFE 102. U _{min} 1.5 U _k (fix) = memory option = KFE 102. U _{min} 1.5 U _k (fix) = 0.0 to 12 30 VAC. 50/60 Hz; P ≤ 4 VA = 0.0 to 12 sec = KFE 102. U _{min} 1.5 U _k (fix) = KFE 100.101 / 230 VAC. 50/60 Hz; P ≤ 4 VA = 0.0 to 12 sec = KFE 102. U _{min} 1.5 U _k (fix) = fix U hange - over contact); B A 250 VAC = netal (fix) = neta	Mounting			■ snap-on DIN rail 35 mm	■ snap-on DIN rail 35 mm
U_model 2.0, (fit2), U_m (0.8 U_m), U_m 0.8 U_m), U_max 0.8 U_m, U_max 0.2 U_m, T2	Dimensions (mm)	35 x 85 x 58	35 x 85 x 58	35 x 85 x 58	35 x 85 x 58
Time range • 5 or 10 min, selection by wire bridge or switch • 300 ms (fixed) • 0.1 to 12 sec • KFE 103.0.1 to 12 sec • KFE 103.0.0 to 12 sec • KFE 103.0.1 to 12 sec • KFE 103.0.0 to 15 sec • Sol VAC Function control • fault and power supply LED • 100 • phase fault, fault asymmetry and power supply LED • phase fault, fault asymmetry and power supply LED • 103 • fault and power supply LED • display • display Type KFT 100 KFT 200 Type AAD1 Characteristics • FTC short circuid detection • FTC short circuid detection • FTC short circuid detection • Trease by supply interruption • temperature monitor • FTC short circuid detection • FTC short circuid detection • FTC short circuid detection • Trease by supply interruption • single phase • direct measurement • class 1 precision • FTC short circuid detection • Trease by supply interruption • single phase • direct measurement • class 1 precision • Short	Setting	U _{max} 1.2 U _N (fix) KFE 101/301: U _{min} 0.8 U _N : U _{max} 1.2 U _N	 under voltage phase order (fixed) 	 U_{max} 1.15 U_N (fix) memory option 	 memory option KFE 102: U_{min} 15 V;
BA. 250 VAC Supply voltage KFE 100/101: 230 VAC; 50/60 Hz; P≤ 4 VA 400 VAC; 50/60 Hz; P ≤ 4 VA 400 VAC; 50/60 Hz; P ≤ 4 VA 230 VAC; 50/60 Hz; P ≤ 4 VA Function control = fault and power supply LED = fault and power supply LED = fault and power supply LED = display Page 100 103 106 109 Control Relays Counter Energy Meter Thermistor Important control = fault and power supply LED = fault and power supply LED Vpe KFT 100 KFT 200 Type AAD1 Characteristics = temperature monitor = PTC broken wire detection = PTC broken wire	Time range	5 or 10 min, selection by	300 ms (fixed)	• 0.1 to 12 sec	
Freeson: 400 VAC: 50/60 Hz: P ≤ 4 VA Function control • fault and power supply LED • fault and power supply LED • fault and power supply fault fault fault and power supply fault fault fault fault and power supply fault fault fault f	Outputs				1 relay (change-over contact); 8 A, 250 VAC
and power supply LED Page 100 103 106 109 Control Relays Counter Thermistor Energy Meter Image: Supply colspan="2">Supply colspan="2">Counter Counter Type KFT 100 KFT 200 Type AAD1 Characteristics single phase clinect incluit detection PTC broken wire detection PTC broken wire detection PTC broken wire detection Characteristics single phase Immensions (mm) ISZ 5 x 75 x 96 Surface mounting Surface	Supply voltage	KFE 301: 400 VAC; 50/60 Hz;	400 VAC; 50/60 Hz; P \leq 4 VA	400 VAC; 50/60 Hz; P \leq 4 VA	230 VAC; 50/60 Hz; P \leq 4 VA
Control Relays Counter Thermistor Energy Meter Type KFT 100 KFT 200 Type Characteristics • temperature monitor • PTC short circuit detection • PTC brock mive detection • reset by supply interruption • temperature monitor • PTC short circuit detection • PTC short circuit detection • reset by supply interruption • single phase • direct measurement • class 1 precision • PTC short circuit detection • PTC short circuit detection • reset by supply interruption • single phase • direct measurement • class 1 precision • PTC short circuit detection • PTC short circuit detection • reset by supply interruption • single phase • direct measurement • class 1 precision • PTB approval • Sol-VOB- output 1000 imp/k • nominal current I _N = 5 A. I _{max} 25 A according EN6102 • suppon DIN rail 35 mm Dimensions (mm) 22.5 x 75 x 96 Mounting • snap on DIN rail 35 mm Setting automatic reset Dimensions (mm) 17.5 x 85 x 59 Outputs 1 relay (NO contact) 10 A. 250 VAC 10 A. 250 VAC Dimensions (mm) 17.5 x 85 x 59 Supply voltage 230 VAC; 50/60 Hz; P ≤ 3 VA 230 VAC; 50/60 Hz; P ≤ 3 VA Supply voltage 230 VAC; 50/60 Hz; P ≤ 8 VA Function control red LED for fault green LED for power supply red LED for fault green LED for power supply Function control flashing red LED Supply voltage 230 VAC; 50/60 Hz; P ≤ 8 VA	Function control	fault and power supply LED		fault and power supply LED	display
Thermistor Energy Meter Type KFT 100 KFT 200 Type AAD1 Characteristics • emperature monitor • temperature monitor • isingle phase - direct measurement - class 1 precision PTC short circuit detection • TC short circuit detection • Surface mounting • s	Page	100	103	106	109
Type KFT 100 KFT 200 Characteristics • temperature monitor • PTC short circuit detection • PTC short circuit detection • PTC broken wire detection • reset by supply interruption • single phase • direct measurement • class 1 precision • DTB approval • Sufface mounting • snap on DIN rail 35 mm Mounting • surface mounting • snap on DIN rail 35 mm • surface mounting • snap on DIN rail 35 mm Dimensions (mm) 22.5 x 75 x 96 • surface mounting • snap on DIN rail 35 mm Setting automatic reset Dimensions (mm) 17.5 x 85 x 59 Outputs 1 relay (NO contact) 10 A, 250 VAC 1 relay (change-over contact) 10 A, 250 VAC Display • mechanical. 4 mm high dig e decimal places in red Supply voltage 230 VAC; 50/60 Hz; P ≤ 3 VA red LED for fault green LED for power supply Supply voltage Function control 230 VAC; 50/60 Hz; P ≤ 8 VA Page 112 112 Table Table		Control Relays			Counter
Characteristics • temperature monitor • temperature monitor • temperature monitor • PTC short circuit detection • PTC short circuit detection • PTC short circuit detection • single phase • PTC broken wire detection • PTC broken wire detection • PTC broken wire detection • PTB approval • surface mounting • surface mounting • surface mounting • surface mounting • snap on DIN rail 35 mm • surface mounting • surface mounting • snap on DIN rail 35 mm • surface mounting • surface mounting • snap on DIN rail 35 mm • surface mounting • surface mounting • surface mounting • surface mounting • surface mounting • surface mounting • surface mounting • surface mounting • snap on DIN rail 35 mm • surface mounting • surface mounting • surface mounting • surface mounting • surface mounting • surface mounting • surface mounting • surface mounting • surface mounting • surface mounting • surface mounting • surface mounting • surface mounting • surface mounting • surface mounting • surface mounting • surface		1771 A. 1971			
PTC short circuit detection • PTC broken wire detection • reset by supply interruption• memory fonction • PTC short circuit detection • PTC short circuit detection • PTC broken wire detection • PTC broken wire detection • reset by supply interruption• direct measurement • class 1 precision • PTB approval • Supply out 1000 imp/k • nominal current $I_N = 5 A$, $I_{max} 25 A$ according EN6103 • surface mounting • surface mounting • snap on DIN rail 35 mm• direct measurement • class 1 precision • PTB approval • Supply interruption • surface mounting • surface mounting • snap on DIN rail 35 mmDimensions (mm)22.5 x 75 x 96 automatic reset22.5 x 75 x 96 22.5 x 75 x 96• surface mounting • surface mounting • snap on DIN rail 35 mmDimensions (mm)22.5 x 75 x 96 automatic resetDimensions (mm)17.5 x 85 x 59 999.999.9Outputs1 relay (NO contact) 10 A, 250 VAC1 relay (change-over contact) 10 A, 250 VACCounting capacity 999.999.9Supply voltage230 VAC; 50/60 Hz; P ≤ 3 VA green LED for fault green LED for power supplySupply voltage green LED for power supplySupply voltage Function controlSupply voltage function controlPage112112112	_	***	KET 200	_	đ
■ snap on DIN rail 35 mm■ snap on DIN rail 35 mm■ snap on DIN rail 35 mmDimensions (mm)22.5 x 75 x 9622.5 x 75 x 96■ surface mounting ■ snap on DIN rail 35 mmSettingautomatic resetmanual or automatic resetDimensions (mm)17.5 x 85 x 59Outputs1 relay (NO contact) 10 A, 250 VAC1 relay (change-over contact) 10 A, 250 VACDimensions (mm)17.5 x 85 x 59Supply voltage230 VAC: 50/60 Hz; P ≤ 3 VA230 VAC: 50/60 Hz; P ≤ 3 VACounting capacity Display999.999.9Function controlred LED for fault green LED for power supplyred LED for fault green LED for power supplySupply voltage green LED for power supplySupply voltage Function controlSupply voltage Function controlPage112112112112	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	KFT 100		Туре	AAD1
Dimensions (mm)22.5 x 75 x 9622.5 x 75 x 96= snap on DIN rail 35 mmSettingautomatic resetmanual or automatic resetDimensions (mm)17.5 x 85 x 59Outputs1 relay (NO contact) 10 A, 250 VAC1 relay (change-over contact) 10 A, 250 VACCounting capacity999.999.9Supply voltage230 VAC; 50/60 Hz; P ≤ 3 VA230 VAC; 50/60 Hz; P ≤ 3 VADisplaymechanical, 4 mm high dig decimal places in redFunction controlred LED for fault green LED for power supplyred LED for fault green LED for power supplySupply voltage green LED for power supplySupply voltage Function controlSupply voltage Function controlSupply voltage flashing red LED	Characteristics	KFT 100 • temperature monitor • PTC short circuit detection • PTC broken wire detection • reset by supply interruption	 temperature monitor memory fonction PTC short circuit detection PTC broken wire detection reset by supply interruption 		AAD1 • single phase • direct measurement • class 1 precision • PTB approval • S0+/S0- output 1000 imp/kWh • nominal current I _N = 5 A,
Setting Outputsautomatic resetDimensions (mm)17.5 x 85 x 59Outputs1 relay (NO contact) 10 A, 250 VAC1 relay (change-over contact) 10 A, 250 VACCounting capacitySupply voltage230 VAC; 50/60 Hz; P ≤ 3 VA230 VAC; 50/60 Hz; P ≤ 3 VADisplayFunction control Pagered LED for fault green LED for power supplyred LED for fault green LED for power supplySupply voltage Function controlSupply voltage Function controlSupply voltage Function control	Characteristics	KFT 100 • temperature monitor • PTC short circuit detection • PTC broken wire detection • PTC broken wire detection • reset by supply interruption • surface mounting • snap on DIN rail 35 mm	 temperature monitor memory fonction PTC short circuit detection PTC broken wire detection reset by supply interruption surface mounting snap on DIN rail 35 mm 	- Characteristics	AAD1 • single phase • direct measurement • class 1 precision • PTB approval • S0+/S0- output 1000 imp/kWh • nominal current I _N = 5 A, I _{max} 25 A according EN61036
In A, 250 VAC In A, 250 VAC Supply voltage 230 VAC: 50/60 Hz; P ≤ 3 VA Supply voltage 230 VAC: 50/60 Hz; P ≤ 3 VA Function control red LED for fault green LED for power supply Page 112	Characteristics Mounting	KFT 100 • temperature monitor • PTC short circuit detection • PTC broken wire detection • PTC broken wire detection • reset by supply interruption • surface mounting • snap on DIN rail 35 mm 22.5 x 75 x 96	 temperature monitor memory fonction PTC short circuit detection PTC broken wire detection reset by supply interruption surface mounting snap on DIN rail 35 mm 22.5 x 75 x 96 	Characteristics	AAD1 • single phase • direct measurement • class 1 precision • PTB approval • S0+/S0- output 1000 imp/kWh • nominal current I _N = 5 A, I _{max} 25 A according EN61036 • surface mounting • snap on DIN rail 35 mm
Supply voltage Display mechanical, 4 mm high dig Supply voltage 230 VAC; 50/60 Hz; P ≤ 3 VA 230 VAC; 50/60 Hz; P ≤ 3 VA Function control red LED for fault green LED for fault green LED for power supply Supply voltage Page 112 112	Characteristics Mounting Dimensions (mm)	KFT 100 • temperature monitor • PTC short circuit detection • PTC broken wire detection • PTC broken wire detection • reset by supply interruption • surface mounting • snap on DIN rail 35 mm 22.5 x 75 x 96	 temperature monitor memory fonction PTC short circuit detection PTC broken wire detection reset by supply interruption surface mounting snap on DIN rail 35 mm 22.5 x 75 x 96 	Characteristics	AAD1 • single phase • direct measurement • class 1 precision • PTB approval • S0+/S0- output 1000 imp/kWh • nominal current I _N = 5 A, I _{max} 25 A according EN61036 • surface mounting • snap on DIN rail 35 mm
green LED for power supply green LED for power supply Page 112	Characteristics Mounting Dimensions (mm) Setting	KFT 100 • temperature monitor • PTC short circuit detection • PTC broken wire detection • reset by supply interruption • surface mounting • snap on DIN rail 35 mm 22.5 x 75 x 96 automatic reset 1 relay (NO contact)	 temperature monitor memory fonction PTC short circuit detection PTC broken wire detection reset by supply interruption surface mounting snap on DIN rail 35 mm 22.5 x 75 x 96 manual or automatic reset 1 relay (change-over contact) 	Characteristics Characteristics Mounting Dimensions (mm)	AAD1 • single phase • direct measurement • class 1 precision • PTB approval • S0+/S0- output 1000 imp/kWh • nominal current I _N = 5 A, I _{max} 25 A according EN61036 • surface mounting • snap on DIN rail 35 mm 17.5 x 85 x 59
Page 112 112 Function control flashing red LED	Characteristics Mounting Dimensions (mm) Setting Outputs	 KFT 100 temperature monitor PTC short circuit detection PTC broken wire detection PTC broken wire detection reset by supply interruption surface mounting snap on DIN rail 35 mm 22.5 x 75 x 96 automatic reset 1 relay (NO contact) 10 A, 250 VAC 	 temperature monitor memory fonction PTC short circuit detection PTC broken wire detection reset by supply interruption surface mounting snap on DIN rail 35 mm 22.5 x 75 x 96 manual or automatic reset 1 relay (change-over contact) 10 A, 250 VAC 	Characteristics Characteristics Mounting Dimensions (mm) Counting capacity	AAD1 • single phase • direct measurement • class 1 precision • PTB approval • S0+/S0- output 1000 imp/kWh • nominal current I _N = 5 A, I _{max} 25 A according EN61036 • surface mounting • snap on DIN rail 35 mm 17.5 x 85 x 59 999.999.9 • mechanical, 4 mm high digit
	Characteristics Mounting Dimensions (mm) Setting Outputs Supply voltage	KFT 100• temperature monitor• PTC short circuit detection• PTC broken wire detection• PTC broken wire detection• reset by supply interruption• surface mounting• snap on DIN rail 35 mm22.5 x 75 x 96automatic reset1 relay (NO contact)10 A, 250 VAC230 VAC; 50/60 Hz; $P \le 3$ VAred LED for fault	• temperature monitor • memory fonction • PTC short circuit detection • PTC broken wire detection • reset by supply interruption • surface mounting • snap on DIN rail 35 mm 22.5 x 75 x 96 manual or automatic reset 1 relay (change-over contact) 10 A, 250 VAC 230 VAC; 50/60 Hz; $P \le 3$ VA red LED for fault	Characteristics Characteristics Mounting Mounting Dimensions (mm) Counting capacity Display	AAD1 • single phase • direct measurement • class 1 precision • PTB approval • S0+/SO- output 1000 imp/kWh • nominal current I _N = 5 A, I _{max} 25 A according EN61036 • surface mounting • snap on DIN rail 35 mm 17.5 x 85 x 59 999.999.9 • mechanical, 4 mm high digit • decimal places in red
	Characteristics Mounting Dimensions (mm) Setting Outputs Supply voltage Function control	KFT 100• temperature monitor• PTC short circuit detection• PTC broken wire detection• reset by supply interruption• surface mounting• snap on DIN rail 35 mm22.5 x 75 x 96automatic reset1 relay (N0 contact)10 A, 250 VAC230 VAC; 50/60 Hz; $P \le 3$ VAred LED for faultgreen LED for power supply	 temperature monitor memory fonction PTC short circuit detection PTC broken wire detection reset by supply interruption surface mounting snap on DIN rail 35 mm 22.5 x 75 x 96 manual or automatic reset 1 relay (change-over contact) 10 A, 250 VAC 230 VAC; 50/60 Hz; P ≤ 3 VA red LED for fault green LED for power supply 	Characteristics Characteristics Mounting Dimensions (mm) Counting capacity Display Supply voltage	AAD1 • single phase • direct measurement • class 1 precision • PTB approval • S0+/S0- output 1000 imp/kWh • nominal current $I_N = 5 A$, $I_{max} 25 A$ according EN61036 • surface mounting • snap on DIN rail 35 mm 17.5 x 85 x 59 999.999.9 • mechanical, 4 mm high digit • decimal places in red 230 VAC, 50/60 Hz; P \leq 8 VA