



http://waterheatertimer.org/How-to-troubleshoot-Intermatic-timer.html

http://waterheatertimer.org/How-to-wire-T104-Intermatic-timer.html

## **Parts/Accessories Chart**

#### For a complete and current parts/accessories chart please visit www.intermatic.com

Model	Description			
	Electronic Timers			
10100040	Battery holder for ET100			
101ET945A	Discontinued – use part number: 10100040			
133ET1189A Power Board only for ET70115C Series				
133ET1191A Power Board only for ET70215C Series				
133ET1192A Power Board only for ET70415CR Series				
133ET1424A	Logic Module only for ET70115C Series			
133ET1425A	Logic Module only for ET70215C Series			
133ET1426A	Logic Module only for ET70415CR Series			
133ET1427A	Logic Module only for ET70815CR Series			
133ET1428A	Logic Module only for ET71615CR Series			
I56ET3905A	(4) "AA" NiCad Rechargeable Bat. for ET700C & ET800CR Series			
156ET4159A	(2) Lithium Coin Cells for ET70000C / ET70000CR Series			
156ET9402A	8 Circuit Remote Override for ET70815CR & ET70815CR24 NEMA 3R			
156ET9403A	16 Circuit Remote Override for ET71615CR & ET71615CR24 NEMA 3R			
156ET9748A	Voltage and Momentary Output Selector Jumpers for ET Series and CT1000			
188ET1045A	Power Board only for ET70815CR Series			
188ET1049A	Power Board only for ET71615CR Series			
22T338GR Snap-In Bracket for ET Series, T100, T170, T180, T1900, T2000 C8800 Series				
22T535GR	DIN Rail Bracket for ET Series, T100, T170, T180, T1900, T2000 & C8800 Series			
CA8750 CA USB Stick w/Base				
CA8750SW CA USB Stick w/Base & Pro CD				
ET7232M	Override Accessory for ET70115C & ET70215C Series Outdoor or Flush Mount			
ET7232M1	Override Accessory for ET70115C & ET70215C Series Surface Mount			
	Enclosures			
6ET1398GA	Flush Mount Cover with Lock for ET70415CR & ET70415CR24			
24EB5495	Replacement Plate Only for E1120, KM2ST-1G & KM2SW-1G			
24EB5497	Replacement Plate Only for E1220, KM2ST-2G & KM2SW-2G			
24EB5524	Replacement Plate Only for E1221, KM2ST-2D & KM2SW-2D			
24EB5526	Replacement Plate only for E1222, KM2STST-2G & KM2SWSW-2G			
	Hour Meters			
G-55U	Gasket for all FWZ55 flush mount models			
G-72U	Gasket for all FWZ72 flush mount models			
	Mechanical Timers			
107T119	Tripper (silver) for T8800 & R8800 Series			
107T73	Day Wheel Pin for T8800 & R8800 Series			
119T86A	Transformer for T8845PV			
124T1948	Insulator for Single Pole Time Switches			
124T1952	Insulator for Double Pole Time Switches			
124T2097	Plastic Insulator for T8800 & R8800 Series			
	Insulator Old Style Replaces 124T1607			

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Model	Description				
131T68GA	125 V, 60 Hz Motor & Carryover T7400BC & T7800BC Series				
133T698A	Replacement Snap Switch for T1970 Series				
133T1115A	Toggle Switch for T8800 & R8800 Series				
133T700A	Micro Switch for T8800 & R8800 Series				
133T701A	Replacement Snap Switch for T1900 & T2000 Series				
133T773A	Replacement Snap Switch for C8800 Series				
156EB1945A	Trippers 2 Sets (ON / OFF) for E1020, E1022, EB11, EB11R & WH21				
156T1948A	Trippers One Set (ON/OFF/ON Cutout) for T170, P171, T1400 & T1800 Series				
156T1949A	Tripper Variable (10 to 60 minute) for Model T185				
156T1950A	Trippers (12 ON or OFF) for T1900, T2000, C8800, R8800 & T8800 Series				
156T1954A	14 Pins for R8800, T8800 Series				
156T1957A	Skipper Screws (3 per package)				
156T1978A	Trippers (1 ON / 1 OFF) for T100, T170, T7000, &				
1001177074	WH40 (Same as 156T3492A)				
156T2548A	Trippers 7 Sets (ON / OFF) for T7400 & T7800 Series				
156T3085A	3 Skipper Screws for T170, P171, T1400, T1800 and WH Series				
156T3230A	Trippers (1 ON / 1 OFF / 1 On Cutout) for WH Series				
FM-FU	FM1 Flush Mount Housing Kit				
FM-SU	FM1 Surface/DIN Rail Kit				
WG1381-10	Motor - Boxed, 125 V, 50 Hz for T170CR				
WG1380-11	Motor - Boxed, 125 V, 60 Hz for T1400BCR				
WG1383-11	Motor - Boxed, 208/277 V, 60 Hz for T1800BCR				
WG1570-10D	Motor - Boxed, 125 V, 60 Hz for T101, T103 & T105				
WG1571-10D	Motor - Boxed, 125 V, 50 Hz for T101, T102, T103, T104, T105, T100R201 & WH10				
WG1573-10D	Motor - Boxed, 208/277 V, 60 Hz for T102, T104, WH10 & WH30				
WG1574-10D	Motor - Boxed, 208/277 V, 50 Hz for T100R301				
WG1576-10D	Motor - Boxed, 480 V, 60 Hz for WH40, WH70 & WH80				
WG1600-11	Motor - Boxed, 125 V, 60 Hz for T7400B & T7800B				
WG1603-11D	Motor - Boxed, 208/277 V, 60 Hz for T7400B & T7800B				
WG190-15D	Motor - Boxed, 125 V. 60 Hz				
WG230-13D	Motor - Boxed, 125 V, 60 Hz for E1000				
WG233-18	Motor - Boxed, 208/277 V, 60 Hz for E1000				
WG430-10D	Motor - Boxed. 125 V, 60 Hz for T1400BR				
WG430-20D	Motor - Boxed, 125 V, 60 Hz for T1800BR				
WG433-20D	Motor - Boxed, 208/277 V, 60 Hz for T180 & T500				
WG436-20	Motor - Boxed, 480 V, 60 Hz for WH10 & WH30				
WG630D	Motor - Boxed, 125 V, 60 Hz				
WG720-10D	Motor - Boxed, 125 V, 60 Hz for T2000 Series				
WG723-10D	Motor - Boxed, 208/277 V, 60 Hz for T2000 Series				
WG730-14D	Motor - Boxed, 125 V, 60 Hz for R8800, T1900, T1970, T8800 Series				
WG733-14D	Motor - Boxed, 208/277 V, 60 Hz for R8800, T1900, T1970, T8800 Series				
WG736-14D	Motor - Boxed, 480 V, 60 Hz for R8800, T1975E & T1976E Series				
WG750-10	Motor - Boxed, 125 V, 60 Hz for C8845				
WG760-10	Motor - Boxed, 125 V, 60 Hz for C8825 (timer obsolete)				

## **Parts/Accessories Chart**

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Model	Description	Model	Description	
WG770-10	Motor - Boxed, 125 V, 60 Hz for C8866	DA400	100 Watt 12 V Transformer Assembly Kit for PE40000 Series	
WG770-10D	Motor - Boxed, 125 V, 60 Hz for C8865	PA123	I-Wave Control System	
WG7773-10	Motor - Boxed, 208/277 V, 60 Hz for C8866	PA124	300 Watt 12 V Transformer Assembly Kit for PE40000 Series	
WG7773-10D	Motor - Boxed, 208/277 V, 60 Hz for C8865	FA124	I-Wave Control System	
WG780-12D	Motor - Boxed, 125 V, 60 Hz for C8835	PA600	Pump Shut-Off Switch	
WG790-11D	Motor - Boxed, 125 V, 60 Hz for C8815	PB913N66	24 Hr. Panel Mount Timer, 120VAC for PF & RC Series Products	
	Pool & Spa	PE650	Wireless I-Wave Panel Mount Receiver for P1353ME and/or	
	Electronic 24 Hr 120 V, 50/60 Hz Replacement Clock Kit for	1 2000	P4243ME Mechs (PE950 transmitter req.)	
PB313EK	Mechanical PB Clock	PE653	Wireless 5 Circuit Pool/Spa/Variable Speed Receiver (MultiWave)	
DD244EK	Electronic 24 Hr 240 V, 50/60 Hz Replacement Clock Kit for	PE953	Wireless Hand Held Transmitter for all Wave Series Products	
PB314EK	Mechanical PB Clock	PJB2175	Plastic Pool/Spa Light Junction Box - Two Light Capacity w/	
119T267	Transformer – 100 Watt		Conduit sizes from .5" to 1"	
119T340	Transformer – 300 Watt	PJB4175	Plastic Pool/Spa Light Junction Box - Four Light Capacity	
124T2530A	8-Pole Buss Bar Assembly		w/Conduit sizes from .5" to 1"	
124TP2608A	4-Pole Buss Bar Assembly	RC117	Air Tubing - 75 Ft. Long	
133PE1484A	Three Button Wired Remote Control for P1353ME Digital Control	RC122B	Air Tubing - 25 Ft. Long w/RC4G Button	
133RC1144	Pressure Sensing Momentary Air Switch 3 Amp	RC127B	Air Tubing - 75 Ft. Long w/RC4G Air Button	
143PS307	DPST Relay w/24 VDC Coil	RC150	Air Tubing - 500 Ft. Long	
143RC126	Bi-Stable Relay SPDT, 1 H.P120 V, 2 H.P 240 V, 120 V Coil	RC4F	Air Button for Fiberglass Construction - 100 Ft. Range	
143RC140	Four Function Stepper Relay	RC510	Tube Coupler - 10 Units	
143T135	Double Pole Single Throw Relay w/240 V Coil	RC6F	Air Button for Gunite/Fiberglass Construction - 150 Ft. Range	
143T136	Double Pole Single Throw Relay w/120 V Coil		Spring Wound Timers	
143T145A	Double Pole Single Throw Relay, 24 VDC Coil w/leads	146MT573	Small Ivory Knob	
45/04407404	1/2" Nonmetallic Hub Kit For Direct Connection To Underwater	146MT574	Small White Knob	
156PA13713A	Pool Lights	146MT575	Small Almond Knob	
156PA13714A	3/4" Nonmetallic Hub Kit For Direct Connection To Underwater	146MT577	Large Stonedust (gray) Knob	
1301 A137 14A	Pool Lights	146MT579	Large Black Knob	
156PA13715A	1" Nonmetallic Hub Kit For Direct Connection To Underwater Pool	AG1BRKT	L Bracket for AG Series	
	Lights	107TN221	Red trippers for TN311C	
156PA14336A	1/2" Metallic Hub Kit For Direct Connection To Underwater Pool	107TN222	Turquois trippers for TN111RM40	
	Lights	107SB189	Red trippers for HB plug-ins	
156PB10398A	(2) ON (2) OFF Trippers for P1000 Series Timers	107SB192	Black trippers for HB plug-ins	
156T4042A	Heater Control (Fireman) Switch Kit	176ET10A	Surge Suppressor - For Switching Inductive 240 V Nominal Loads	
178PA28A	Freeze Protection Thermostat for P1353ME Digital Control	176ET22A	Surge Suppressor - For Switching Inductive 277 V Nominal Loads	
178T24	Freeze Protection Thermostat	176ET8A	Surge Suppressor - For Switching Inductive 24 V Nominal Loads	
21T156A	(4) Stand-off for Mounting Wiring Devices	176ET9A	Surge Suppressor - For Switching Inductive 120 V Nominal Loads	
22T904A	Hold-Down Kit For Circuit Breakers	107SB234	OFF Trippers for HB35R	
24T5265A	Snap-in Bracket for (2) Wiring Devices	107SB216	ON Trippers for HB31R & P1121	
PA102	Replacement Thermostat Relay Assembly for PF1202T & PF1222TB	107SB217	OFF Trippers for HB31R & P1121	
PA108	Repair Kit for all PAV Series Water Valves (includes 5 cover rings &	107TN222	ON Trippers for TN, PB, TB Series, P1101, P1131, P1161, P1261,	
	10 shaft rings)	107111222	AL300TPWS, AL600TPWS & AL900TPWS	
PA114	Plastic Pool/Spa Light Junction Box Mounting Bracket	107TN221	OFF Trippers for TN, PB, TB Series, P1101, P1131, P1161, P1261,	
PA115	25 Off Trippers Only and Screws		AL300TPWS, AL600TPWS & AL900TPWS	
PA117	Replacement Latch Kit		ON Trippers for HB11, HB35R, HB112C, HB113C, HB114C,	
PA118	Antenna only for PE650 Transceiver	107SB189	AL300RTW, AL600TW, AL900TW, AL60TW & ML Series	
PA120	Double Pole Single Throw Relay w/24 VAC Coil		Transformer Timers	
PA121	35 Foot Antenna Extension Cable Assembly for PE650 Transceiver	107SB192	OFF Trippers for HB11, HB112C, HB113C, HB114C, AL300RTW, AL600TW, AL900TW, AL60TW & ML Series Transformer Timers	
PA122	Water Temperature Sensor for PE650 Transceiver (I-Wave)			



# **Bulb Replacement Chart**

HID Wall Packs & Flood Lights									
Wall Pack	Flood	Cut-Off Wall Pack	Full Cut-Off Wall Pack	Lamp Туре	Watts	Base	Туре	Lumens	Lamp Hours
WL050MH	FL050MH	_	_	Metal Halide	50	Medium	ED17	"4,100"	"10,000"
WL070MH	FL070MH	_	_	Metal Halide	70	Medium	ED17	"6,200"	"16,000"
WL100MH	FL100MH	WLC100MH	_	Metal Halide	100	Medium	ED17	"9,500"	"16,000"
WL150MH	FL150MH	WLC150MH	WLFC150MH	Metal Halide	150	Medium	ED17	"12,500"	"10,000"
	FL175MH	WLC175MH	WLFC175MH	Metal Halide	175	Medium	ED17	"13,500"	"10,000"
WL250MH	FL250MH	_	_	Metal Halide	250	Mogul	ED28	"25,000"	"10,000"
WL400MH	FL400MH	WLC400MH	_	Metal Halide	400	Mogul	ED37	"36,000"	"20,000"
WL035HPS	FL035HPS	_	_	High Pressure Sodium	35	Medium	ED17	"2,250"	"24,000"
WL050HPS	FL050HPS	_	_	High Pressure Sodium	50	Medium	ED17	"4,000"	"24,000"
WL070HPS	FL070HPS	WLC070HPS	_	High Pressure Sodium	70	Medium	ED17	"6,300"	"24,000"
WL100HPS	FL100HPS	WLC100HPS	_	High Pressure Sodium	100	Medium	ED17	"9,500"	"24,000"
WL150HPS	FL150HPS	WLC150HPS	WLFC150HPS	High Pressure Sodium	150	Medium	ED17	"16,000"	"24,000"
WL250HPS	FL250HPS	WLC250HPS	_	High Pressure Sodium	250	Mogul	ED18	"26,000"	"24,000"
WL400HPS	FL400HPS	WLC400HPS	_	High Pressure Sodium	400	Mogul	ED18	"50,000"	"24,000"
		Н	ID Quar	tz Flood	l Lig	hts			
_	FL150Q	_	_	Quartz	150	Double Ended	Т3	"2,400"	"2,000"
_	FL300Q	_	_	Quartz	300	Double Ended	Т3	"5,200"	"2,000"
_	FL500Q	_	_	Quartz	500	Double Ended	Т3	"9,500"	"2,000"
		HI	D Dusk-	to-Dawı	ı Lig	hts			
_	_	_	DD100MH	Metal Halide	100	Medium	ED28	"8,500"	10,000
_	_	_	DD150HPS	High Pressure Sodium	150	Medium	ED17	"16,000"	"24,000"
	HID Wall Pack Lights with Photocell								
WL070HPSPC	_	_	_	High Pressure Sodium	70	Medium	ED17	"6,300"	"24,000"
	HID Canopy Lights								
_	_	_	CP150MH	Metal Halide	150	Medium	ED17	"12,500"	"10,000"
_	_	_	CP150HPS	High Pressure Sodium	150	Medium	ED17	"16,000"	"24,000"



## **IP Classifications**

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Ingress Protection class of enclosures is according to IEC 529 given in form of IP classification, a two digit coding which is shown below

bel	ow				
First Digit			Second Digit		
Protection against contact and ingress of solid objects		Protection against ingress of water			
0	No special protection	0	No special protection		
1	Protected against ingress solid objects with a diameter of more than 50 mm. No protection against deliberate access, e.g. with a hand, but large surfaces of the body are prevented from approach	1	Protection against dripping water falling vertically. No harmful effect must be produced (vertically falling drops)		
2	Protected against penetration by solid objects with a diameter of more than 12 mm. Fingers or similar objects prevented from approach	2	Protection against dripping water falling vertically. There must be no harmful effect when the equipment (enclosure) is tilted at an angle up to 15° from its normal position (drops falling at an angle)		
3	Protected against ingress of solid objects with a diameter of more than 2.5 mm. Tools, wires, etc. with a thickness of more than 2.5 mm are prevented from approach	3	Protection against water falling at any angle up to 60° from the vertical. There must be no harmful effect (spray water)		
4	Protected against ingress of solid objects with a diameter of more than 1 mm. Tools, wires, etc. with a thickness of more than 1 mm are prevented from approach	4	Protection against water splashed against the equipment (enclosure) from any direction. There must be no harmful effect (splashing water)		
5	Protected against harmful dust deposits. Ingress of dust is not totally prevented but the dust must not enter in sufficient quantity to interface with satisfactory operation of the equipment. Complete protection against contact	5	Protection from water projected from a nozzle against the equipment (enclosure) from any direction. There must be no harmful effect (water jet)		
6	Protection against ingress of dust (dust tight). Complete protection against contact	6	Protection against heavy seas or powerful water jets.  Water must not enter the equipment (enclosure) in harmful quantities (splashing over)		
		7	Protection against water when the equipment (enclosure) is immersed in water under defined conditions of pressure and time. Water must not enter in harmful quantities (immersion)		
		8	The equipment (enclosure) is suitable for continuous submersion in water under conditions which must be specified by the manufacturer (submersion)		





# **Obsolete/Substitution Chart**

### For a complete and current Obsolete/Subtitution list please visit www.intermatic.com

Old Model	Substitution		
AG2083C	AG2083C3		
AG2401	AG24013		
AG2401C	AG2401C3		
AG2401C-IND	AG2401C3		
AG2403C	AG2403C3		
AG4801	AG48013		
AG4803C	AG4803C3		
AG6503	AG65033		
AG6503C	AG6503C3		
AG6503C-IND	AG6503C3		
AG6503C-INDL	AG6503L3		
AG6503L	AG6503L3		
CP924	DT620CL		
E1120	KM2ST-1G		
E1220	KM2ST-1G		
ET100C	ET1105C		
ET101C	ET1105C		
ET102C	ET1105C		
ET103C	ET1125C		
ET104C	ET1125C		
ET104CP	ET1125CPD82		
ET105C	ET1115C		
ET171C	ET1705C		
ET171CR	ET1705CR		
ET173C	ET1725C		
ET174C	ET1725C		
ET175C	ET1715C		
ET279C	ET1725C		
ET616	EI400C		
FL175MH	FL150MH		
IG11246	IG112463		

Old Model	Substitution		
IG11266	IG112663		
IG11266BLK10	IG112663BLK10		
IG1240RC	IG1240RC3		
IG1300-2T-1C	IG1300-2T-1C3		
IG1300-4T-2C	IG1300-4T-2C3		
IG2012B15	IG2012B153		
IG20615	IG206153		
IG2066	IG20663		
IG2086	IG20863		
IG20B12	IG20B123		
IG3240RC	IG3240RC3		
K4022	K4023C		
K4033	K4023C		
K4121M	K4136M		
K4122	K4123C		
K4124	K4123C		
K4133	K4123C		
K4222	K4223C		
K4224	K4223C		
K4233	K4223C		
P1102FE	P1103FE		
P1102ME	P1103FE		
P1103ME	P1103FE		
P1161	P1261P		
P1203FR	P1103FE, RC613 &		
1 12001 K	RC939		
P1261PE	P1261P		
P7101ME	P7103ME		
P7102ME	P7103ME		
PB912M10R	PB913N		
PE153W	PE153 & 133PE1484A		

Old Model	Substitution			
PE153WF	PE153, 133PE1484A, 178PA28A			
PE950	PE953			
RC2103E	RC2103S			
RC2112S	RC2103S			
RC2123MT	RC2123PT			
RC2123S	RC2123PT			
RC2133M	RC2123PT			
RC2133P	RC2123PT			
RC2163E	RC2163BE			
RC2163FE	RC2163BFE			
RC2233P	RC2103S			
RC2263BE	RC2163BE & RC2103S			
RC2263E	RC2163BE & RC2103S			
RC2343M	RC2343PT			
RC2343MT	RC2343PT			
RC2343P	RC2343PT			
RC2403RT	RC2343PT & RC2103S			
RC4F	RC4G			
T25	TN311C, TN111RM40			
T35	TN311C			
T240	HB114C			
T40004R5	T40000R4			
WL175MH	WL150MH			
WP104	WP107			
WP105	WP107			
WP1110WC	WP1110C, WP100WC			



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