

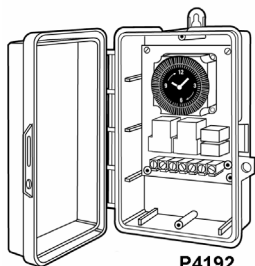
TIMERS

GRASSLIN DEFROST TIMER

<http://waterheatertimer.org/Intermatic-Defrost-timers-and-manuals.html>

GRASSLIN DTMV SERIES

SPECIFIERS GUIDE



P4192



Furnish and install a Grasslin DTMV40 defrost control which is field adjustable for 120V or 240V operation and shall have defrost initiation times settable to the quarter hour via captive trippers at 15 minute intervals. The defrost timer shall be housed in a NEMA 3R indoor/outdoor plastic enclosure. The relay output will be rated for 40A Resistive, 2HP @ 250VAC. Defrost termination to be by time (and by a remote temperature or pressure switch).

SPECIFICATIONS

Switch Rating: 40A Resistive @ 120VAC, 208~240VAC 2HP @ 208~240VAC;
 1HP @ 120VAC 16FLA, 90LRA @ 120VAC 12FLA, 52LRA @ 240VAC
 "F" Terminal: 30A Resistive @ 120~240VAC 1HP @ 120VAC; 2HP @ 208~240VAC
 Wiring Connections: Screw box lug terminals accommodate up to four #8 AWG wires.
 Environmental Ratings: Operating Temperature Range: -40°F to 131°F (-40°C to 55°C)
 Operating Humidity: 0 to 95% non-condensing
 Dimensions: 8.795" x 6.631" x 2.935" (H x W x D) Shipping Weight: 2 lbs.

Ordering Data

Time Initiated, Remote Temperature, Pressure, or Time Terminated

PART NO	VOLTAGE	MOUNTING	TIMER	BATTERY BACK-UP Duration	DEFROST		
					FREQUENCY NO/DAY	DURATION	MINIMUM DURATION INTERVAL
DTMV40	120V, 208/240V, 60Hz	NEMA 3R Outdoor Enclosure	Synchronous	N/A	1 to 24	15-180 min.	15 minutes
DTMV40-M	120V, 208/240V, 60Hz	Mechanism Only	Synchronous	N/A	1 to 24	15-180 min.	15 minutes
DTMV40-B20	120V, 208/240V, 60Hz	Bracket Mount	Synchronous	N/A	1 to 24	15-180 min.	15 minutes
DTMV40-P	120V, 208/240V, 60Hz	Panel Mount	Synchronous	N/A	1 to 24	15-180 min.	15 minutes
DTQMV40	120V, 208/240V, 60Hz	NEMA 3R Outdoor Enclosure	Quartz	1 week	1 to 24	15-180 min.	15 minutes
DTQMV40-M	120V, 208/240V, 60Hz	Mechanism Only	Quartz	1 week	1 to 24	15-180 min.	15 minutes
DTQMV40-B	120V, 208/240V, 60Hz	Bracket Mount	Quartz	1 week	1 to 24	15-180 min.	15 minutes
DTQMV40-P	120V, 208/240V, 60Hz	Panel Mount	Quartz	1 week	1 to 24	15-180 min.	15 minutes
DT140 Digi 20-120	120V, 50/60Hz	NEMA 3R Outdoor Enclosure	Electronic*	1 week	1 to 8	1-180 min.	1 minute
DT140 Digi 20-240	208/240V, 50/60Hz	NEMA 3R Outdoor Enclosure	Electronic*	1 week	1 to 8	1-180 min.	1 minute

Standard models are also available with 50Hz input in 208/240V *Rated at 30 Amps

Universal Replacement

GRASSLIN	PARAGON	PRECISION
DTMV 40	8141-00	6141-00
	8143-00	6143-00
	8145-00	6145-00
	8041-00	6041-00
	8043-00	6043-00
	8045-00	6045-00
	8046-00	
	8047-00	6047-00
	8141-20	6141-20
	8143-20	6143-20
	8145-20	6145-20
	8041-20	6041-20
	8043-20	6043-20
	8045-20	6045-20
	8046-20	
	8047-20	6047-20
	8245-20*	6245-20
	8243-20*	6243-20
	8247-20*	6247-20

Recommended Pressure Switches:

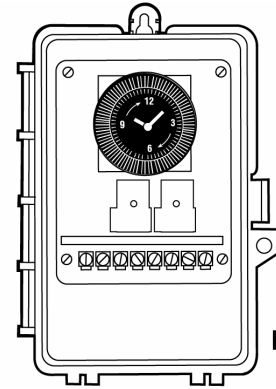
Johnson/Penn P170, Ranco 010 series, or Danfoss KP1 series.
 Pressure range approximately 35-110psi, Cut-in on pressure rise

GRASSLIN GENERAL PURPOSE TIMER (24-Hour, 7-Day)

<http://waterheatertimer.org/How-to-wire-GM40-timer.html>

Multivoltage — Accepts 120, 240 or 277 Input Voltages

The GM1 and GMD units are universal commercial time switches that are field-selectable for 120, 208 and 240 or 277 VAC (50 or 60 Hz) – all within the same unit. All units are 40A rated. The GMX time Switches are voltage-specific, offering 4 pole 32A contacts. All commercial time controls come standard in a high quality plastic enclosure; Metal enclosures are optional.



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24-Hour

PART NO	DESCRIPTION	REPLACES PARAGON
GM1-ST-I-MV	24 Hr., Synchronous, SPDT Switch	4001 & P101
GMD-ST-I-MV	24 Hr., Synchronous, DPDT Switch	4003-00 & 4004-71
GMD1SW-I-MV	7 Day, Synchronous, DPDT Switch	7008
GMX SW-I-4P32-120	7 Day, Synchronous with 4-Pole 32A Contactor	7008-00
GMX SW-I-4P32-240	7 Day, Synchronous with 4-Pole 20A Contactor	7008-71

24-Hour, Battery Backup

PART NO	TIMER VOLTAGE	SWITCH	AMPS
GM1 QT-"I"-MV	120, 208/240, 277 V	SPDT	30
GMD QT-"I"-MV	120, 208/240, 277 V	DPDT	30

7-Day

PART NO	TIMER VOLTAGE	SWITCH	AMPS
GM1 SW-"I"-MV	120, 208/240, 277 V	SPDT	30
GMD SW-"I"-MV	120, 208/240, 277 V	DPDT	30

7-Day, Battery Backup

PART NO	TIMER VOLTAGE	SWITCH	AMPS
GM1 QW-"I"-MV	120, 208/240, 277 V	SPDT	30
GMD QW-"I"-MV	120, 208/240, 277 V	DPDT	30

GRASSLIN GENERAL PURPOSE TIMER GM40

<http://waterheatertimer.org/How-to-wire-GM40-timer.html>



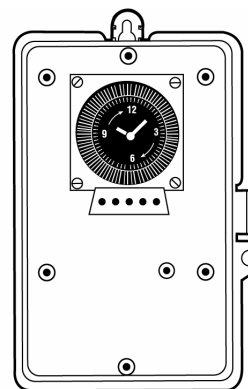
- Amber and Green LED Lights Indicate Power and Status
- Easy Multi-Voltage Field Adjustable DIP Switch for 120, 208/240 or 277 VAC
- New Compact VALOX® NEMA 3R Outdoor Enclosure Replaces All Metal Enclosures
- Large Screw Terminals for Easy Wiring #8 AWG
- Ground Lug Termination
- Captive Trippers Can't Be Lost
- Independently Adjustable Trippers at 15 Minute Intervals
- Real Time Clock Face
- NO TOOLS REQUIRED! Our "GUTS" simply snap into existing Grasslin or Intermatic enclosures
- 40 Amp Rated Contacts
- Moisture Resistant Conformal Coated Board

PART NO	DESCRIPTION	VOLTAGE	OUTPUT	BATTERY BACKUP	WILL REPLACE
GM40	24-HOUR ELECTROMECHANICAL, MULTI-VOLTAGE, SPDT, NEMA 3R OUTDOOR ENCLOSURE	120, 208-240, 277VAC	40A DPDT	NO	GM1ST-I-MV & GMDST-I-MV
GM40Q	24-HOUR ELECTROMECHANICAL, MULTI-VOLTAGE, SPDT, NEMA 3R OUTDOOR ENCLOSURE	120, 208-240, 277VAC	40A DPDT	YES	GM1QT-I-MV & GMDQT-I-MV
GM40W	7-DAY (SKIP-A-DAY/WEEKLY) ELECTROMECHANICAL, MULTI-VOLTAGE, SPDT/DPDT, NEMA 3R OUTDOOR ENCLOSURE	120, 208-240, 277VAC	40A DPDT	NO	GM1SW-I-MV & GMDSW-I-MV
GM40QW	7-DAY (SKIP-A-DAY/WEEKLY) ELECTROMECHANICAL, MULTI-VOLTAGE, SPDT/DPDT, NEMA 3R OUTDOOR ENCLOSURE	120, 208-240, 277VAC	40A DPDT	YES	GM1QW-I-MV & GMDQW-I-MV

GRASSLIN GMX SERIES (24-Hour, 7-Day)

<http://waterheatertimer.org/Intermatic-timers-and-manuals.html#GM40E>

- Inexpensive general purpose timer.
- 21A, 2HP @ 240V switch.
- Indoor or outdoor enclosure.
- Captive trippers with interval of 15 minutes on 24-hour model.
- Easy to set clock face timer.
- Optional clear cover allows viewing timer clock face without opening cover.



P4177

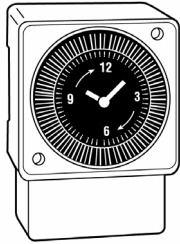
TIMERS

Enclosure Options, Substitute the Following for "X":

- "I" = NEMA 1 Indoor Enclosure
- "IC" = NEMA 1 Indoor Enclosure with Clear Cover
- "O" = NEMA 3R Outdoor Enclosure
- "OC" = NEMA 3R Outdoor Enclosure with Clear Cover
- "IM" = NEMA 1 Indoor Metal Enclosure

PART NO.	TIMER VOLTAGE	SWITCH	AMPS	PART NO.	TIMER VOLTAGE	SWITCH	AMPS
24-Hour				7-Day			
GMX ST-"I"-120	120, 60 Hz	SPDT	21	GMX SW-"I"-120	120, 60 Hz	SPDT	21
GMX ST-"I"-240	208/240 v, 60 Hz	SPDT	21	GMX SW-"I"-240	208/240 V, 60 Hz	SPDT	21
GMX ST-"I"-24	24 V, 60 Hz	SPDT	21	GMX SW-"I"-24	24 V, 60 Hz	SPDT	21
GMX ST-"I"-277	277V,60Hz	SPDT	21	GMX SW-"I"-277	277 V, 60 Hz	SPDT	21
24-Hour, Battery Backup				7-Day Battery Backup			
GMX QT-"I"-120	120, 50/60 Hz	SPDT	21	GMX QW-"I"-120	120, 50/60 Hz	SPDT	21
GMX QT-"I"-240	208/240 V, 50/60 Hz	SPDT	21	GMX QW-"I"-240	208/240 V, 50/60 Hz	SPDT	21
GMX QT-"I"-24	24 V, 50/60 Hz	SPDT	21	GMX QW-"I"-24	24 V, 50/60 Hz	SPDT	21

24-HOUR TIME CONTROL



P4179



IN OPTIONAL ENCLOSURES



CSA FILE: LR52379

UL FILE: E83486



Time based control of lighting, ventilating, heating, cooling or other electrical loads in commercial and industrial applications. The MIL 72 time switches are available with a 24-hour or 7-day program dial with a SPDT switch (form “C” contact). The MIL 72A series is intended for surface mounting. The control is completely enclosed in a plastic housing and includes a terminal cover and sub-base for installation and hard wiring. The MIL 72E is intended for flush (panel) mounting. All units are supplied with a clear plastic cover.

Features

- Synchronous drive or quartz drive with battery backup
- 21A SPDT switch
- Captive trippers with interval as low as 15 minutes
- With or without 3-way override
- Real clock face
- Surface, flush, or DIN rail mount

Complete Part Number = MIL 72A or E Followed by Suffix Code and Voltage.

Example: MIL 72A STuZ-24

SYNCHRONOUS						
WITHOUT OVERRIDE	WITH 3-WAY OVERRIDE	QUARTZ 7-DAY CARRY-OVER**With 3-Way Override	INPUT VOLTS	SWITCH RATING 240 V RES	MINIMUM ON/OFF TIME	EVENT ON/OFF TIME
STuZ-24	STuZH-24	QTuZH-24	24 VAC	SPDT 21A	15 min.	ON 1/4 hr.
STuZ-120	STuZH-120	QTuZH-120	120 VAC	SPDT 21A	15 min.	ON 1/4 hr.
STuZ-240	STuZH-240	QTuZH-240	208/240 VAC	SPDT 21A	15 min.	ON 1/4 hr.
	STuZH-277		277 VAC	SPDT 21A	15 min.	ON 1/4 hr.

7-DAY TIME CONTROL

MIL 72A — Surface Mount

MIL 72E — Flush Mount

SYNCHRONOUS						
WITHOUT OVERRIDE	WITHOUT 3-WAY OVERRIDE	QUARTZ 7-DAY CARRY-OVER**With 3-Way Override	INPUT VOLTS	SWITCH RATING 240 V RES	MINIMUM ON/OFF TIME	EVENT ON/OFF TIME
SWuZ-24	SWZH-24	QWuZH-24	24 VAC	SPDT 21A	2 hr.	ON 2 hr.
SWuZ-120	SWuZH-120	QWuZH-120	120 VAC	SPDT 21A	2 hr.	ON 2 hr.
SWuZ-240	SWuZH-240	QWuZH-240	208/240 VAC	SPDT 21A	2 hr.	ON 2 hr.
-	SWuZH-277	-	277 VAC	SPDT 21A	2 hr.	ON 2 hr.

**Quartz units also operate on DC voltages down to 12 VDC.

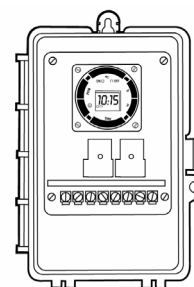
ONE Channel Electronic Time Controls In Enclosure

GM Series: 30 Amp Electronic Time Controls

GM20: 20 programs, 24 hr. or 7 day

GM42: 42 programs, 7 day plus holiday program and automatic daylight time changeover.

All GM20/42 models contain a manual temporary and continuous override.



P4180

C.E.C. CERTIFIED
TITLE 24, PART 6
ON ALL MODELS MARKED WITH "T"

Ordering Example:

GMD-digi20

-O-

Switch Type

GM1 = SPDT, 30 Amp
GMD = DPDT, 30 Amp

Enclosure Type

I = NEMA 1 Plastic
O = NEMA 3R, Plastic
IM = NEMA 1, Metal

Clock Type (24-hr/7-Day)

digi20 = 20 Programs
digi42 = 42 Programs

24 Hr./7 Day NEMA I Indoor Plastic Enclosure

MODEL CODE	INPUT VOLTAGE	PROGRAMS	SWITCH RATING
GM1-digi20-I-120	120V 50/60 Hz	20	30A SPDT
GM1-digi20-I-240	208/240V 50/60 Hz	20	30A SPDT
GM1-digi20-I-277	277V 50/60 Hz	20	30A SPDT
GMD-digi20-I-120	120V 50/60 Hz	20	30A DPDT
GMD-digi20-I-240	208/240V 50/60 Hz	20	30A DPDT
GMD-digi20-I-277	277V 50/60 Hz	20	30A DPDT
GM1-digi42-I-120	120V 50/60 Hz	42	30A SPDT
GM1-digi42-I-240	208/240V 50/60 Hz	42	30A SPDT
GMD-digi42-I-120	120V 50/60 Hz	42	30A DPDT
GMD-digi42-I-240	208/240V 50/60 Hz	42	30A DPDT

24 Hr/7 Day NEMA 3R Outdoor Plastic Enclosure

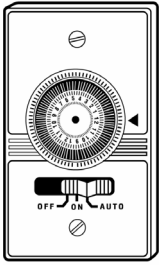
MODEL CODE	INPUT VOLTAGE	PROGRAMS	SWITCH RATING
GM1-digi20-O-120	120V 50/60 Hz	20	30A SPDT
GM1-digi20-O-240	208/240V 50/60 Hz	20	30A SPDT
GM1-digi20-O-277	277V, 50/60 Hz	20	30A SPDT
GMD-digi20-O-120	120V, 50/60 Hz	20	30A DPDT
GMD-digi20-O-240	208/240V 50/60 Hz	20	30A DPDT
GMD-digi20-O-277	277V 50/60 Hz	20	30A DPDT
GM1-digi42-O-120	120V 50/60 Hz	42	30A SPDT
GM1-digi42-O-240	208/240V 50/60 Hz	42	30A SPDT
GMD-digi42-O-120	120V 50/60 Hz	42	30A DPDT
GMD-digi42-O-240	208/240V 50/60 Hz	42	30A DPDT

24 Hr/7 Day NEMA 1 Indoor Metal Enclosure

MODEL CODE	INPUT VOLTAGE	PROGRAMS	SWITCH RATING
GM1-digi20-IM-120	120V 50/60 Hz	20	30A SPDT
GM1-digi20-IM-240	208/240V 50/60 Hz	20	30A SPDT
GM1-digi20-IM-277	277V 50/60 Hz	20	30A SPDT
GMD-digi20-IM-120	120V 50/60 Hz	20	30A DPDT
GMD-digi20-IM-240	208/240V 50/60 Hz	20	30A DPDT
GMD-digi20-IM-277	277V 50/60 Hz	20	30A DPDT
GM1-digi42-IM-120	120V 50/60 Hz	42	30A SPDT
GM1-digi42-IM-240	208/240V 50/60 Hz	42	30A SPDT
GMD-digi42-IM-120	120V 50/60 Hz	42	30A DPDT
GMD-digi42-IM-240	208/240V 50/60 Hz	42	30A DPDT

GRASSLIN KM2 IN-WALL TIMER (24-Hour, 7-Day)

<http://waterheatertimer.org/Programmable.html#KM>



- Captive trippers with 20-minute switching interval (2-1/3 hour for 7-day).
- SPST 20A, 1 Hp @ 120 V switch.
- Replaces standard wall switches.
- Reliable synchronous timer motor.



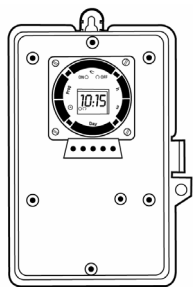
PART NO	WALLPLATE CONFIGURATION	SWITCH
KM2 ST-CS	1 Gang	SPST
KM2 STu-1G	1 Gang, 3 Way	SPDT
KM2 ST-2G	2 Gang, Toggle	SPST
KM2 STu-2G	2 Gang, Toggle, 3 Way	SPDT
KM2 ST-3G	3 Gang, Toggle	SPST
KM2 ST-4G	4 Gang, Toggle	SPST
KM2 ST-2D	2 Gang, Decorator	SPST
KM2 ST-3D	3 Gang, Decorator	SPST
KM2 ST-2R	2 Gang, Receptacle	SPST
KM2 STST-2G	2 Gang, Dual Timers	(2) SPST

7-DAY

PART NO	WALLPLATE CONFIGURATION	SWITCH
KM2 SW-1G	1 Gang	SPST
KM2 SWu-1G	1 Gang, 3 Way	SPDT
KM2 SW-2G	2 Gang, Toggle	SPST
KM2 SW-3G	3 Gang, Toggle	SPST
KM2 SW-4G	4 Gang, Toggle	SPST
KM2 SW-2D	2 Gang, Decorator	SPST
KM2 Sw-3D	3 Gang, Decorator	SPST
KM2 SW-2R	2 Gang, Receptacle	SPST
KM2 SWSW-2G	2 Gang, Dual Timers	(2) SPST

GRASSLIN GMX digi SERIES (24-Hour, 7-Day)

<http://waterheatertimer.org/Intermatic-timers-and-manuals.html#GM40E>



P4181



- 16A @ 240V switch.
- Indoor or outdoor enclosure.
- Rechargeable battery backup with 1 week or more carryover.
- Optional clear cover allows viewing timer clock face without opening cover.

Enclosure Options, Substitute the Following for "X":

- "I" = NEMA 1 Indoor Enclosure
- "IC" = NEMA 1 Indoor Enclosure with Clear Cover
- "O" = NEMA 3R Outdoor Enclosure
- "OC" = NEMA 3R Outdoor Enclosure with Clear Cover
- "IM" = NEMA 1 Indoor Metal Enclosure

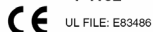
NOTE: 6 V and 12 VDC Models Available

PART NO	TIMER VOLTAGE	SWITCH	AMPS	PROGRAMS
GMX digi 20-"X"-120	120 V, 50/60 Hz	SPDT	16	20
GMX digi 20-"X"-240	208/240 V, 50/60 Hz	SPDT	16	20
GMX digi 20-"X"-24	24 V, 50/60 Hz	SPDT	16	20
GMX digi 20-"X"-277	277 V, 50/60 Hz	SPDT	16	20
GMX digi 42-"X"-120	120 V, 50/60 Hz†	SPDT	16	42
GMX digi 42-"X"-240	208/240 V, 50/60 Hz†	SPDT	16	42
GMX digi 42-"X"-24	24 V, 50/60 Hz†	SPDT	16	42
GMX2 digi 42-"X"-120†	120 V, 50/60 Hz	(2) SPDT	16	42
GMX2 digi 42-"X"-240†	208/240 V, 50/60 Hz	(2) SPDT	16	42
GMX2 digi 42-"X"-24†	24 V, 50/60 Hz	(2) SPDT	16	42

GRASSLIN digi 42/2 (24-Hour, 7-Day)



P4182



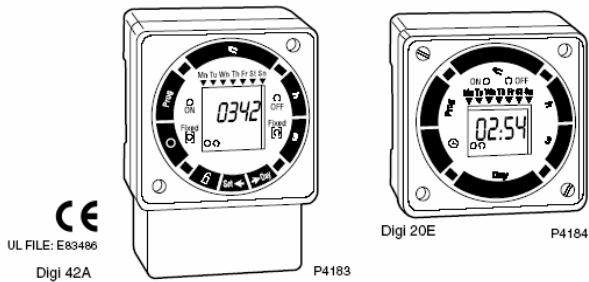
Time based control of 2-circuit lighting, ventilating, heating, cooling or other electrical loads in commercial and industrial applications. The Digi 42/2 time switches are programmable for 24-hour or 7-day schedules as well as an "8th day" or holiday schedule. Each channel can operate independently or combined.

- Two channel or double pole switching.
- Automatic daylight time changeover.
- 8th day HOLIDAY program.
- 16 A, SPDT switching.

PART NO	TIMER VOLTAGE	MOUNTING*	SETPOINT PROGRAMS	MAXIMUM WEEKLY ON/OFF EVENTS	RELAY OUTPUT GENERAL PURPOSE RATING
Digi 42/2-120††	120 V, 50/60 Hz	Flush or Surface	42	294	(2) SPDT, 16 A, 240 VAC
Digi 42/2-240†	240 V, 50/60 Hz	Flush or Surface	42	294	(2) SPDT, 16 A, 250 VAC
Digi 42/2-24†	24 V, 50/60 Hz	Flush or Surface	42	294	(2) SPDT, 16 A, 250 VAC

GRASSLIN digi 20, digi 42 SERIES (24-Hour, 7-Day)

<http://waterheatertimer.org/Timer-modules.html#MIL>

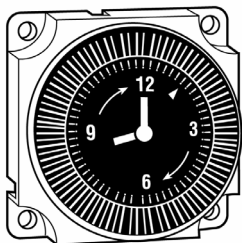


- Automatic Daylight Time changeover with Digi 42
- Holiday program with Digi 42.
- Rechargeable battery backup with 1 week or more carryover.
- 16 amp, SPDT switching.

**C.E.C. CERTIFIED
TITLE 24, PART 6**
ON ALL MODELS MARKED WITH "†"

PART NO	TIMER VOLTAGE	MOUNTING*	SETPOINT PROGRAMS	MAXIMUM WEEKLY ON/OFF EVENTS	RELAY OUTPUT GENERAL PURPOSE RATING
Digi 20A — 120	120 V, 50/60 Hz	Surface or DIN Rail	20	140	SPDT, 16 A, 250 V
Digi 20A — 240	208/240 V, 50/60 Hz	Surface or DIN Rail	20	140	SPDT, 15 A, 250 V
Digi 20A — 24	24 V, 50/60 Hz	Surface or DIN Rail	20	140	SPDT, 16 A, 250 V
Digi 20A — 277	277 V, 50/60 Hz	Surface or Dln Rail	20	140	SPDT, 16 A, 250 V
Digi 42A — 120†	120 V, 50/60 Hz	Surface or DIN Rail	42	294	SPDT, 16 A, 250 V
Digi 42A — 240†	208/240 V, 50/60 Hz	Surface or DIN Rail	42	294	SPDT, 16 A, 250 V
Digi 42A — 24†	24 V, 50/60 Hz	Surface or Dln Rail	42	294	SPDT, 16 A, 250 V
Digi 20E — 120	120 V, 50/60 Hz	Flush Panel	20	140	SPDT, 16 A, 250 V
Digi 20E — 240	208/240 V, 50/60 Hz	Flush Panel	20	140	SDPT, 16 A, 250 V
Digi 20E — 24	24 V, 50/60 Hz	Flush Panel	20	140	SPDT, 16 A, 250 V
Digi 20E — 277	277 V, 50/60 Hz	Flush Panel	20	140	SPDT, 16 A, 250 V
Digi 42E — 120†	120 V, 50/60 Hz	Flush Panel	42	294	SDPT, 15 A, 250 V
Digi 42E — 240†	208/240 V, 50/60 Hz	Flush Panel	42	294	SDPT, 16 A, 250 V
Digi 42E — 24†	24 V, 50/60 Hz	Flush Panel	42	294	SPDT, 16 A, 250 V

GRASSLIN FM/1 SERIES (24-Hour, 7-Day)



The FM/1 series modules are designed to be placed inside a machine control panel, circuit board, or other equipment. It offers up to 21A switching designed for control of heating, ventilating, air conditioning, refrigeration, lighting, security, circulating pumps, spas or any electrical load requiring 24-hour or 7-day scheduling.

- Authentic clock face.
- 21 A SPDT switch.
- Captive Trippers.



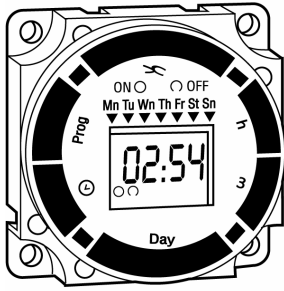
PART NO	MINIMUM ON/OFF TIME	SWITCH PROGRAM	CARRY-OVER	PROGRAM ON/OFF EVERY	SWITCH OUTPUT	
					Type	Rating
FM/1 Stuz (synchronous)	15 minutes	21 A Res.	No	15 minutes	SPDT	21 A Res.
FM/1 SWuZ (synchronous)	2 hours	21 A Res.	No	2 hours	SPDT	21 A Res.
FM/1 QtuZ (quartz)	15 minutes	21 A Res.	7 day	15 minutes	SPDT	21 A Res.
FM/1 QWuZ (quartz)	2 hours	21 A Res.	7 day	2 hours	SPDT	21 A Res.

NOTES:

1. Available with 24 V, 120 V, 240 V, 277 VAC input.
2. Quartz also available with 12 V, 30 V, 60 V, or 120 VDC input.

GRASSLIN FM/1 digi 20-120 (24 Hour, 7-Day)

<http://waterheatertimer.org/Timer-modules.html#MIL>



P4188



UL FILE: E83486

The FM/1 digi 20 is a compact electronic 24 hour/ 7 day time switch module with heavy duty relay contacts for switching low or line voltage loads. Applicable for time of day control of pumps, fans, heaters, HVAC control circuits, lighting, machinery and many other types of commercial, industrial, and agricultural equipment. The FM/1 digi 20 features large keys with unique "circular pattern" for easy programming, an easy-to-read LCD display and capacitor backup to retain program memory during power outages.

- 20 programs, up to 140 events per week.
- Easy to program with large keys.
- 16 Amp @ 277 V SPDT switching.
- Capacitor backup with 5-day carryover.
- Manual override.

GRASSLIN FM/1 digi 42-120 (24 Hour, 7-Day)

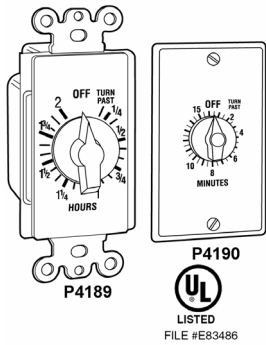
- Automatic Spring/Fall Daylight Time changeover.
- 42 programs, up to 294 events per week.
- Holiday programming.
- 16 Amp @ 277 V SPDT switching.
- Rechargeable battery backup with carryover of over 2 weeks.

**C.E.C. CERTIFIED
TITLE 24, PART 6**

ON ALL MODELS MARKED WITH "†"

PART NO	INPUT VOLTAGE	PROGRAMS	SWITCH PROGRAM	MAX WEEKLY ON/OFF	HOLIDAY PROGRAM	RESERVE CARRYOVER	RELAY OUTPUT
FM/1 digi 20-240	240 V, 50/60 Hz	20	24 hr./7 day	140	No	1 week	SPDT 16 A
FM/1 digi 20-24	24 V, 50/60 Hz	20	24 hr./7 day	140	No	1 week	SPDT 16 A
FM/1 digi 20-277	277 V, 50/60 Hz	20	24 hr./7 day	140	No	1 week	SPDT 16 A
FM/1 digi 42-120†	120 V, 50/60 Hz	42	24 hr./7 day	294	Yes	2 weeks	SPDT 16 A
FM/1 digi 42-240†	240 V, 50/60 Hz	42	24 hr./7 day	294	Yes	2 weeks	SPDT 16 A
FM/1 digi 42-24	24 V, 50/60 Hz	42	24 hr./7 day	294	Yes	2 weeks	SPDT 16 A

SPRING WOUND INTERVAL/COUNTDOWN TIME SWITCH



- Timing ranges from 5 minutes to 12 hours.
- SPST 20 A, 2 HP switch.
- Decorator style dial plate fits both standard and decorator wallplates.
- Aluminum wallplate available.
- Fits in single or multigang wallboxes.
- May be flush panel mounted.
- Normally closed version (15 and 30 min. only)

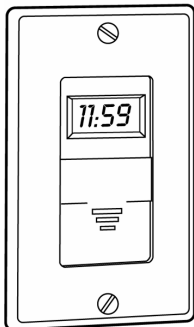
PART NO

NO-HOLD MODELS WITH IVORYKNOB & PLATE	HOLD MODELS WITH IVORYKNOB & PLATE	TIME CYCLE
KLT-5M	KLT-5MH	0-5 Minutes
KLT-15M	KLT-15MH	0-15 Minutes
KLT-15MC	—	0-15 Minutes (Normally Closed)
KLT-30M	KLT-30MH	0-30 Minutes
KLT-30MC	—	0-30 Minutes (Normally Closed)
KLT-60M	KLT-60MH	0-60 Minutes
KLT-2H	KLT-2HH	0-2 Hours
KLT-4H	KLT-4HH	0-4 Hours
KLT-6H	KLT-6HH	0-6 Hours
KLT-12H	KLT-12HH	0-12 Hours

Example: KLT-30M-W — Add “-W” to above for white knob and plate.

Example: KLT-30MH-A — Add “-A” to above for aluminum plate and plastic knob.

GRASSLIN ET 616 ELECTRONIC COUNTDOWN TIMER



- Electronic version of the manual countdown timer.
- Operates on 120 V or 277 VAC — No neutral wire required.
- Mounts in standard wallbox.
- Single button On/Off operation.
- Backlighted LCD display.
- Preset time countdown; 5, 15, 30, 60 minutes, 3, 6, 9, 12 hours.
- Switch holds position during a power failure (on or off), restarts at preset time when power is restored.
- UL and cUL listed.

P4191

PART NO	VOLTAGE	SWITCH RATING	COUNTDOWN TIMING
ET616	120 or 277 VAC, 50/60 Hz	1000 W (Tung.) @ 120 V; 800 W (Bal.) @ 120 V; 1500W (Tung.) @ 277 V; 1200W (Bal.) @ 277 V	5, 15, 30, 60 Min. 3, 6, 9, 12 Hr.

GRASSLIN ET724 Electronic In-Wall Timer
<http://waterheatertimer.org/Programmable.html#EI500>

24 Hour, 7 Day

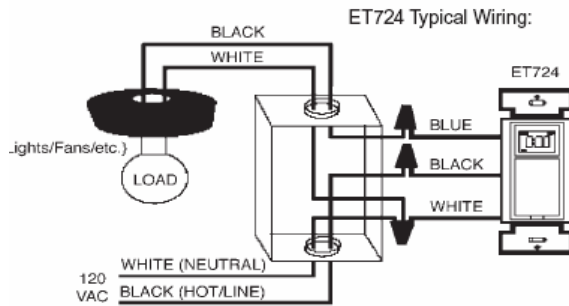


Replaces standard wall switch (toggle) to provide automatic control of outdoor or indoor lighting, fans, pumps, office machines, and other types of circuits. The unit can be programmed for 7-ON and 7-OFF events daily or weekly. AUTO and Manual Modes are clearly displayed along the time of day. The ET724 is designed to be mounted in a standard decorator plate for a sleek modern look.

Features

- Sleek profile
- Easy to program
- Single push-button control
- Mounts in standard wallbox
- Built-in rechargeable battery never needs replacement
- LCD display
- Flush mounted design
- Non-volatile memory
- Captive cover plate
- UL Listed and CSA Approved

SPECIFIERS GUIDE: Furnish and install a Grasslin model ET724 electronic in-wall 7 day time control. The timer shall fit into a standard 2-1/2" deep single or multigang wall box and decorator style wallplate. It shall not protrude from the wall more than 1/8" and have a captive cover plate over the programming keys. The unit shall be capable of switching a 20 amp ballast or general purpose load or 1 HP motor and have seven independently programmable events. The battery backup will be a rechargeable NiMh type that does not require replacement.



SPECIFICATIONS

- Input:** 120VAC, 60 Hz
- Switch Rating:** 20A Ballast Switch Rating @ 120VAC, 20A Inductive Switch Rating @ 120VAC, 2400W Resistive, 1HP Motor
- Operating Temperature:** 32° to 122°F (0° to 50°C)
- Faceplate Color:** White
- Timing Accuracy:** Less Than 1% Deviation
- Wiring Connections:** 6" Leadwires

ORDERING DATA

PART NO	DESCRIPTION	WALLPLATE CONFIGURATION	SWITCH
ET724	Electronic 24-hr./7-day (White)	1 Gang Decorator (Not Included)	SPST

GRASSLIN T25/16 PLUG-IN TIMER

<http://waterheatertimer.org/Intermatic-timers-and-manuals.html#TN>

TIMERS



Features

- 24 hour electromechanical plug-in timer
- Captive trippers
- Programming resolution of 15 minutes
- Easy to program
- Manual override

Specifications:

Input Voltage: 120VAC
Switch Rating: 15A @ 125VAC
Tungsten: 1250W, TV-4 1/3HP
 Polarized 2-conductor plug and receptacle



LISTED
FILE #E83486

ORDERING DATA

PART NO	SWITCH PROGRAM	RESERVE	PROGRAM ON/OFF EVERY	SHORTEST SWITCHING TIME
T25	24 hour	No	15 minutes	15 minutes

GRASSLIN T35/16CS PLUG-IN TIMER



Features

- 24 hour electromechanical plug-in timer
- Captive trippers
- Programming resolution of 15 minutes
- Easy to program
- Manual override

Specifications:

Voltage: 110-120VAC
Switch Rating: 15A Resistive
Ambient Temperature Range: 14°F to 122°F Grounded 3-conductor plug and receptacle



LISTED
FILE #E83486

ORDERING DATA

PART NO	SWITCH PROGRAM	RESERVE	PROGRAM ON/OFF EVERY	SHORTEST SWITCHING TIME
T35	24 hour	No	15 minutes	15 minutes

GRASSLIN T240 PLUG-IN TIMER



Features

- 24 hour electromechanical plug-in timer
- Captive trippers
- Programming resolution of 15 minutes
- Heavy Duty 20A, 4800W
- Manual override

Specifications:

Voltage: 240VAC, 60Hz
Switch Rating: 20A Resistive
Ambient Temperature Range: 14°F to 122°F Grounded 3-conductor plug and receptacle



LISTED
FILE #E83486

ORDERING DATA

PART NO	SWITCH PROGRAM	RESERVE	PROGRAM ON/OFF EVERY	SHORTEST SWITCHING TIME
T240	24 hour	No	15 minutes	15 minutes