Dold Relay Timers

Multi-Mode Relay Timers MK Series

Overview

The MK series relay timers are timing relays designed for process control, machine tool control, safety control and many other types of applications. The timers are DIN-rail mountable with up to 8 functions in one unit.

Fleeting/single shot on make:
The relay switches on immediately when energized and switches off after the time delay, or when de-energized.

Fleeting/single shot on break:
When energizing nothing happens. When de-energized, the relay switches on for the adjusted time and switches off after the time is elapsed.

Features

- Eight time ranges from 0.02 sec to 300hr selectable via rotational switches
- Voltage range 12– 240 VAC/VDC
- Eight functions can be set via rotational switch:
- Delay on energization (AV)
- Fleeting on make (EW)
- Delayed pulse (IE)
- Flasher, start with pulse (BI)
- Delay on de-energization (RV)
- Pulse forming function (IF)
- Fleeting on break (AW)
- Delay on energization and de-energization (AV / RV)

MK7850N-82-200-61

Multi-Mode Relay Timers MK Series						
Part Number	***Price***	***Timer Type***	***Timing Range***	***Voltage***	***Output Type***	***Drawing Link***
MK7850N-82-200-61	$64.00	Multi-mode	0.02 seconds to 300 hours selectable	12-240 VAC/VDC	2 changeover contacts, one programmable as instantaneous	PDF

Multi-Mode Relay Timers Specifications	
Input Specifications	
Nominal Voltage	12–240 VAC/VDC
Nominal Consumption	12VAC ~ 1.5 VA 24VAC ~ 2VA 240VAC ~ 3VA 12VDC ~ 1W 24VDC ~ 1W 240VDC ~ 1W
Nominal Frequency	45 – 400 Hz
Contact Specifications	
Type	2 changeover contacts, one programmable as instantaneous
Contact Material	AgNi
Measured Nominal Voltage	250VAC
Switching Capacity (according to AC 15)	N.O. Contact 3A / 230VAC N.C. Contact 1A / 230VAC
Electrical Lifetime	1.5 x 10^5 switching cycle (to AC 15 at 1A, 230VAC)
Switching Frequency	36,000 switching cycle / hr
Max Fuse Rating	4A
Mechanical Lifetime	≥ 30 x 10^6 switching cycles
Time Circuit Specifications	
Time Ranges	8 time ranges in one unit, selectable via rotational switch 0.02 ~ 1 sec, 0.06 ~ 6 sec, 0.3 ~ 30 sec 0.03 ~ 3 min, 0.3 ~ 30 min, 3 ~ 300 min 0.3 ~ 30 hr, 3 ~ 300 hr
Time Setting	t1 - continuous, 1:100 on relative scale
Recovery Time	24VDC 15ms 240VDC 50ms 230VAC 80ms
Repeat Accuracy	± 0.5% of selected end of scale value +20ms
Voltage and Temperature Influence	≤ 1% with the complete operating range

Multi-Mode Relay Timers Specifications	
General Specifications	
Connection (screw terminal)	1 x 4mm² / 12AWG solid or 1 x 2.5 mm² / 14 AWG stranded ferruled or 2 x 1.5 mm² / 16 AWG stranded ferruled or 2 x 2.5 mm² / 14 AWG solid
Tightening Torque	0.8 N·m
Ambient Temperature	-40 to +60°C [-40 to +140°F]
Storage Temperature	-40 to +70°C [-40 to +158°F]
Relative Air Humidity	93% at 40°C
Protection Rating	Housing IP40 / Terminals IP20
Vibration Resistance	Amplitude 0.35 mm frequency 10 – 55Hz
Mounting	35mm Din-rail
Relay Indicator	Green LED: On, when supply connected Yellow LED "R/t": Shows status of output relay and time delay: -Continuously off: Output relay not active; no time delay -Continuously on: Output relay active no time delay -Flashing (short on, long off) output relay not active, time delay -Flashing (long on, short off) output relay active, time delay
Weight (g [oz])	150.0 [5.29]
Agency Approvals and Standards *	cULus, CE
UL Data	
Switching Capacity	Ambient temperature 60°C: Pilot duty B300 5A 250VAC G.P.
UL Specified Wire Connection	60°C / 75°C copper conductors only Screw terminals fixed: AWG 20 – 12 solid or stranded Torque 0.8 Nm

***To obtain the most current agency approval information, see the Agency Compliance & Certifications Checklist section on the specific part number's web page.**

Dold Relay Timers

Cyclic Relay Timers MK Series

Features

- 8 time ranges from 0.05 sec to 300hr selectable via rotational switches
- Impulse and break time separately adjustable
- Selectable start with impulse or break
- Voltage range 12–240 VAC/VDC
- Adjustment aid for quick setting of long time values
- Suitable for 2-wire proximity sensor control
- LED indicators for operation, contact position, and time delay
- 2 changeover contacts

MK7854N-82-61

Cyclic Relay Timers MK Series						
Part Number	***Price***	***Timer Type***	***Timing Range***	***Voltage***	***Output Type***	***Drawing Link***
MK7854N-82-61	$80.00	Cyclic	0.05 seconds to 300 hours selectable	12-240 VAC/VDC	2 changeover contacts	PDF

Cyclic Relay Timers Specifications	
Input Specifications	
Nominal Voltage	12–240 VAC/VDC
Nominal Consumption	12VAC ~ 1.5 VA 24VAC ~ 2VA 240VAC ~ 3VA 12VDC ~ 1W 24VDC ~ 1W 240VDC ~ 1W
Contact Specifications	
Type	2 changeover contacts
Contact Material	AgNi
Measured Nominal Voltage	250VAC
Switching Capacity (according to AC 15)	N.O. Contact 3A / 230VAC N.C. Contact 1A / 230VAC
Electrical Lifetime	1.5 x 10^5 switching cycle (to AC 15 at 1A, 230VAC)
Switching Frequency	36,000 switching cycle / hr
Max Fuse Rating	4A
Mechanical Lifetime	≥ 30 x 10^6 switching cycles
Time Circuit Specifications	
Time Ranges	8 time ranges in one unit, selectable via rotational switch 0.05 ~ 1 sec, 0.06 ~ 6 sec, 0.3 ~ 30 sec 0.03 ~ 3 min, 0.3 ~ 30 min, 3 ~ 300 min 0.3 ~ 30 hr, 3 ~ 300 hr
Time Setting	t1, t2 - continuous, 1:100 on relative scale
Recovery Time	24VDC 15ms 240VDC 50ms 230VAC 80ms
Repeat Accuracy	± 0.5% of selected end of scale value
Voltage and Temperature Influence	≤ 1% with the complete operating range

Cyclic Relay Timers Specifications	
General Specifications	
Connection (screw terminal)	1 x 4mm² / 12AWG solid or 1 x 2.5 mm² / 14 AWG stranded ferruled or 2 x 1.5 mm² / 16 AWG stranded ferruled or 2 x 2.5 mm² / 14 AWG solid
Tightening Torque	0.8 N·m
Ambient Temperature	-40 to +60°C [-40 to +140°F]
Storage Temperature	-40 to +70°C [-40 to +158°F]
Relative Air Humidity	93% at 40°C
Protection Rating	Housing IP40 / Terminals IP20
Vibration Resistance	Amplitude 0.35 mm frequency 10 – 55Hz
Mounting	35mm Din-rail
Relay Indicator	Green LED: On, when voltage connected Yellow LED "R/t": Shows status of output relay and time delay: -Flashing (short on, long off) : Output relay not active; time delay t2 (break time) -Flashing (long on, short off) output relay active; time delay t1 (pulse time)
Weight (g [oz])	150.0 [5.29]
Agency Approvals and Standards *	cULus, CE
UL Data	
Switching Capacity	Ambient temperature 60°C: Pilot duty B300 5A 250VAC G.P.
UL Specified Wire Connection	60°C / 75°C copper conductors only Screw terminals fixed: AWG 20 – 12 solid or stranded Torque 0.8 Nm

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Dold Relay Timers

Off-Delay Relay Timers MK Series

Features

- 8 time ranges from 0.05 sec to 300 hr selectable via rotational switch
- Voltage range 12–240 VAC/VDC for auxiliary supply and control input
- Adjustment aid for quick setting of long time values
- Input for interruption of timing
- LED indicators for operation, contact position and time delay
- 2 changeover contacts

MK9962N-82-61

Off-Delay Relay Timers MK Series						
Part Number	***Price***	***Timer Type***	***Timing Range***	***Voltage***	***Output Type***	***Drawing Link***
MK9962N-82-61	$74.00	Off-delay	0.05 seconds to 300 hours selectable	12-240 VAC/VDC	2 changeover contacts	PDF

Off-Delay Relay Timers Specifications	
Input Specifications	
Nominal Voltage	12–240 VAC/VDC
Nominal Consumption	12VAC ~ 1.5 VA 24VAC ~ 2VA 240VAC ~ 3VA 12VDC ~ 1W 24VDC ~ 1W 240VDC ~ 1W
Contact Specifications	
Type	2 changeover contacts
Contact Material	AgNi
Measured Nominal Voltage	250VAC
Switching Capacity (according to AC 15)	N.O. Contact 3A / 230VAC N.C. Contact 1A / 230VAC
Electrical Lifetime	1.5 x 10^5 switching cycle (to AC 15 at 1A, 230VAC)
Switching Frequency	6,000 switching cycles / hr
Max Fuse Rating	4A
Mechanical Lifetime	≥ 30 x 10^6 switching cycles
Time Circuit Specifications	
Time Ranges	8 time ranges in one unit, selectable via rotational switch 0.05 ~ 1 sec, 0.06 ~ 6 sec, 0.3 ~ 30 sec 0.03 ~ 3 min, 0.3 ~ 30 min, 3 ~ 300 min 0.3 ~ 30 hr, 3 ~ 300 hr
Time Setting	Continuous, 1:100 on relative scale
Minimum on Time	AC 50 Hz - 15ms DC - 5 ms
Repeat Accuracy	± 0.5% of selected end of scale value + 20ms
Voltage and Temperature Influence	≤ 1% with the complete operating range

Off-Delay Relay Timers Specifications	
General Specifications	
Connection (cage clamp terminal)	1 x 4mm² / 12AWG solid or 1 x 2.5 mm² / 14 AWG stranded ferruled or 2 x 1.5 mm² / 16 AWG stranded ferruled or 2 x 2.5 mm² / 14 AWG solid
Tightening Torque	0.8 N·m
Ambient Temperature	-40 to +60°C [-40 to +140°F]
Storage Temperature	-40 to +70°C [-40 to +158°F]
Relative Air Humidity	93% at 40°C
Protection Rating	Housing IP40 / Terminals IP20
Vibration Resistance	Amplitude 0.35 mm frequency 10 – 55Hz
Mounting	35mm Din-rail
Relay Indicator	Green LED: on when auxiliary voltage connected Yellow LED "R/t": shows status of output relay and time delay: - LED off output relay not active; no time delay - LED continuously on output relay active;no time delay (B1 input active) - LED flashing output relay active; long on, short off - time delay
Weight (g [oz])	150.0 [5.29]
Agency Approvals and Standards *	cULus, CE
UL Data	
Switching Capacity	Ambient temperature 60°C: Pilot duty B300 5A 250VAC G.P.
UL Specified Wire Connection	60°C / 75°C copper conductors only Screw terminals fixed: AWG 20 – 12 solid or stranded Torque 0.8 Nm

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Dold Relay Timers

On-Delay Relay Timers MK Series

Features

- 8 time ranges from 0.05 sec to 300 hr selectable via rotational switch
- Voltage range 12-240 VAC/VDC for auxiliary supply and control input
- Adjustment aid for quick setting of long time values
- Input for interruption of timing
- LED indicators for operation, contact position, and time delay
- 2 changeover contacts

MK9906N-82-61

On-Delay Relay Timers MK Series						
Part Number	***Price***	***Timer Type***	***Timing Range***	***Voltage***	***Output Type***	***Drawing Link***
MK9906N-82-61	$60.00	On-delay	0.05 seconds to 300 hours selectable	12-240 VAC/VDC	2 changeover contacts one programmable as instantaneous	PDF

On-Delay Relay Timers Specifications	
Input Specifications	
Nominal Voltage	12–240 VAC/VDC
Nominal Consumption	12VAC ~ 1.5 VA 24VAC ~ 2VA 240VAC ~ 3VA 12VDC ~ 1W 24VDC ~ 1W 240VDC ~ 1W
Contact Specifications	
Type	2 changeover contacts one programmable as instantaneous
Contact Material	AgNi
Measured Nominal Voltage	250VAC
Switching Capacity (according to AC 15)	N.O. Contact 3A / 230VAC N.C. Contact 1A / 230VAC
Electrical Lifetime	1.5 x 10^5 switching cycles (to AC 15 at 1A, 230VAC)
Switching Frequency	36,000 switching cycle / hr
Max Fuse Rating	4A
Mechanical Lifetime	≥ 30 x 10^6 switching cycles
Time Circuit Specifications	
Time Ranges	8 time ranges in one unit, selectable via rotational switch 0.05 ~ 1 sec, 0.06 ~ 6 sec, 0.3 ~ 30 sec 0.03 ~ 3 min, 0.3 ~ 30 min, 3 ~ 300 min 0.3 ~ 30 hr, 3 ~ 300 hr
Time Setting	Continuous, 1:100 on relative scale
Recovery Time	24VDC 15ms 240VDC 50ms 230VAC 80ms
Repeat Accuracy	± 0.5% of selected end of scale value + 20ms
Voltage and Temperature Influence	≤ 1% with the complete operating range

On-Delay Relay Timers Specifications	
General Specifications	
Connection (cage clamp terminal)	1 x 4mm² / 12AWG solid or 1 x 2.5 mm² / 14 AWG stranded ferruled or 2 x 1.5 mm² / 16 AWG stranded ferruled or 2 x 2.5 mm² / 14 AWG solid
Tightening Torque	0.8 N·m
Ambient Temperature	-4 to +60°C [-40 to +140°F]
Storage Temperature	-40 to +70°C [-40 to +158°F]
Relative Air Humidity	93% at 40°C
Protection Rating	Housing IP40 / Terminals IP20
Vibration Resistance	Amplitude 0.35mm frequency 10 – 55Hz
Mounting	35mm Din-rail
Relay Indicator	Green LED: On, when voltage connected Yellow LED "R/t": Shows status of output relay and time delay: - Flashing (long on, short off) output relay not active; time delay - Continuously on: output relay active after time delay
Weight (g [oz])	150.0 [5.29]
Agency Approvals and Standards *	cULus, CE
UL Data	
Switching Capacity	Ambient temperature 60°C: Pilot duty B300 5A 250VAC G.P.
UL Specified Wire Connection	60°C / 75°C copper conductors only Screw terminals fixed: AWG 20 – 12 solid or stranded Torque 0.8 Nm

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Dold Relay Timers

Off-Delay Relay Timers MK Series

Features

- Release delay, without control signal
- No voltage safe
- Delay up to 3, 30 or 300 sec
- Repeat accuracy ≤ ± 0.5 %
- No recovery time
- Voltage range 24–240 VAC/VDC
- LED display for power supply
- 2 changeover contacts

MK7873N-82-61-3S

Off-Delay Relay Timers MK Series						
Part Number	*Price*	*Timer Type*	*Timing Range*	*Voltage*	*Output Type*	*Drawing Links*
MK7873N-82-61-3S	$96.00	Off-delay	0.15 to 3 seconds	24-240 VAC/VDC	2 changeover contacts	PDF
MK7873N-82-61-30S	$96.00	Off-delay	1.5 to 30 seconds	24-240 VAC/VDC	2 changeover contacts	PDF
MK7873N-82-61-300S	$96.00	Off-delay	15 to 300 seconds	24-240 VAC/VDC	2 changeover contacts	PDF

Off-Delay Relay Timers Specifications	
Input Specifications	
Nominal Voltage	24–240 VAC/VDC
Operating Voltage Range	24–240 VAC/VDC 19.2–264 VAC 21.6–300 VDC
Nominal Consumption	0.8W
Nominal Frequency	45 – 400 Hz
Contact Specifications	
Type	2 changeover contacts
Contact Material	$AgSnO_2$ +0.2 µm AU
Measured Nominal Voltage	250VAC
Switching Capacity (according to AC 15)	N.O. Contact 3A / 230VAC N.C. Contact 1A / 230VAC
Electrical Lifetime	8 x 10^5 switching cycles
Switching Frequency	time ranges ≤ 10 sec - 1400 switching cycles per hr time ranges ≥ 30 sec - 700 switching cycles per hr
Max Fuse Rating	6A
Mechanical Lifetime	30 x 10^6 switching cycles
Time Circuit Specifications	
Time Ranges	MK7873N-82-61-3S = 0.15 - 3 sec MK7873N-82-61-30S = 1.5 - 30 sec MK7873N-82-61-300S = 15 - 300 sec
Time Setting	Stepless
Minimum Switch-on Time	24VDC 150ms 200VAC 25ms
Recovery Time	0
Repeat Accuracy	≤ 0.5% of set value
Voltage Influence	≤ 0.5 %
Temperature Influence	< 0.2% / K

Off-Delay Relay Timers Specifications	
General Specifications	
Connection (Integrated Screw terminals)	1 x 4mm² / 12AWG solid or 1 x 2.5 mm² / 14 AWG stranded ferruled or 2 x 1.5 mm² / 16 AWG stranded ferruled or 2 x 2.5 mm² / 14 AWG solid
Tightening Torque	0.8 N·m
Ambient Temperature	-20 to +60°C [-4 to +140°F]
Storage Temperature	-25 to +60°C [-13 to +140°F]
Relative Air Humidity	93% at 40°C
Protection Rating	Housing IP40 / Terminals IP20
Vibration Resistance	Amplitude 0.35 mm frequency 10 – 55Hz
Mounting	35mm Din-rail
Relay Indicator	LED: on, when supply connected
Weight (g [oz])	132.0 [4.65]
Agency Approvals and Standards *	cULus, CE
UL Data	
Switching Capacity	Ambient temperature 60°C: Pilot duty B300 5A 250VAC G.P. 5A 24VDC G.P.
UL Specified Wire Connection	60°C / 75°C copper conductors only Screw terminals fixed: AWG 20 – 12 solid or stranded Torque 0.8 Nm

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Dold Relay Timers

Relay Timers RK Series

Overview

The RK series timers are timing relays that have been designed to be economical and compact to meet the demands of all the modern time control needs. With a few variants of single function and a multi-function model, the RK series covers all common timing functions, time ranges and voltage needs. These timers are suitable for time-dependent control needs in most industrial automation and building automation systems.

Features

RK7814

- 4 time ranges up to 120 sec
- LED indicator for state of contact
- Dual-voltage version 110 – 127VAC + 24 VAC/VDC
- 1 changeover contact

RK7815, RK7816

- Time ranges up to 10 sec
- LED indicator for state of contact
- 1 changeover contact
- Dual voltage version 110 – 127 VAC + 24 VAC/VDC

RK7817

- 8 time ranges adjustable from 0.02 sec to 300 hr via rotational switches
- Dual-voltage-version 110 – 127VAC + 24 VAC/VDC
- 1 changeover contact

8 selectable functions via rotational switches

- Delay on energization (AV)
- Fleeting on make (EW)
- Delayed pulse (IE)
- Flasher, start with pulse (BI)
- Delay on de-energization (RV)
- Pulse forming function (IF)
- Fleeting on break (AW)
- Delay on energization and de-energization (AV / RV)

RK7814-81-61

RK7815-71-61

RK7816-81-61

RK7817-81-61

On-Delay Relay Timer RK Series						
Part Number	***Price***	***Timer Type***	***Timing Range***	***Voltage***	***Output Type***	***Drawing Link***
RK7814-81-61	$36.50	On-delay	0.05 to 120 seconds selectable	24 VAC/VDC and 110-127 VAC	1 changeover contact	PDF

Fleeting (single shot) Relay Timer RK Series						
Part Number	***Price***	***Timer Type***	***Timing Range***	***Voltage***	***Output Type***	***Drawing Link***
RK7815-71-61	$34.00	Fleeting (single-shot)	1 to 10 seconds	24 VAC/VDC and 110-127 VAC	1 changeover contact	PDF

Flasher Relay Timer RK Series						
Part Number	***Price***	***Timer Type***	***Timing Range***	***Voltage***	***Output Type***	***Drawing Link***
RK7816-81-61	$34.00	Flasher	1 to 10 seconds	24 VAC/VDC and 110-127 VAC	1 changeover contact	PDF

Multi-Mode Relay Timer RK Series						
Part Number	***Price***	***Timer Type***	***Timing Range***	***Voltage***	***Output Type***	***Drawing Link***
RK7817-81-61	$43.50	Multi-mode	0.02 seconds to 300 hours selectable	24 VAC/VDC and 110-127 VAC	1 changeover contact	PDF

Dold Relay Timers

Relay Timers RK Series Specifications				
Part Number	***RK7814-81-61***	***RK7815-71-61***	***RK7816-81-61***	***RK7817-81-61***
Input Specifications				
Nominal Voltage	24 VAC/VDC [1] + 110-127 VAC[2]			24 VAC/VDC [1] + 110-127 VAC [2]
Nominal Consumption	24VAC ~ 1VA 230VAC ~ 6VA 24VDC ~ 0.4 W			24VAC ~ 1VA 230VAC ~ 7.5 VA 24VDC ~ 0.5 W
Nominal Frequency	50/60 Hz			
Frequency Range	± 5%			
Contact Specifications				
Type	1 changeover contact			
Switching Capacity (according to AC 15)	N.O. Contact 2A / 230VAC N.C. Contact 1A / 230VAC			
Max Wire Size	22–14 AWG solid or stranded			
Mechanical Lifetime	> $1x10^7$ switching cycles			
Electrical Lifetime	> $1x10^5$ switching cycles			
Time Circuit Specifications				
Time Ranges	0.05 ~ 0.5 sec, 0.2 ~ 2 sec, 1.5 ~ 15 sec, 12 ~ 120 sec	1 ~ 10 sec		0.02* ~ 1 sec, 0.06* ~ 6 sec, 0.3 ~ 30 sec 0.03 ~ 3 min, 0.3 ~ 30 min, 3 ~ 300 min 0.3 ~ 30 hr, 3 ~ 300 hr (* 0.08 s for AV and IE functions)
Time Setting	Infinite, 1:10 on relative scale			Infinite, 1:100 on relative scale
Recovery Time	< 100ms			
Repeat Accuracy	≤ 0.5% of set time delay + 10ms			≤ 0.8% of set time delay + 20ms
Voltage Influence	≤ 1%			
Temperature Influence	0.25 % / K			≤ 2% at range 0 – 60°C ≤ 5% at range -20 – 0°C
General Specifications				
Connection (fixed screw terminal)	0.34 – 2 x 2.5 mm² / 22–14 AWG solid or 0.34 – 2 x 2.5 mm² / 22–14 AWG stranded wire with and without ferrules			
Tightening Torque	0.5 N·m			
Ambient Temperature	-40 to +60°C [-40 to +140°F]			-20 to +60°C [-4 to +140°F]
Storage Temperature	-40 to +70°C [-40 to +158°F]			-25 to +70°C [-13 to +158°F]
Relative Air Humidity	93 % at 40°C			
Protection Rating	Housing IP40 / Terminals IP20			
Vibration Resistance	Amplitude 0.35 mm frequency 10 – 55Hz			
Mounting	35mm DIN rail			
Relay Indicator	On, when corresponding output relay is active (contact 15–18 closed)			Green LED: On, when supply connected Yellow LED "R/t": Shows status of output relay and time delay (15-16-18): -Continuous off: Output relay not active;no time delay -Continuous on: Output relay active no time delay -Flashing (short on, long off) Time delay: output relay not active -Flashing (long on, short off) Time delay: output relay active
Weight (g [oz])	65.0 [2.29]	60.0 [2.11]		70.0 [2.46]
Agency Approvals and Standards *	cULus, CE			
UL Data				
Switching Capacity	Ambient temperature 60°C: Pilot duty B300 4A 240VAC G.P. 4A 30VDC G.P.			
UL Specified Wire Connection	60°C / 75°C copper conductors only AWG 22 – 14 solid or stranded Torque 0.5 N·m			

Notes: [1]at terminals A3-A2 [2] at terminals A1-A2
***To obtain the most current agency approval information, see the Agency Compliance & Certifications Checklist section on the specific part number's web page.**