Klemsan®
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Z1K-M10
Z1K-M10A

Multi Function Timer Relays

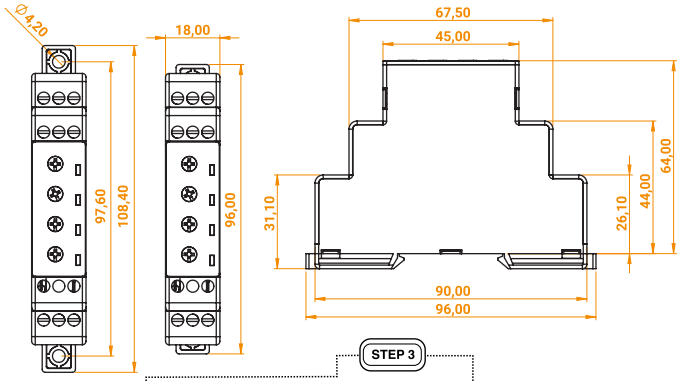
- » Sleek design with NEW 18 mm width in accordance with DIN norm
- » Conforms to IEC 61812-1 + UL 508
- » Wide input power supply range (12-240 V AC/DC)
- » 1 SPDT relay output (10A)
- » Wide and easily adjustable time range
- » LED notifications
- » High sensitivity and switching capacity
- » High mechanical endurance
- » Multifunctional
- » Function control with trigger input

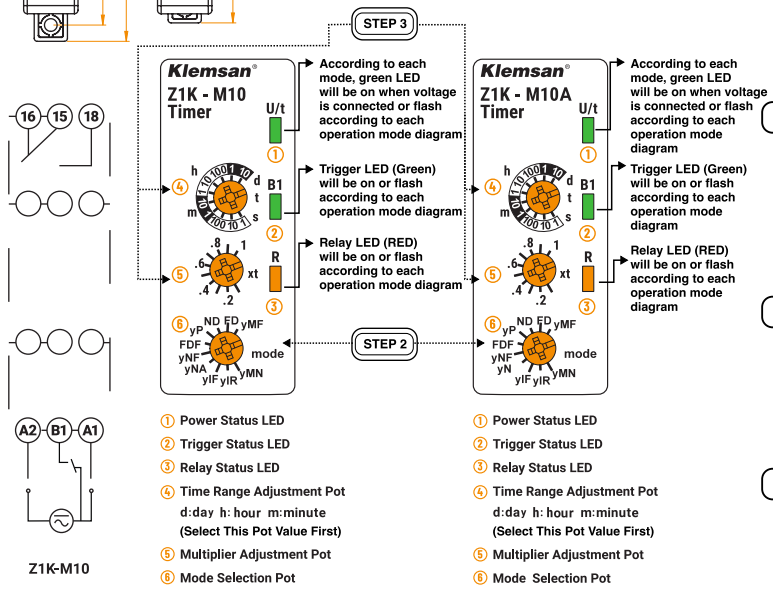
STEP 1

Model Name	Order No	Mode	Timing Range
Z1K-M10	261019	ND, FD, FDF, yMN, yMF, yIR, yNF, yP, yIF, yNA	0.1 sec .. 10 days
Z1K-M10A	261024	ND, FD, FDF, yMN, yMF, yIR, yNF, yP, yIF, yN	0.1 sec .. 10 days

Operating Voltage		12..240V AC/DC ± 10%
Operating Frequency		45..65Hz
Power Consumption	DC	< 1.5 W
	AC	< 5 VA
Relay Outputs	Number and Type of Contacts	1 C/O
	Maximum Switching (Voltage/Current/Power)	250VAC / 5 A / 1250 VA 115 VAC / 10A / 1250 VA
Cable Cross Section		2.5mm² / AWG 14-30 solid or stranded
Screw Tightening Torque		0.5 Nm / 4.5 lb-inch
Cable Stripping Size (Min / Max)		8mm / 9mm
Operating Temperature Range		-20 / +60 °C
Max Surrounding Air Temperature		60°C
Protection Degree (IEC 60529)		IP 20
Pollution Degree		2

NOTE: Use 60/75°C copper (CU) wire only.





① Power Status LED
② Trigger Status LED
③ Relay Status LED
④ Time Range Adjustment Pot
d:day h:hour m:minute
(Select This Pot Value First)
⑤ Multiplier Adjustment Pot
⑥ Mode Selection Pot

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STEP 1

OPERATION MODE	FUNCTION ILLUSTRATION	FUNCTION STATEMENT
Mode: ND On Delay	R: ←t_{off}→ U/t:	The output relay is initially de-energized and energized after an adjustable time delay, t_{off}.
Mode:FD Off Delay	R: ←t_{on}→ U/t:	The output relay is initially energized and de-energized after an adjustable time delay, t_{on}.
Mode: FDF OFF Flash	R: ←t_{off}→ ←t_{on}→ ←t_{off}→ U/t:	The output relay is initially de-energized and energized after an adjustable time delay, t_{off}, and stays energized for an adjustable period, t_{on}, and then de-energized. This loop is repeated until the device is powered off.
Mode:yNF ON and OFF Delay with Control Signal	T: ←t→ <t R: ←t_{off}→ U/t: B1:	The output relay is initially de-energized. A contact closure on B1 contact triggers an adjustable time delay, t, which energizes the output relay when expired. Similarly contact release of B1 contact triggers the time delay, t, which de-energizes the output relay when expired. Delay time, t, is cleared when the contact state of B1 contact changes.
Mode:yN Pulse delayed relay with control signal	T: R: ←t→ ←1s→ U/t: B1:	The output relay is initially de-energized. The state change of the contact on T contact from open to closed, adjustable time delay, t, counts down and output relay is energized when t is expired. The relay remains energized for 1 sec and de-energized at the end of the time.
Mode:yP Pulse Output with Control Signal	T: R: ←t_{on}→ ←t_{on}→ ←t_{on}→ U/t: B1:	The output relay is initially de-energized. A state change on T contact both energizes the output relay and triggers an adjustable time delay, t, which de-energizes the output relay when expired. During the time delay, T contact is insensitive to state changes and becomes sensitive when time delay, t, expired.
Mode:yNA Additive ON Delay	T: t1 t2 t3 t1 R: U/t: B1:	The output relay is initially de-energized. If B1 contact is open, adjustable time delay, t, counts down and output relay energizes when t is expired. Any contact closure on B1 contact pauses the count down process, and the process continues when the contact release on B1 contact occurs. A contact release is needed to restart the cycle, after the output relay is energized.
Mode:yMN ON Delay with Maintened Control Signal	T: <t R: ←t_{off}→ U/t: B1:	The output relay is initially de-energized. A contact closure on B1 contact triggers an adjustable time delay, t, which energizes the output relay when expired. The output relay stays energized as long as the B1 contact is active. Delay time, t, is cleared when the contact on B1 contact opens.
Mode:yMF OFF Delay with Maintened Control Signal	T: ←t→ <t R: U/t: B1:	The output relay is initially de-energized and energized when a contact closure on B1 contact is detected. A contact release on B1 contact triggers an adjustable time delay, t, which de-energizes the output relay when expired. Reclosure of the contact on B1 contact before the time delay is expired restarts time delay, t, and keeps the output relay energized.
Mode:yIR Interval with Control Signal On	T: R: ←t_{on}→ ←t_{on}→ U/t: B1:	The output relay is initially de-energized. A contact closure on B1 contact both energizes the output relay and triggers an adjustable time delay, t, which de-energizes the output relay when expired. During the time delay, B1 contact is insensitive to state changes and becomes sensitive when time delay, t, expired.
Mode:yIF Interval with Control Signal Off	T: R: ←t_{on}→ ←t_{on}→ U/t: B1:	The output relay is initially de-energized. A state change of the contact on B1 contact from closed to open both energizes the output relay and triggers an adjustable time delay, t, which de-energizes the output relay when expired. During the time delay, B1 contact is insensitive to state changes and becomes sensitive when time delay, t, expired.

USER ASSISTANT

SETTING THE TIMER RELAY

STEP 1 Check the device model name and understand which operating modes your device supports.

STEP 2 Select the desired operation mode by the pot N.6

STEP 3 Set time range from the pot No.4 and No.5

Exmple → For 80 minutes → t= 10 m xt= .8
Exmple → For 3 hour → t= 10 h xt= .3

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