

POTTER & BRUMFIELD K10 SERIES MINIATURE RELAY

GENERAL PURPOSE RELAYS
INDUSTRIAL RELAYS

INTRODUCTION

TE Connectivity (TE)'s Potter & Brumfield K10 series miniature relays are designed for the global market, offering a versatile and reliable solution for industrial control applications. With a variety of configurations available, the P&B K10 Series relays are engineered to meet the rigorous demands of industries such as industrial automation, medical equipment, and motor control systems.



FEATURES

- Contact Arrangement: 2 Form C (DPDT).
- Coil Options: Supports both AC and DC versions to suit diverse requirements.
- Mounting Options: Flexible solutions including socket, PCB, and top-flange mounting.
- Compact Design: Space-saving miniature form factor ideal for constrained environments.

APPLICATIONS

- Industrial controls
- Medical
- Motor controls

APPROVALS

- UL E214025
- CSA L15734



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INDUSTRIAL RELAYS

CONTACT DATA

Contact arrangement	2 form C (CO)
Rated voltage	120 VAC
Rated current	15 A
Contact material	AgCdO
Min. recommended contact load: AgCdO contacts	300mA, 12VDC
Initial contact resistance	100mΩ
Frequency of operation, with/without load	360 ops./hour
Operate/release time max.	13/10 ms
Bounce time max.	10 ms

CONTACT RATINGS

Type	Load	Operations
UL 508		
AgCdO	15A, 120VAC	100x10 ³
	10A, 277VAC	100x10 ³
	15A, 30VDC	100x10 ³
	15 FLA, 36 LRA, 120VAC	100x10 ³
	1/3HP, 120VAC	1x10 ³
	1/2HP, 250VAC	1x10 ³
Mechanical endurance		10x10 ⁶

Note:
Indicated contact ratings and electrical endurance data apply only for direct wiring of the relay (according to UL 508/61810-1); for relays mounted on sockets, deratings may apply.

COIL DATA

Coil voltage range	6 to 110VDC 6 to 240VAC
Coil insulation system according UL	Class B

COIL VERSIONS, DC COIL

Coil Code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω± 10%	Rated coil power mW
006	6	4.5	0.6	40	900
012	12	9.0	1.2	160	900
024	24	18.0	2.4	650	900
036	36	27.0	3.6	1440	900
048	48	36.0	4.8	2600	900
110	110	82.5	11.0	11000	1100

COIL VERSIONS, AC COIL

Coil Code	Rated voltage VAC	Operate voltage VAC	Release voltage VAC	Coil resistance Ω± 10%	Rated coil power VA
006	6	5.1	0.6	10.5	1.20
012	12	10.2	1.2	43	1.20
024	24	20.4	2.4	160	1.25
120	120	102.0	12.0	3900	1.35
240	240	204.0	24.0	12000	1.50

All figures are given for coil without preenergization, at ambient temperature +23°C, 60Hz.

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INDUSTRIAL RELAYS

INSULATION DATA

Initial dielectric strength	
between open contacts	1000Vrms
between contact and coil	1500Vrms
between adjacent contacts	1500Vrms
between coil and frame	1500Vrms
Initial surge withstand voltage	
between adjacent contacts	1000MΩ at 500VDC

OTHER DATA

Material compliance	EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter
Ambient temperature	-45 to 85°C
Category of environmental protection	
IEC 61810	RTI - dust protected
Weight	51 g
Terminal type	quick connect (QC) .187 PCB .120" and .160" long
Packaging/unit	box/250 pcs., tray/50 pcs.

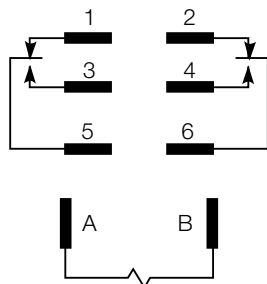
ACCESSORIES

Product Code	Description	Part Number
27E895	DIN socket	2-1419106-7
27E487	Track mount socket	1-1419106-9
20C426	Clip for 27E895 and 27E487	5-1393159-1
27E488	Chassis/solder socket	2-1419106-0
27E489	PCB socket	2-1419106-1
20C217	Clip for 27E488 and 27E489	1419111-2

For details see datasheet [Sockets and Accessories, K10 Relays*](#)

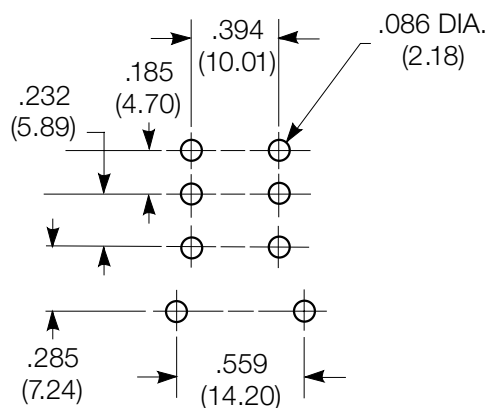
TERMINAL ASSIGNMENT

2 Form C



PCB LAYOUT

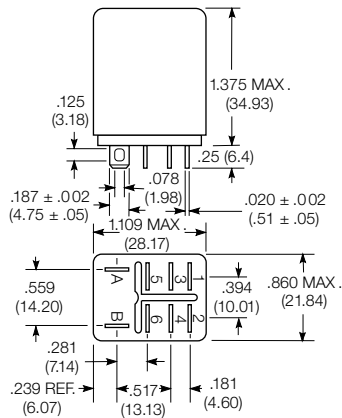
Bottom view on solder pins



DIMENSIONS (Unit:mm)

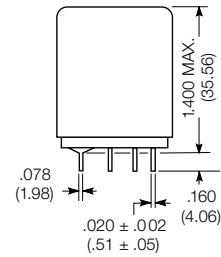
MOUNTING CODE 1

Socket mount



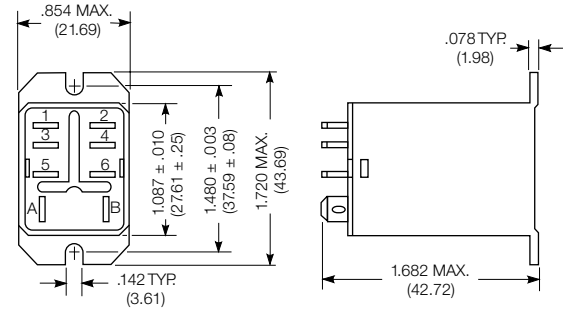
MOUNTING CODE 5

Printed circuit terminals



MOUNTING CODE T

Flange mount



PRODUCT CODE STRUCTURE

Part Number						
K10	P	-11	D	1	5	-6

Type

K10	15A Miniature Relay, K10 Series
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Cover

P	Polycarbonate (smoke color)
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Contact arrangement

11	2 form C (CO)
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Coil input

A	50/60Hz AC
D	DC

Coil voltage

Coil code: please refer to coil versions table

Contact type

5	AgCdO (15A)
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Mounting & termination

1	Socket mount; .187" (4.75mm) quick connect/solder terminals
5	Printed circuit terminals; .160" (4.1mm) length.
T	Mounting bracket on end of cover; .187" (4.75mm) quick connect/solder terminals

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