CONVENTIONAL TYPE REED RELAY
EDR0 SERIES

EDR001

EDR002

EDR003

EDR007

EDR009

EDR010

EDR011

EDR012

EDR013

EDR015

EDR016

EDR018

■ FEATURES

◆ EDR0 01, 02, 03, 07, 09, 10, 11, 12, 13, 15, 16 SERIES

- 2.54 mm IC terminal arrangement.
- High switching speed and low bounce time.
- Use gas tube sealed switch to prevent dust, gas and humidity influence.
- Wide operate voltage range and low power consumption.
- Ideal for use on cordless telephone, multifunction telephone, modem, burglar alarm etc..

◆ EDR0 18 SERIES

- Low coil resistance.
- Less than 15mA Pull-In-Current possible.
- Coil-Contact isolation voltage up to 4250 VDC / 3000 VAC.
- Position of pin is optional.
- Wide operation current and low power consumption.
- A sealed metal outer case is used to prevent interference by magnetic fields and also to protect the coil during PCB assembly.
- This product of line sense reed relay are designed for use as telephone line busy detectors.

■ PART NUMBER SYSTEM

EDR0 01 1 A 08 00 Z

- Z: RoHS Compliant
- Special code: 00~99
- Nominal voltage: 08:8VDC
- Contact form:
  - A: CONTACT a  (NORMAL OPEN)
  - B: CONTACT b  (NORMAL CLOSE)
  - C: CONTACT c 
- Contact number set
- Types: 01, 02, 03, 07, 09, 10, 11, 12, 13, 15, 16
- Series name

EDR0 18 1 A 12 1 00 Z

- Z: RoHS Compliant
- Special code: 00~99
- Layout type
- Coil resistance: 12:12Ω
- Contact form
  - A: Contact a  (NORMAL OPEN)
- Contact number set
- Types
- Series name

■ SPECIFICATIONS(at 20℃)

Types	01	02	03
Contact Form	1A,1B	1A,1B	1A,1B
Contact Rating Maximum switching power Maximum switching voltage Maximum switching current Maximum carry current	 10 VA 100 VDC 0.5A 1.0A	 10 VA 100 VDC 0.5A 1.0A	 10 VA 100 VDC 0.5A 1.0A
Nominal Input Power Reference 5V Version	50 mW	50 mW	50 mW
Contact Resistance, Initial	150 mΩ	150 mΩ	150 mΩ
Life Expectancy (typ.) (10VDC-10mA,Resistive load)	$10x10^6$	$10x10^6$	$10x10^6$
Timing (at nominal VDC, 25Hz drive, 50% duty cycle with diode suppression) Operate time, maximum (Including Bounce) Release time, maximum	 1.0 ms 0.5 ms	 1.0 ms 0.5 ms	 1.0 ms 0.5 ms
Dielectric Voltage Coil to contact Across contacts	 500 VAC 200 VDC	 500 VAC 200 VDC	 500 VAC 200 VDC
Insulation Resistance(Ω)	$100x10^6$	$100x10^6$	$100x10^6$
Temperature Range	-10℃ to +60℃	-10℃ to +60℃	-10℃ to +60℃
Shock Resistance	30G Min.	30G Min.	30G Min.
Electrical Life at Rated Load	10^6	10^6	10^6
Package Type	OPEN	METAL	PLASTIC
Can Be Found In This Section of Brochure	PITCH 20.32+2.54mm	PITCH 20.32+2.54mm	PITCH 20.32+2.54mm

Types	09	10	11
Contact Form	1C	1C	1C
Contact Rating Maximum switching power Maximum switching voltage Maximum switching current Maximum carry current	 3 VA 30 VDC 0.2A 0.5A	 3 VA 30 VDC 0.2A 0.5A	 3 VA 30 VDC 0.2A 0.5A
Nominal Input Power Reference 5V Version	50 mW	50 mW	50 mW
Contact Resistance, Initial	150 mΩ	150 mΩ	150 mΩ
Life Expectancy (Typ.) (10VDC-10mA,Resistive load)	$10x10^6$	$10x10^6$	$10x10^6$
Timing (at nominal VDC, 25Hz drive, 50% duty cycle with diode suppression) Operate time, maximum (Including Bounce) Release time, maximum	 2.5 ms 2.0 ms	 2.5 ms 2.0 ms	 2.5 ms 2.0 ms
Dielectric Voltage Coil to contact Across contacts	 500 VAC 200 VDC	 500 VAC 200 VDC	 500 VAC 200 VDC
Insulation Resistance(Ω)	$100x10^6$	$100x10^6$	$100x10^6$
Temperature Range	-10℃ to +60℃	-10℃ to +60℃	-10℃ to +60℃
Shock Resistance	30G Min.	30G Min.	30G Min.
Electrical Life at Rated Load	10^6	10^6	10^6
Package Type	PLASTIC	METAL	PLASTIC
Can Be Found In This Section of Brochure	PITCH 22.86mm	PITCH 19.42+0.9mm	PITCH 19.42+0.9mm

Types	07	15
Contact Form	2A,2B	1A
Contact Rating Maximum switching power Maximum switching voltage Maximum switching current Maximum carry current	 10 VA 100 VDC 0.5A 1.0A	 1 VA 24 VDC 0.1A 0.3A
Nominal Input Power Reference 5V Version	50 mW	50 mW
Contact Resistance, Initial	150 mΩ	150 mΩ
Life Expectancy (Typ.) (10VDC-10mA,Resistive load)	$10x10^6$	$10x10^6$
Timing (at nominal VDC, 25Hz drive, 50% duty cycle with diode suppression) Operate time, maximum (Including Bounce) Release time, maximum	 1.0 ms 0.5 ms	 1.0 ms 0.5 ms
Dielectric Voltage Coil to contact Across contacts	 500 VAC 200 VDC	 500 VAC 150 VDC
Insulation Resistance(Ω)	$100x10^6$	$100x10^6$
Temperature Range	-10℃ to +60℃	-10℃ to +60℃
Shock Resistance	30G Min.	30G Min.
Electrical Life at Rated Load	10^6	10^6
Package Type	PLASTIC	PLASTIC
Can Be Found In This Section of Brochure	PITCH 22.86mm	PITCH 12.7mm

Types	12	13	16
Contact Form	1A,1B	1A,1B	1A
Contact Rating Maximum switching power Maximum switching voltage Maximum switching current Maximum carry current	 10 VA 100 VDC 0.5A 1.0A	 10 VA 100 VDC 0.5A 1.0A	**c UL us E155181(R)** 10 VA 100 VDC 0.5A 1.0A
Nominal Input Power Reference 5V Version	50 mW	50 mW	50 mW
Contact Resistance, Initial	150 mΩ	150 mΩ	150 mΩ
Life Expectancy (Typ.) (10VDC-10mA,Resistive load)	$10x10^6$	$10x10^6$	$10x10^6$
Timing (at nominal VDC, 25Hz drive, 50% duty cycle with diode suppression) Operate time, maximum (Including Bounce) Release time, maximum	 1.0 ms 0.5 ms	 1.0 ms 0.5 ms	 1.0 ms 0.5 ms
Dielectric Voltage Coil to contact Across contacts	 500 VAC 200 VDC	 500 VAC 200 VDC	 1500 VAC 200 VDC
Insulation Resistance(Ω)	$100x10^6$	$100x10^6$	$100x10^6$
Temperature Range	-10℃ to +60℃	-10℃ to +60℃	-10℃ to +60℃
Shock Resistance	30G Min.	30G Min.	30G Min.
Electrical Life at Rated Load	10^6	10^6	10^6
Package Type	METAL	PLASTIC	METAL
Can Be Found In This Section of Brochure	SIP TYPE PITCH 5.08+10.16+5.08mm	SIP TYPE PITCH 5.08+10.16+5.08mm	SIP TYPE PITCH 5.08+10.16+5.08mm

Types	18
Contact Form	1A
Contact Rating Maximum switching power Maximum switching voltage Maximum switching current Maximum carry current	 10VA 100VDC 0.5A 1.0A
Nominal Input Power Reference 5V Version	NOT APPLICABLE
Contact Resistance, Initial	150mΩ
Contact Material	Rhodium
Life Expectancy (Typ.) (10VDC-10mA,Resistive load)	$10x10^6$
Timing (at nominal VDC, 25Hz drive, 50% duty cycle with diode suppression) Operate time, maximum (Including Bounce) Release time, maximum	 1.0ms 0.5ms
Dielectric Voltage Coil to contact Across contacts	 3000VAC 150VDC
Insulation Resistance(Ω)	$100x10^6$
Temperature Range	-10℃ to +60℃
Shock Resistance	30G Min.
Electrical Life at Rated Load	10^6
Package Type	METAL
Can Be Found In This Section of Brochure	PITCH 25.4mm

Part Number	Nominal Voltage(VDC)	Coil Resistance (Ohms+/-10%)	Nominal Input Power(mW)	Must Operate Voltage(VDC)	Must Release Voltage(VDC)	Maximum Voltage(VDC)
EDR0011A03	3	500	18	2.4	0.6	11.0
EDR0011A05	5	500	50	3.2	0.8	11.0
EDR0011A06	6	500	72	3.8	0.8	11.0
EDR0011A08	8	700	92	6.0	0.8	18.0
EDR0011A09	9	700	116	6.0	0.8	18.0
EDR0011A12	12	1050	138	8.0	0.8	22.0
EDR0011A24	24	2080	277	16.0	0.8	32.0
EDR0011B03	3	500	18	2.4	0.6	3.6
EDR0011B05	5	500	50	3.75	0.8	6.0
EDR0011B06	6	500	72	4.5	0.8	7.2
EDR0011B08	8	700	92	6.0	0.8	9.6
EDR0011B09	9	700	116	6.75	0.8	10.8
EDR0011B12	12	1050	138	9.0	0.8	14.4
EDR0011B24	24	2080	277	18.0	0.8	28.8
EDR0021A03	3	500	18	2.4	0.6	11.0
EDR0021A05	5	500	50	3.2	0.8	11.0
EDR0021A06	6	500	72	3.8	0.8	11.0
EDR0021A08	8	700	92	6.0	0.8	18.0
EDR0021A09	9	700	116	6.0	0.8	18.0
EDR0021A12	12	1050	138	8.0	0.8	22.0
EDR0021A24	24	2080	277	16.0	0.8	32.0
EDR0021B03	3	500	18	2.4	0.6	3.6
EDR0021B05	5	500	50	3.75	0.8	6.0
EDR0021B06	6	500	72	4.5	0.8	7.2
EDR0021B08	8	700	92	6.0	0.8	9.6
EDR0021B09	9	700	116	6.75	0.8	10.8
EDR0021B12	12	1050	138	9.0	0.8	14.4
EDR0021B24	24	2080	277	18.0	0.8	28.8
EDR0031A03	3	500	18	2.4	0.6	11.0
EDR0031A05	5	500	50	3.2	0.8	11.0
EDR0031A06	6	500	72	3.8	0.8	11.0
EDR0031A08	8	700	92	6.0	0.8	18.0

Part Number	Nominal Voltage(VDC)	Coil Resistance (Ohms+/-10%)	Nominal Input Power(mW)	Must Operate Voltage(VDC)	Must Release Voltage(VDC)	Maximum Voltage(VDC)
EDR0031A09	9	700	116	6.0	0.8	18.0
EDR0031A12	12	1050	138	8.0	0.8	22.0
EDR0031A24	24	2080	277	16.0	0.8	32.0
EDR0031B03	3	500	18	2.4	0.6	3.6
EDR0031B05	5	500	50	3.75	0.8	6.0
EDR0031B06	6	500	72	4.5	0.8	7.2
EDR0031B08	8	700	92	6.0	0.8	9.6
EDR0031B09	9	700	116	6.75	0.8	10.8
EDR0031B12	12	1050	138	9.0	0.8	14.4
EDR0031B24	24	2080	277	18.0	0.8	28.8
EDR0072A03	3	500	18	2.4	0.6	11.0
EDR0072A05	5	500	50	3.2	0.8	11.0
EDR0072A06	6	500	72	3.8	0.8	11.0
EDR0072A08	8	700	92	6.0	0.8	18.0
EDR0072A09	9	700	116	6.0	0.8	18.0
EDR0072A12	12	1050	138	8.0	0.8	22.0
EDR0072A24	24	2080	277	16.0	0.8	32.0
EDR0072B03	3	500	18	2.4	0.6	3.6
EDR0072B05	5	500	50	3.75	0.8	6.0
EDR0072B06	6	500	72	4.5	0.8	7.2
EDR0072B08	8	700	92	6.0	0.8	9.6
EDR0072B09	9	700	116	6.75	0.8	10.8
EDR0072B12	12	1050	138	9.0	0.8	14.4
EDR0072B24	24	2080	277	18.0	0.8	28.8
EDR0091C03	3	500	18	2.4	0.6	11.0
EDR0091C05	5	500	50	3.2	0.8	11.0
EDR0091C06	6	500	72	3.8	0.8	11.0
EDR0091C08	8	700	92	6.0	0.8	18.0
EDR0091C09	9	700	116	6.0	0.8	18.0
EDR0091C12	12	1050	138	8.0	0.8	22.0
EDR0091C24	24	2080	277	16.0	0.8	32.0
EDR0101C03	3	500	18	2.4	0.6	11.0
EDR0101C05	5	500	50	3.2	0.8	11.0

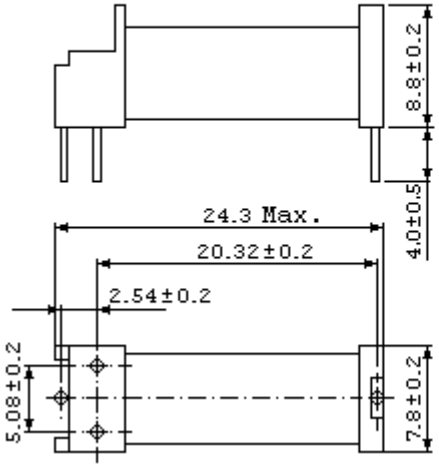
Part Number	Nominal Voltage(VDC)	Coil Resistance (Ohms+/-10%)	Nominal Input Power(mW)	Must Operate Voltage(VDC)	Must Release Voltage(VDC)	Maximum Voltage(VDC)
EDR0101C06	6	500	72	3.8	0.8	11.0
EDR0101C08	8	700	92	6.0	0.8	18.0
EDR0101C09	9	700	116	6.0	0.8	18.0
EDR0101C12	12	1050	138	8.0	0.8	22.0
EDR0101C24	24	2080	277	16.0	0.8	32.0
EDR0111C03	3	500	18	2.4	0.6	11.0
EDR0111C05	5	500	50	3.2	0.8	11.0
EDR0111C06	6	500	72	3.8	0.8	11.0
EDR0111C08	8	700	92	6.0	0.8	18.0
EDR0111C09	9	700	116	6.0	0.8	18.0
EDR0111C12	12	1050	138	8.0	0.8	22.0
EDR0111C24	24	2080	277	16.0	0.8	32.0
EDR0121A03	3	500	18	2.4	0.6	11.0
EDR0121A05	5	500	50	3.2	0.8	11.0
EDR0121A06	6	500	72	3.8	0.8	11.0
EDR0121A08	8	700	92	6.0	0.8	18.0
EDR0121A09	9	700	116	6.0	0.8	18.0
EDR0121A12	12	1050	138	8.0	0.8	22.0
EDR0121A24	24	2080	277	16.0	0.8	32.0
EDR0121B03	3	500	18	2.4	0.6	3.6
EDR0121B05	5	500	50	3.75	0.8	6.0
EDR0121B06	6	500	72	4.5	0.8	7.2
EDR0121B08	8	700	92	6.0	0.8	9.6
EDR0121B09	9	700	116	6.75	0.8	10.8
EDR0121B12	12	1050	138	9.0	0.8	14.4
EDR0121B24	24	2080	277	18.0	0.8	28.8
EDR0131A03	3	500	18	2.4	0.6	11.0
EDR0131A05	5	500	50	3.2	0.8	11.0
EDR0131A06	6	500	72	3.8	0.8	11.0
EDR0131A08	8	700	92	6.0	0.8	18.0
EDR0131A09	9	700	116	6.0	0.8	18.0
EDR0131A12	12	1050	138	8.0	0.8	22.0
EDR0131A24	24	2080	277	16.0	0.8	32.0

Part Number	Nominal Voltage(VDC)	Coil Resistance (Ohms+/-10%)	Nominal Input Power(mW)	Must Operate Voltage(VDC)	Must Release Voltage(VDC)	Maximum Voltage(VDC)
EDR0131B03	3	500	18	2.4	0.6	3.6
EDR0131B05	5	500	50	3.75	0.8	6.0
EDR0131B06	6	500	72	4.5	0.8	7.2
EDR0131B08	8	700	92	6.0	0.8	9.6
EDR0131B09	9	700	116	6.75	0.8	10.8
EDR0131B12	12	1050	138	9.0	0.8	14.4
EDR0131B24	24	2080	277	18.0	0.8	28.8
EDR0151A03	3	500	18	2.4	0.6	3.6
EDR0151A05	5	500	50	4.0	0.8	6.0
EDR0151A06	6	500	72	4.8	0.8	7.2
EDR0151A08	8	700	92	6.4	0.8	9.6
EDR0151A09	9	700	116	7.2	0.8	10.8
EDR0151A12	12	1050	138	9.6	0.8	14.4
EDR0151A24	24(18)	2080	277	14.4	0.8	28.8
EDR0161A03	3	500	18	2.4	0.6	11.0
EDR0161A05	5	500	50	3.2	0.8	11.0
EDR0161A06	6	500	72	3.8	0.8	11.0
EDR0161A08	8	700	92	6.0	0.8	18.0
EDR0161A09	9	700	116	6.0	0.8	18.0
EDR0161A12	12	1050	138	8.0	0.8	22.0
EDR0161A24	24	2080	277	16.0	0.8	32.0

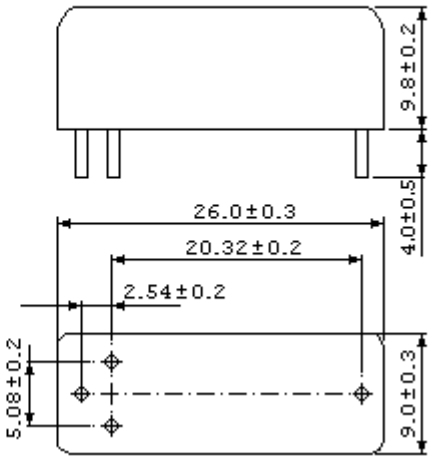
Part Number	Coil Resistance (Ohms+/-10%)	Nominal Input Power(mW)	Nominal Current(mA)	Must Operate Current(mA)	Must Release Current(mA)	Maximum Current(mA)
EDR0181A071/2	7	2.8	20	15	5	200
EDR0181A091/2	9	3.6	20	15	5	200
EDR0181A121/2	12	4.8	20	15	5	200
EDR0181A151/2	15	6.0	20	15	5	200
EDR0181A181/2	18	7.2	20	15	5	200

■ DIMENSIONS (UNIT: mm)

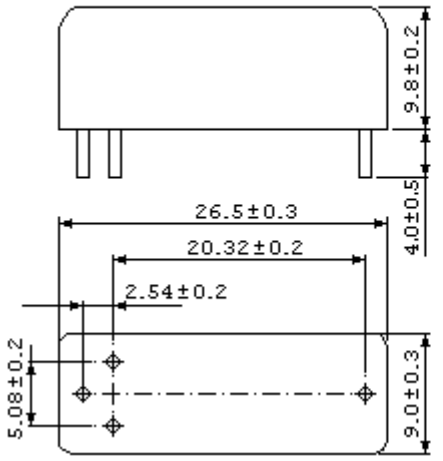
EDR001 (FORM 1A,1B)
Open Type



EDR002 (FORM 1A,1B)
Magnetic Shield Type

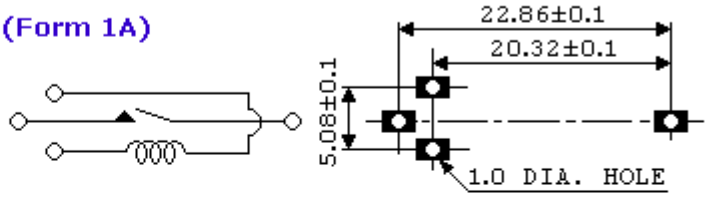


EDR003 (FORM 1A,1B)
Plastic Cap Type

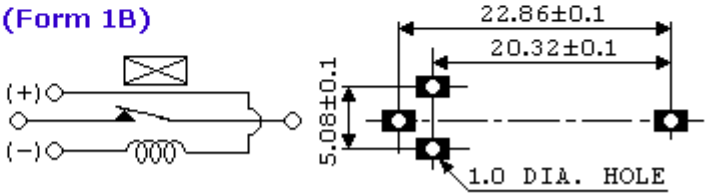


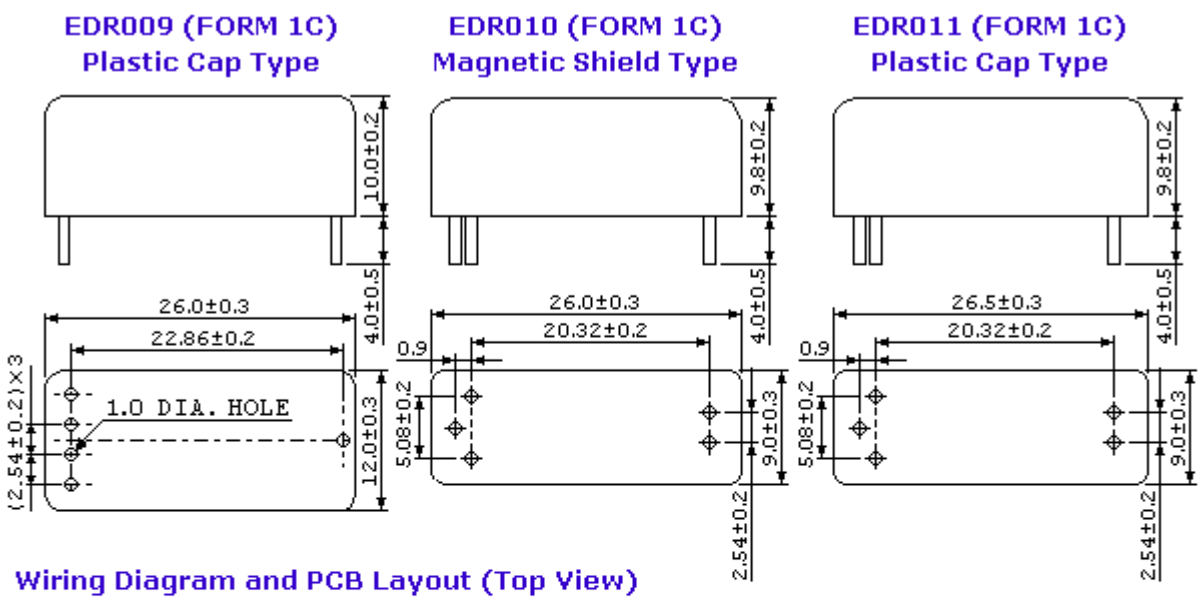
Wiring Diagram and PCB Layout (Top View)

(Form 1A)

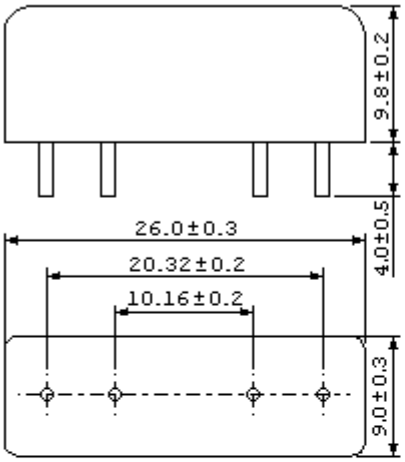


(Form 1B)

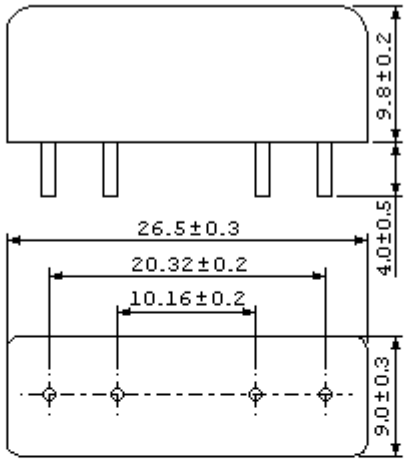



EDR009 (FORM 1C)
Plastic Cap Type
EDR010 (FORM 1C)
Magnetic Shield Type
EDR011 (FORM 1C)
Plastic Cap Type
10.0±0.2
9.8±0.2
9.8±0.2
4.0±0.5
4.0±0.5
4.0±0.5
26.0±0.3
22.86±0.2
26.0±0.3
20.32±0.2
26.5±0.3
20.32±0.2
0.9
0.9
(2.54±0.2)×3
1.0 DIA. HOLE
12.0±0.3
5.08±0.2
9.0±0.3
5.08±0.2
9.0±0.3
2.54±0.2
2.54±0.2
Wiring Diagram and PCB Layout (Top View)
EDR009 (FORM 1C)
EDR010 (FORM 1C)
EDR011 (FORM 1C)
NC
NO
NC
NO
NC
NO
22.86±0.1
20.32±0.1
20.32±0.1
0.9
0.9
7.62±0.1
5.08±0.1
5.08±0.1
2.54±0.2
2.54±0.2
1.0 DIA. HOLE
1.0 DIA. HOLE
1.0 DIA. HOLE

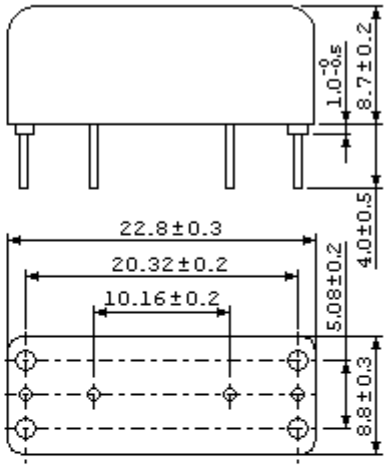
EDR012 (FORM 1A,1B)
Magnetic Shield Type



EDR013 (FORM 1A,1B)
Plastic Cap Type

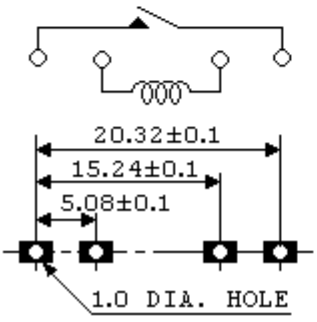


EDR016 (FORM 1A)
Magnetic Shield Type

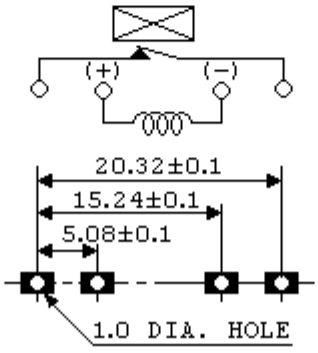


Wiring Diagram and PCB Layout (Top View)

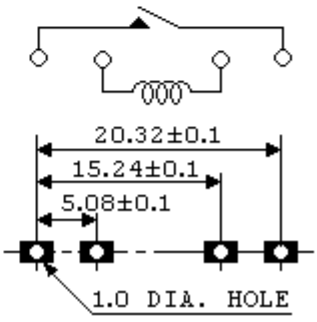
(FORM 1A)



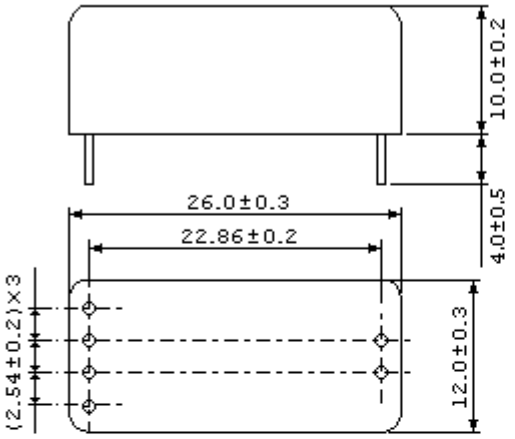
(FORM 1B)



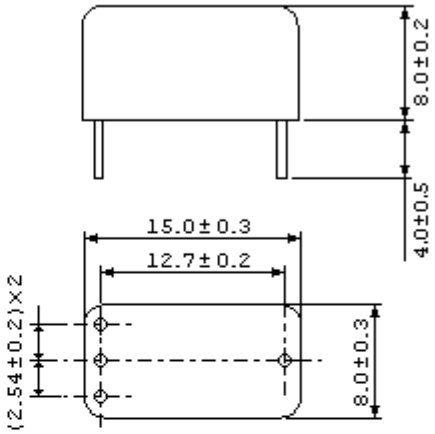
EDR016 (FORM 1A)



EDR007 (FORM 2A,2B)
Plastic Cap Type

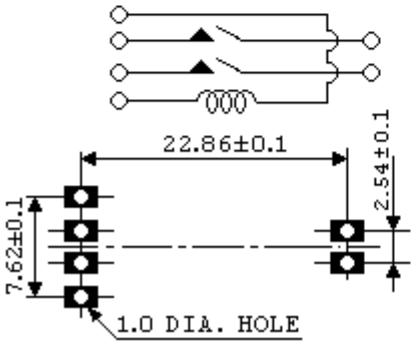


EDR015 (FORM 1A)
Plastic Cap Type

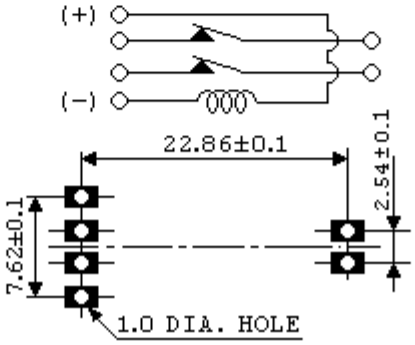


Wiring Diagram and PCB Layout (Top View)

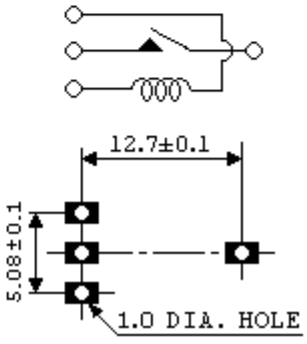
EDR007 (FORM 2A)



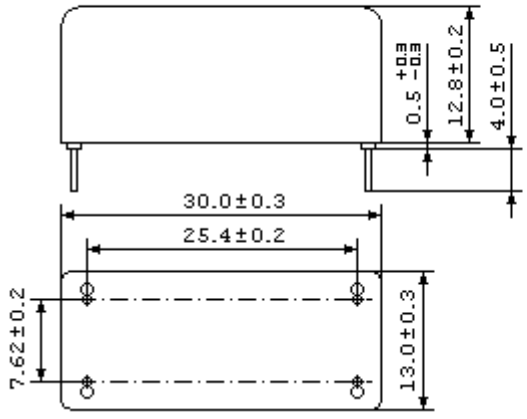
EDR007 (FORM 2B)



EDR015 (FORM 1A)



EDR018 (FORM 1A)
Magnetic Shield Open Type



Wiring Diagram and PCB Layout
(Top View)

EDR0181A**1

EDR0181A**2