

# Catalogue No: **TZS-AD 415/440V**

## ELR SURFACE MOUNT 415/440V AC

Power Distribution and Protection > Earth Leakage Protection > Earth Leakage Relays > Terasaki TZS range of Earth Leakage Relays and Toroids > TZS Earth Leakage Relay



### Earth Leakage Relay TZS, surface mount 415/440V AC



- Surface mount and field adjustable
- 1 x trip change-over contact
- Red LED trip indication
- High vibration withstand
- 2-wire toroid connection
- 30mA - 1000mA sensitivity and up to 2s time delay
- Harmonic filter.

Representative Photo Only  
(actual product may vary based on configuration selections)

#### SPECIFICATIONS

Product Series	TZS
Component Type Power Distribution & Protection	Earth Leakage Relay
Input Frequency, Nom	50 Hz
Operational Frequency, Min	47 Hz min
Operational Frequency, Max	63 Hz max
Unom, Supply Voltage(s), AC, Nom	415 V AC 440
Burden, Rated	1 VA
Power Dissipation, Max	1 W
Number of Setpoints	5
Setpoint Range(s)	Configurable 0.03 ... 1A
Configuration Method	DIP-Switch
Trip Time, Min	300 ms
Trip Time, Max	2000 ms
Display Technology	LED Sequence
Reset Type	Local pushbutton
Alarm Function	Yes
Details, Alarm	Trip contact and RED LED
Number of Alarm Contacts	1
Contact Configuration	1 CO
Details, Output(s)	1 SPDT trip contact.
Terminal Type	Screw Terminal(s)
Mounting	Surface Mount
Intervention time t:	0.04, 0.3, 0.5, 1.0 and 2.0 s
Current set point I $\Delta$ n	.03, 0.1, 0.3, 0.5 & 1.0
Power On	Green LED
Visible Trip Indicator	Red LED
Width	60 mm

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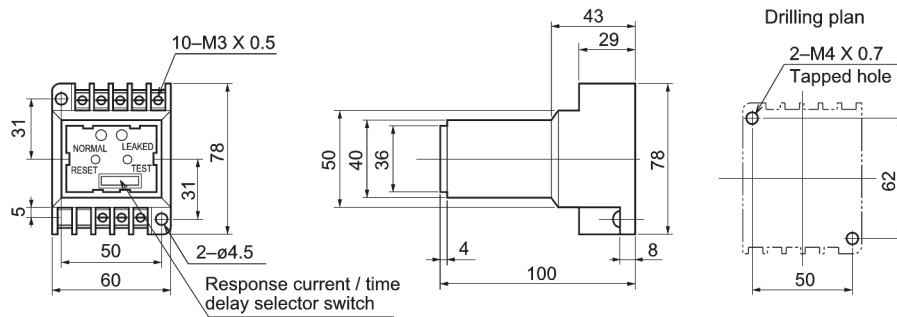
Power Distribution and Protection > Earth Leakage Protection > Earth Leakage Relays > Terasaki TZS range of Earth Leakage Relays and Toroids > TZS Earth Leakage Relay



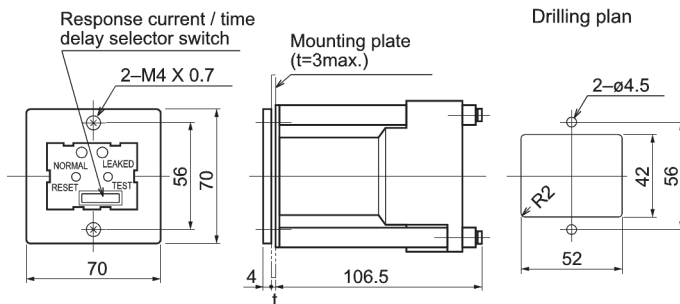
Height	78 mm
Depth	100 mm
Weight	0.22 kg
IΔn, Leakage Current, Max	1 A

REFERENCES	
IECEX Certificate	-
Supplier Declaration of Conformity:	-
Installation Guide:	-
User Manual:	-
Manufacturer Datasheet:	-
Manufacturer Catalogue & Product Selection:	-

### Surface mount Type



### Flush mount Type

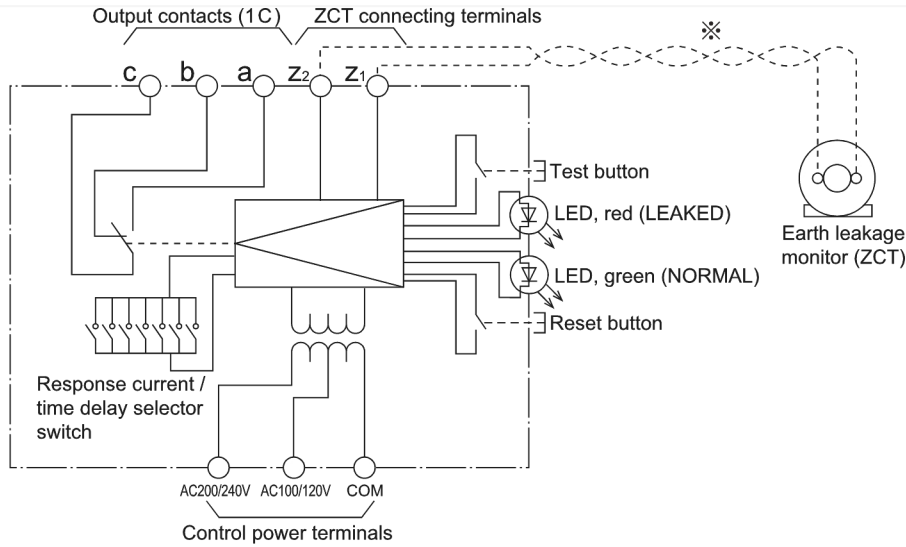


Dimension Diagram

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※ TZS-AD — ZCT wire length

30 mA: less than 3 m, 100, 300 mA: less than 5 m, 500, 1000 mA: less than 10 m

**NOTE:** The output contacts are hold until the reset button is pressed.  
Loss of control power resets the contacts automatically.

Terminal screw tightening torque: 0.45–0.73 N.m (4.6–7.4 kgf.cm)

Connection / Wiring Diagram

## Selection of sensitivity current and operating time

### Tripping times

Rated operating time (sec)	Operating time range (sec)	Non-operating time range (sec)
0.3	0.2-0.36	0.15
0.5	0.4-0.6	0.38
1	0.8-1.2	0.7
2	1.3-2	1.25

Technical Diagram

Table 1

	Slide switch position				
	Switch	1	2	3	4
30 mA	ON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	OFF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Superceded by switch setting "ON"					
100 mA	ON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	OFF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
300 mA	ON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	OFF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
500 mA	ON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	OFF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1000 mA	ON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	OFF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Table 2 (not applicable to 30 mA)

	Slide switch position				
	Switch	5	6	7	8
0.04 sec or less	ON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	OFF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0.3 sec (0.2-0.36 sec)	ON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	OFF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0.5 sec (0.4 - 0.8 sec)	ON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	OFF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1 sec (0.8 - 1.2 sec)	ON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	OFF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 sec (1.3 - 2 sec)	ON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	OFF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>