

# 2

## Ratings and Specifications

### Earth Leakage Relays

#### 20 TZS series (Harmonics/surge with countermeasure)

#### Category

#### Type

Phase and wires ① 1φ2W, 1φ3W  
3φ3W, 3φ4W

#### Outside view

The monitor (ZCT) is shown in the table below.

#### ■ Ratings

Rated control voltage, V AC②

Applicable range V AC100  
AC200

Rated sensitivity current [mA]

Rated operating time (sec)

External dimensions mm Width × Height × Depth

Weight (FC) kg

#### ■ Connections and Mountings

Front-connected (FC)

Flush-mounted (FP)

#### ■ Standard features

Earth leakage detection (Current operation type)

Output contact ⑥

Earth leakage indication

Reset function

Power source required

CE marking

Page of characteristics and outline dimensions

#### Separate type

High-sensitivity  
Instantaneous tripping type

TZS-15HD ⑧  
TZS-24HD  
TZS-40HD  
TZS-68HD  
TZS-100HD

●

●



Medium sensitivity Instantaneous  
tripping / time delay tripping type

TZS-15MD ⑨  
TZS-24MD  
TZS-40MD  
TZS-68MD  
TZS-100MD

●

●



100 selectable ③④  
200

80~132  
160~264

30

0.1 or less

60×78×100

0.22

●

○

Electronic

1C

LED (Red)

Push button ⑦

1VA or more

Non ⑩

7-251

100 selectable ③④  
200

80~132  
160~264

100  
200  
500  
1000  
selectable

0.1 or less

0.3

0.5 selectable ⑤

1

2

60×78×100

0.22

●

○

Electronic

1C

LED (Red)

Push button ⑦

1VA or more

Non ⑩

7-251

#### Notes:

●: Standard. This configuration used unless otherwise specified.

○: Specify when ordering.

●: "yes" or "available".

①: Can also be applied to the ground wire.

②: Applicable rated voltage For 100V: 100 to 120V,  
For 200V: 200 to 240V

③: Terminals for 100V AC and 200V AC are provided.

**Caution: do not apply 100V AC to the 200V AC terminal., burnout can result.**

④: For 415V AC or 440V AC, please contact TERASAKI.

⑤: Operating time range and Non-operating time range.

Rated operating time (sec)	Operating time range (sec)	Non-operating time range (sec)
0.1 or less	0.1 or less	—
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

⑥: Ratings of output contact.

Voltage	COSφ=1	COSφ=0.4 (L/R=7ms)	Minimum load
120V AC	6A	3.5A	5V DC 10mA
240V AC	6A	3.5A	
30V DC	6A	3A	

⑦: The output contacts remain operational until the RESET button is pressed. If the control power supply fails, the contacts automatically reset.

⑧: Type of the relay displayed is TZS-HD.

⑨: Type of the relay displayed is TZS-MD.

⑩: The earth leakage relay TZS-AD for overseas with CE marking is available. Please contact us for details.

Remarks (1): With the medium sensitivity

instantaneous tripping / time delay tripping type, you can switch the rated sensitivity current to 100mA, 200mA, 500mA, or 1000mA, and switch the operating time to 5 stages of 0.1 seconds or less, 0.3, 0.5, 1, or 2 seconds with the DIP switch. The rated sensitivity current is set to 100 mA and the operating time is set to 0.1 seconds before delivery.

### Ratings of ZCT

Type	TZS-15	TZS-24	TZS-40	TZS-68	TZS-100
Outside view					
Diameter of transit part [mm]	φ15	φ24	φ40	φ68	φ100
Weight [kg]	0.2	0.3	0.7	1.1	2.0
Applicable numbers, size and continuous current of wires (IV cable wires)					
2 wires	max. continuous current A	61	139	298	650
	max. wire size mm <sup>2</sup>	8	30	100	325
	max. diameter of wire mm	6.0	10.5	17	29
3 wires	max. continuous current A	61	139	298	650
	max. wire size mm <sup>2</sup>	8	30	100	325
	max. diameter of wire mm	6.0	10.5	17	29
4 wires	max. continuous current A	49	115	257	556
	max. wire size mm <sup>2</sup>	5.5	22	80	250
	max. diameter of wire mm	5.0	9.5	15.5	26