

# H.V. Distribution Equipment

## Instrument transformers

### ZCT, EVT and special purpose CT

#### ■ Description

FUJI can supply special purpose CTs, ZCTs (Zero-phase current transformers) and EVT's (Earthing voltage transformers) as well as standard FUJI instrument transformers. Some of the versions are described below.

#### CED and ZCED

The CED and ZCED are split-construction types. They can be mounted in position without disconnecting the cables.

CED: Epoxy-molded split-toroidal type CT  
ZCED: Epoxy-molded split-toroidal type ZCT

#### ZCE

ZCE type is toroidal-type ZCTs and molded in epoxy resin.

#### GVE and GPE

GVE and GPE series are 3-phase earthing voltage transformers.

GVE: Epoxy-molded type (3.3kV, 6.6kV)

GPE: Epoxy-molded type (11 to 33kV)

Note: All types are for indoor use only.



#### ■ Type number nomenclature

##### • Toroidal type ZCT

**ZCT**  **A/**

**Basic type** \_\_\_\_\_

ZCE: Epoxy molded toroidal type  
ZCED: Epoxy molded split-toroidal type

**Hole diameter, mm** \_\_\_\_\_

1: 65                      4: 125 (ZCE type)  
2: 80 (ZCE type)      130 (ZCED type)  
                                 90 (ZCED type)      5: 190 (ZCE type)  
3: 100                     150 (ZCED type)

**Rated primary current (Amps.):** 200 to 1500

##### • Split-toroidal type CT

**CT**  **/**

**Basic type** \_\_\_\_\_

**Hole diameter, mm** \_\_\_\_\_

1: 65  
2: 90  
3, 3A, 3B: 100  
4: 130

**Rated primary current (Amps)** \_\_\_\_\_

200 to 3000

##### • Earthing voltage transformer EVT

**EVT**  **-**  **F -**

**Basic type** \_\_\_\_\_

GVE, GPE: Epoxy-molded type

**Secondary rated burden** \_\_\_\_\_

GVE	GPE:
1: 3 x 100VA	21: 3 x 200VA
2: 3 x 200VA	13: 3 x 200VA
	12: 3 x 200VA
	9: 3 x 200VA
	8: 3 x 200VA
	7: 3 x 200VA(400A)

**Rated primary voltage** \_\_\_\_\_

3: 3.3kV    10: 11kV    20: 22kV  
6: 6.6kV    15: 13.2kV    30: 33kV

**Rated secondary voltage** \_\_\_\_\_

( ) Available on request

#### ■ Toroidal type ZCT

Description	Hole diameter (mm)	Primary current (A)	Rated zero-phase current (mA) burden		Rated constant (Ω)	Overcurrent (n <sub>0</sub> )	Type
			Primary	Secondary			
Indoor use Epoxy molded toroidal type	65	0-200	200	1.5	10	n <sub>0</sub> > 2000	ZCE1A/200 ZCE2A/400 ZCE3A/750 ZCE4A/1200 ZCE5A/3000
	80	0-400					
	100	0-750					
	125	0-1200					
	190	0-3000					
Indoor use Epoxy molded split-toroidal type	65	0-200	200	1.5	10	n <sub>0</sub> > 2000	ZCED1/200 ZCED2/400 ZCED3/600 ZCED4/750 ZCED5/1500
	90	0-400					
	100	0-600					
	130	0-750					
	150	0-1500					

■ Split-toroidal type CT

Hole diameter (mm)	Primary current (A)		Secondary current (A)	Rated burden (VA)	Overcurrent constant (n)	Type	
	Single ratio	Double ratio					
65	200	—	5	15	n > 10	CED1/200	
	300	—		15		CED1/300	
	400	—		25		CED1/400	
	500	—		25		CED1/500	
	600	—		40		CED1/600	
	750	—	40	CED1/750			
90	200	—	5	15	n > 10	CED2/200	
	300	—		25		CED2/300	
	400	—		40		CED2/400	
	500	—		40		CED2/500	
	600	—		40		CED2/600	
		750	—	40	CED2/750		
		1000	—	5	40	n > 20	CED2/1000
		1200	—		40		CED2/1200
		1500	—		40		CED2/1500
	100	300	—	5	25	n > 10	CED3/300
400		—	40		CED3/400		
500		—	40		CED3/500		
600		—	40		CED3/600		
		750	—	5	40	n > 20	CED3/750
		1000	—		40		CED3/1000
		1200	—		40		CED3/1200
		1500	—		40		CED3/1500
		2000	—		40		CED3/2000
		3000	—	40	CED3/3000		
		300	300–150	5	25	n > 20	CED3A/300
		400	400–200		40		CED3A/400
		500	—		40		CED3A/500
	600	600–300	40		CED3A/600		
	300	300–150	5	40	n > 20	CED3B/300	
130	400	400–200	5	40	n > 10	CED4/400	
	500	—		40		CED4/500	
	600	600–300		40		CED4/600	
		750	—	5	40	n > 20	CED4/750
		—	800–400		40		CED4/800
		1000	1000–500		40		CED4/1000
		1200	1200–600		40		CED4/1200
		1500	1500–750		40		CED4/1500
		2000	2000–1000		40		CED4/2000
		3000	3000–1500		40		CED4/3000

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## Instrument transformers

### ■ Earthing voltage transformer EVT

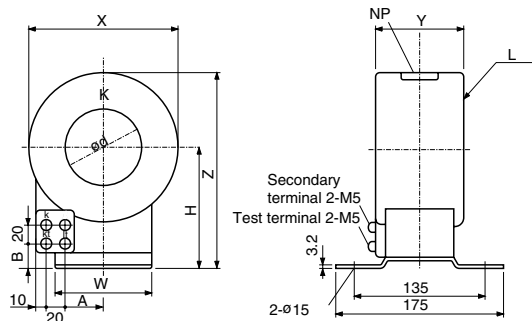
Rated voltage (V)			Rated burden (VA)		Dielectric strength (kV, 1minute)		Impulse*1 (kV)	Type	Fuse
Primary	Secondary	Tertiary	Secondary	Tertiary	Primary	Secondary			
3300	110	110	3 × 100	3 × 500	2	2	45	<b>GVE1-3FA-110/5G</b> <b>GVE2-3FA-110/5G</b>	PTFA-6*2
		3	3 × 200	3 × 500	2	2	45		
6600	110	110	3 × 100	3 × 500	2	2	60	<b>GVE1-6FA-110/5G</b> <b>GVE2-6FA-110/5G</b>	
		3	3 × 200	3 × 500	2	2	60		
11000	110	110	3 × 200	3 × 200	2	2	90	<b>GPE9-10</b> <b>GPE8-10</b> <b>GPE7-10</b>	JR-10/5*3 JR-10/5*3 JR-10/5*3
		3	3 × 200	3 × 200	2	2	75		
			3 × 200	3 × 200	2	2	90		
13200	110	110	3 × 200	3 × 200	2	2	95	<b>GPE7-15</b>	JR-10N/5*3
22000	110	110	3 × 200	3 × 200	2	2	125	<b>GPE12-20</b>	JR-20/5*3
22000	110	110	3 × 200	3 × 200	2	2	150	<b>GPE13-20</b>	JR-20/5*3
33000	110	110	3 × 200	3 × 200	2	2	170	<b>GPE21-30</b>	—

Note: \*1:  $1.2 \times 50\mu s$  \*2: Provided \*3: Optional

### ■ Dimensions, mm

#### ● Toroidal-type ZCT

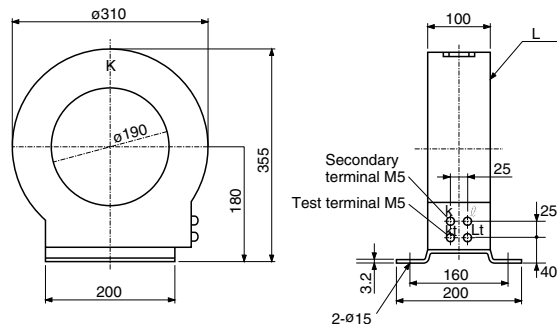
#### ZCE1A, 2A, 3A, 4A



Type	d	X	Y	Z	H	W	A	B	Mass (kg)
ZCE1A/200	65	140	75	180	110	90	40	25	4.0
ZCE2A/400	80	160	90	210	130	90	40	25	5.6
ZCE3A/750	100	185	105	248	155	120	60	35	8.4
ZCE4A/1200	125	214	120	287	180	120	60	35	12.0

Dimensions for reference only. Please confirm before construction begins.

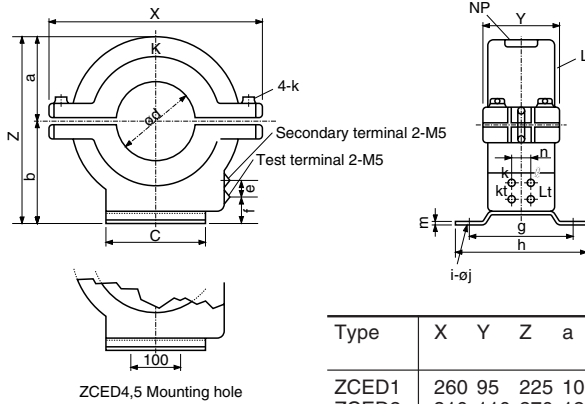
#### ZCE5A/3000



Mass: 14kg

■ Dimensions, mm

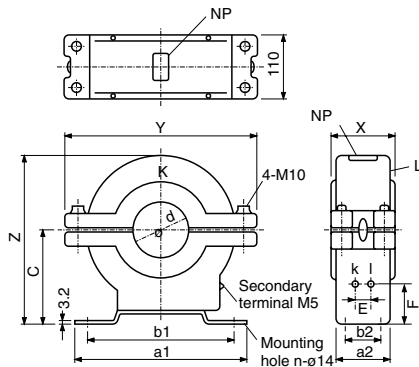
● Split-toroidal type CT/ZCED



Type	X	Y	Z	a	b	c	d	e	f	g	h	i	j	k	m	n	Mass (kg)
ZCED1	260	95	225	100	125	130	65	27	30	135	175	2	14	M10	3.2	27	15
ZCED2	310	110	270	120	150	150	90	27	40	135	175	2	14	M10	4.5	27	20
ZCED3	340	110	295	130	165	150	100	30	40	135	175	2	14	M10	4.5	27	25
ZCED4	380	140	350	155	195	200	130	30	55	200	250	4	18	M10	6	30	30
ZCED5	460	150	405	185	220	200	150	30	55	200	250	4	18	M12	6	30	52

Dimensions for reference only. Please confirm before construction begins.

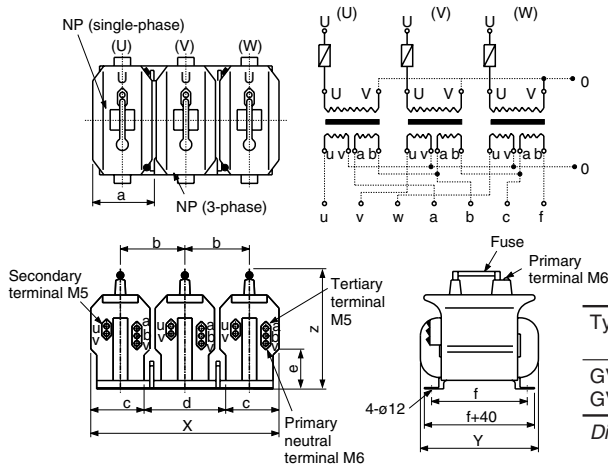
● Split-toroidal type CT/CED



Type	X	Y	Z	d	a <sub>1</sub>	a <sub>2</sub>	b <sub>1</sub>	b <sub>2</sub>	c	E	F	n
CED1	95	260	225	65	260	80	220	—	125	27	57	2
CED2	110	310	285	90	300	90	260	—	165	27	82	2
CED3	110	340	295	100	300	95	260	—	165	27	67	2
CED3A	200	340	295	100	300	190	260	120	165	50	65	4
CED3B	250	340	295	100	300	240	260	120	165	50	65	4
CED4	125	350	305	130	300	110	260	70	165	50	50	4

Dimensions for reference only. Please confirm before construction begins.

● Earth voltage transformer VT/GVE1, GVE2



Type	X	Y	Z	a	b	c	d	e	f	Mass (kg)
GVE1	428	265	284	136	146	104	220	90	220	59
GVE2	476	305	300	152	162	128	220	100	220	82

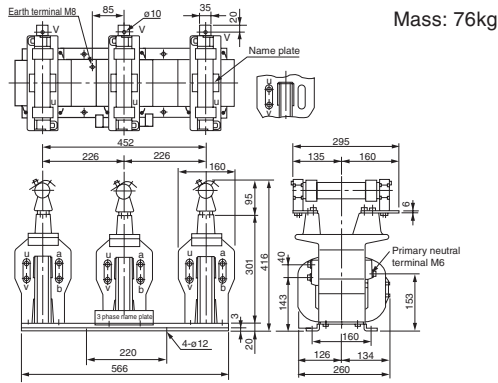
Dimensions for reference only. Please confirm before construction begins.

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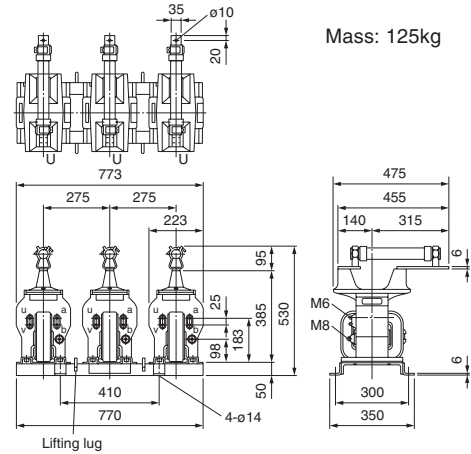
## Instrument transformers

### ■ Dimensions, mm

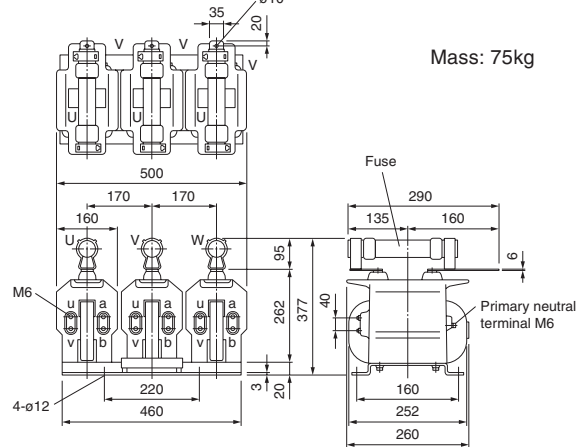
### ● Earthing voltage transformer VT (with fuse links) GPE9-10



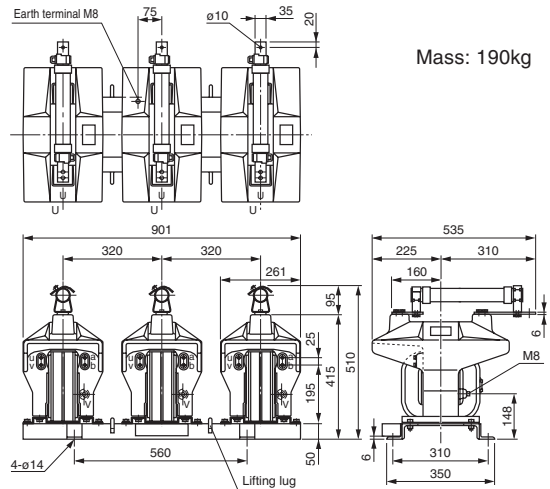
### GPE12-20



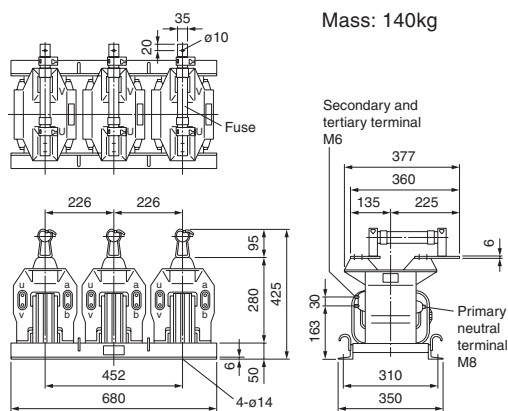
### GPE8-10



### GPE13-20



### GPE7-10, GPE7-15



### GPE21-30

