

## Classic Line - Current transformers

### General Characteristics

Current transformers convert an alternating current, usually high value, into a proportional lower one. Depending on their use, the current transformers are classified as:

- **Measuring transformers:** For measuring of current, power, power factor or energy connected to measuring instruments. They are characterized by their accuracy and for saturating at moderate overcurrents (normally, at less than 5 times the nominal current). Thus the effect of these possible overcurrents on the measuring instruments is minimized.
- **Protective transformers:** These are generally connected to protective relays, in which proportionality between the primary and secondary current has to be kept, even in overloaded conditions (normally, more than 5 times the nominal current). Thus, quick operation of the relays is guaranteed.

#### CURRENT TRANSFORMERS

The current transformers convert an alternating current of high value into a proportional, lower one, which is easily measurable by standard instruments (ammeters, wattmeters, varimeters, power factor meters, relays, measuring transducers, ...) of rated 5 or 1A. They are suitable for indoor use in low-voltage networks, and they are built according to IEC and UNE-EN 61869-2. The split core permits their installation in already constructed networks without need to cut conductors.

#### Constructive Characteristics

Cases of self-extinguishing polycarbonate UL-94 V0. Double secondary terminals, for short circuiting the secondary winding before opening the measuring circuit.

The current transformers are bus bar type, excepto IBO and IBO-50, which are wound primary transformers.

#### Electrical Data (according to UNE-EN and IEC 61869-2)

Rated secondary current: 5 or 1 A

Frequency range: 50 - 60 Hz

Highest voltage for equipment: 720 V

Rated insulation level: 3 kV, 50 Hz during 1 minute

Rated continuous thermal current  $I_{cth}$ : 1.2 times rated current

Rated short-time thermal current (Ith): 60 times rated current

Rated dynamic current ( $I_{dyn}$ ): 2.5 times Ith

Security factor (FS): less than 5 (depends on model and range)

Thermal class of insulation: according to IEC 60085: E (120°C)

#### Accuracy (according to IEC y UNE-EN 61869-2)

These current transformers fulfil the specifications of the accuracy classes 0.5, 1 and 3, for the rated outputs indicated in the table, in the same instrument. For measuring transformers, the current error and phase displacement at rated frequency must not exceed the values given in the below table, when the secondary burden is any value from 25% to 100% of the rated burden. For class 3 transformers, the limits are 50% and 100% of the rated burden. The test burden shall have a power-factor of 0.8 lagging, except when it less than 5VA, in which case the power-factor shall be 1. In no case shall the test burden be less than 1VA.

#### Accuracy classes

Class	+/- Percentaje current error at percentaje of rated current					
	1%	5%	20%	50%	100	120%
0,2 S	0,75	0,35	0,2	-	0,2	0,2
0,2	-	0,75	0,35	-	0,2	0,2
0,5 S	1,5	0,75	0,5	-	0,5	0,5
0,5	-	1,5	0,75	-	0,5	0,5
1	-	3	1,5	-	1	1
3	-	-	-	3	-	3

Class	+/- Phase displacement in minutes at percentaje of rated current				
	1%	5%	20%	100	120%
0,2 S	30	15	10	10	10
0,2	-	30	15	10	10
0,5 S	90	45	30	30	30
0,5	-	90	45	30	30
1	-	180	90	60	60
3	-	-	-	-	-

#### Installation

Fixing systems:

- Primary busbar fixing clamps
- Mounting brackets for fixing screws on a surface
- DIN rail fixing, easy and fast.

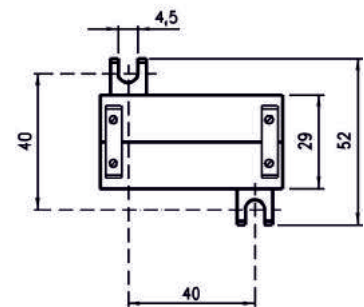
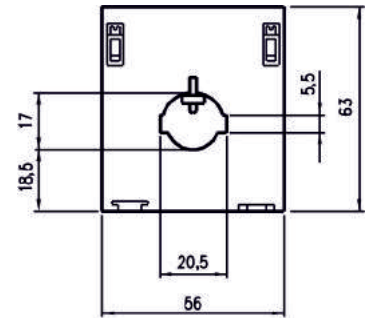
# CURRENT TRANSFORMERS

## IBA

### WINDOW TYPE CURRENT TRANSFORMER



Round conductor:	Ø 16 mm
Primary bar:	20 x 5 mm
Dimensions:	63 x 56 x 29 mm



#### IBA Technical Features, Executions

Primary rated current A	sec. 5 A or 1 A / Rated burdens VA		
	Class 0,5	Class 1	Class 3
40	-	1,25*	1,25
50	-	1,25*	1,25
60	-	1,25	1,25
75	-	1,25	2,5
100	-	2,5	2,5
125	1,25	3,75	3,75
150	1,25	5	5
200	2,5	5	7,5

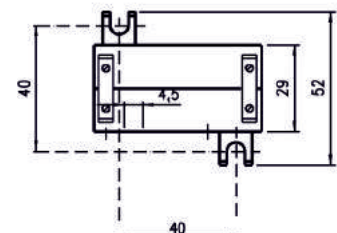
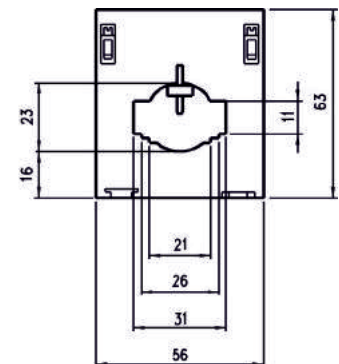
Accessories: mounting feet / Snap on mounting EN 50022-35  
\*only ammeters

## IBP

### WINDOW TYPE CURRENT TRANSFORMER



Round conductor:	Ø 22 mm
Primary bar:	30 x 10 mm
Dimensions:	63 x 56 x 29 mm



#### IBP Technical Features, Executions

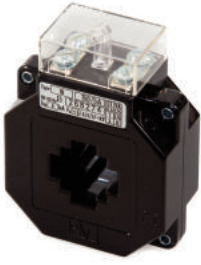
Primary rated current A	sec. 5 A or 1 A / Rated burdens VA		
	Class 0,5	Class 1	Class 3
100	-	1,25	2,5
125	-	2,5	2,5
150	-	2,5	2,5
200	-	2,5	3,75
250	1,25	2,5	3,75
300	2,5	2,5	3,75
400	2,5	3,75	5
500	3,75	5	5
600	3,75	5	7,5

Included: Primary busbar  
Accessories: mounting feet / Snap on mounting EN 50022-35

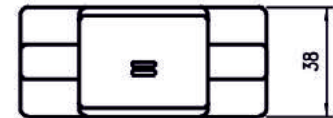
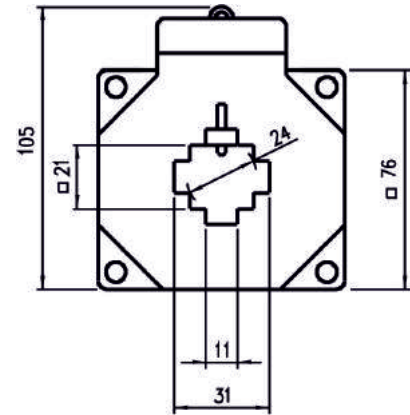
# CURRENT TRANSFORMERS

## IB

### WINDOW TYPE CURRENT TRANSFORMER



Round conductor:	Ø 23 mm
Primary bar:	30 x 10 mm
Dimensions:	105 x 76 x 38 mm



#### IB Technical Features, Executions

Primary rated current A	sec. 5 A or 1 A/ Rated burdens VA		
	Class 0,5	Class 1	Class 3
50	-	1,25	1,25
60	-	1,25	2,5
75	-	2,5	2,75
100	-	2,5	5
125	-	3,75	7,5
150	-	3,75	10
200	1,25	5	10
250	3,75	5	10
300	3,75	7,5	10
400	5	10	10
500	5	15	20
600	7,5	20	20

Included: Primary busbar

Accessories: mounting feet / Snap on mounting EN 50022-35

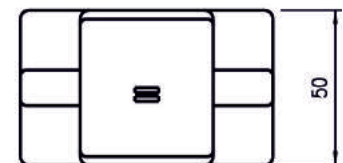
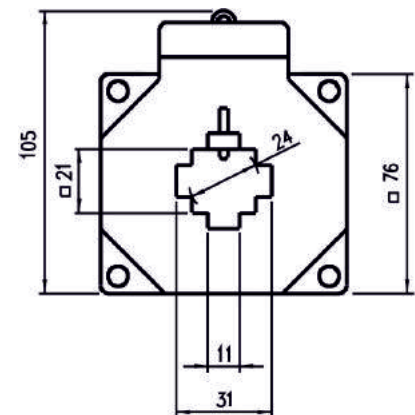
## IB-50

### WINDOW TYPE CURRENT TRANSFORMER



The rated burden of this type is higher than the type IB.

Round conductor:	Ø 23 mm
Primary bar:	30 x 10 mm
Dimensions:	105 x 76 x 50 mm



#### IB-50 Technical Features, Executions

Primary rated current A	sec. 5 A or 1 A/ Rated burdens VA		
	Class 0,5	Class 1	Class 3
100	1,25	3,75	7,5
125	2,5	5	10
150	3,75	7,5	15
200	7,5	15	20
250	10	20	20
300	10	20	20
400	10	20	20
500	10	20	30
600	15	30	30

Included: Primary busbar

Accessories: mounting feet / Snap on mounting EN 50022-35

# CURRENT TRANSFORMERS

## IBG



IBG

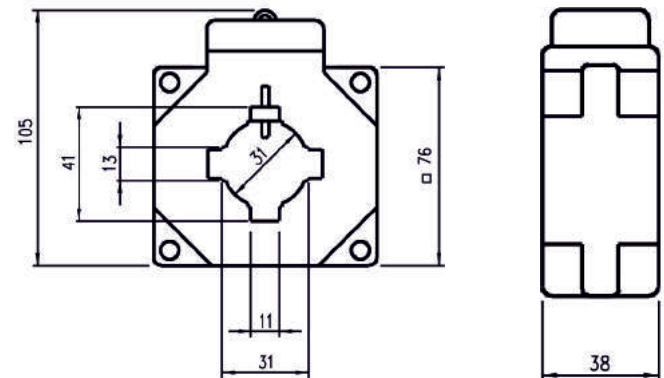


IBG/1

### WINDOW TYPE CURRENT TRANSFORMER

For round conductor  $\varnothing$  40 mm the type IBG/1 is available.

Round conductor	IBG: $\varnothing$ 30 mm
	IBG/1: $\varnothing$ 40 mm
Primary bar	40 x 10 mm
Dimensions:	105 x 76 x 38 mm



### IBG Technical Features, Executions

Primary rated current A	sec. 5 A or 1 A/ Rated burdens VA		
	Class 0,5	Class 1	Class 3
150	-	2,5	5
200	-	5	5
250	2,5	5	5
300	3,75	5	7,5
400	3,75	5	10
500	5	7,5	10
600	5	7,5	10
750	5	7,5	10
800	7,5	7,5	10
1000	10	10	15

Included: Primary busbar (except IBG/1)

Accessories: mounting feet / Snap on mounting EN 50022-35

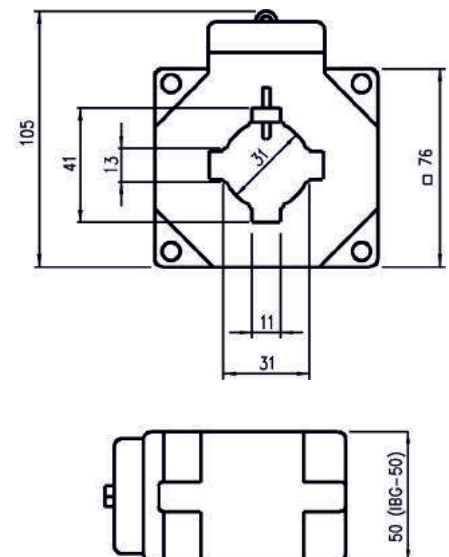
## IBG-50

### WINDOW TYPE CURRENT TRANSFORMER

The rated burden of this current transformer is higher than the type IBG.



Round conductor:	$\varnothing$ 30 mm
Primary bar:	40 x 10 mm
Dimensions:	105 x 76 x 50 mm



### IBG-50 Technical Features, Executions

Primary rated current A	sec. 5 A or 1 A/ Rated burdens VA		
	Class 0,5	Class 1	Class 3
150	2,5	5	10
200	3,75	7,5	10
250	3,75	7,5	10
300	5	7,5	15
400	10	10	20
500	10	15	20
600	10	15	20
750	10	15	20
800	10	15	15
1000	15	20	20

Included: Primary busbar

Accessories: mounting feet / Snap on mounting EN 50022-35

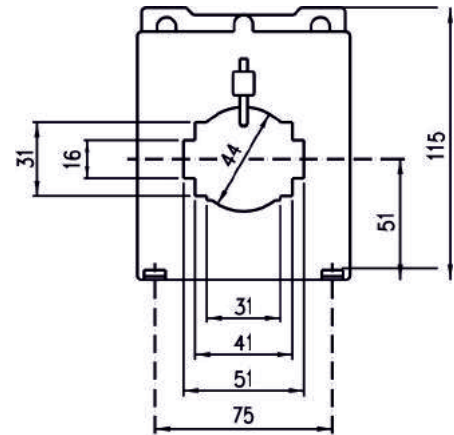
# CURRENT TRANSFORMERS

## IBR

### WINDOW TYPE CURRENT TRANSFORMER



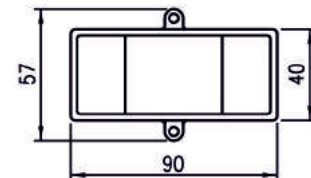
Round conductor:	Ø 44 mm
Primary bar:	50 x 15 mm 2 x 40 x 10 mm
Dimensions:	115 x 90 x 40 mm



#### IBR Technical Features, Executions

Primary rated current A	sec. 5 A or 1 A/ Rated burdens VA		
	Class 0,5	Class 1	Class 3
400	5	5	10
500	7,5	7,5	10
600	10	10	15
750	10	15	15
800	10	15	20
1000	10	15	20
1200	10	15	20
1500	10	20	20
1600	10	20	30

Included: Primary busbar  
Accessories: mounting feet

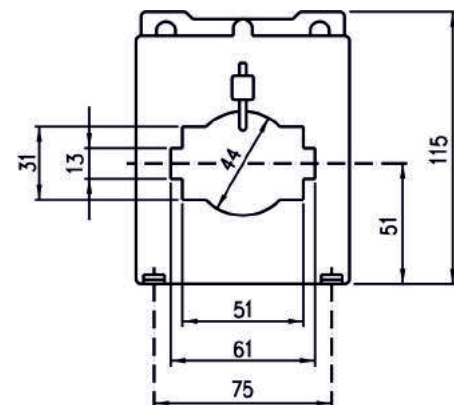


## IBR/1

### WINDOW TYPE CURRENT TRANSFORMER



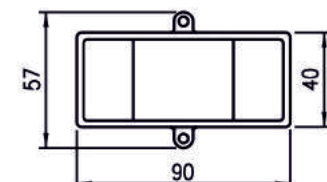
Round conductor:	Ø 44 mm
Primary bar:	60 x 12 mm 2 x 50 x 10 mm
Dimensions:	115 x 90 x 40 mm



#### IBR/1 Technical Features, Executions

Primary rated current A	sec. 5 A or 1 A/ Rated burdens VA		
	Class 0,5	Class 1	Class 3
400	5	5	10
500	7,5	7,5	10
600	10	10	15
750	10	15	15
800	10	15	20
1000	10	15	20
1200	10	15	20
1500	10	20	20
1600	10	20	30

Included: Primary busbar  
Accessories: mounting feet



# CURRENT TRANSFORMERS

## IER

### WINDOW TYPE CURRENT TRANSFORMER

Typ IER/1 for round conductors  $\varnothing$  80 mm



IER



IER/1



IER/2



IER/3

#### IER Technical Features, Executions

Primary rated current A	sec. 5 A or 1 A/ Rated burdens VA		
	Class 0,5	Class 1	Class 3
250	2,5	5	15
300	5	7.5	20
400	10	10	20
500	10	15	30
600	10	15	30
750	10	15	30
800	10	15	30
1000	15	20	30
1200	15	20	30
1500	20	30	45
1600	20	30	45
2000	30	45	60

Included: Primary busbar (except IER/1)

Round conductor

IER  $\varnothing$  50 mm

IER/1  $\varnothing$  80 mm

Primary bar

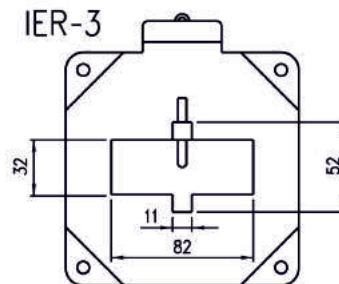
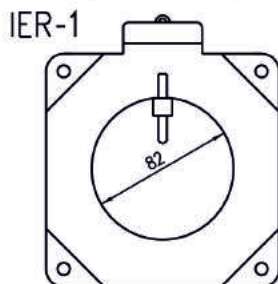
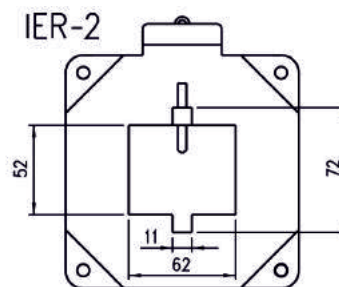
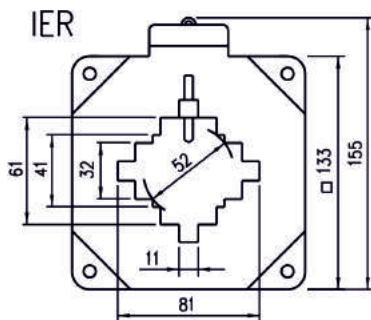
IER 80 x 10 mm

2 x 60 x 10 mm

IER/2 3 x 60 x 10 mm

IER/3 2 x 80 x 10 mm

Dimensions: 155 x 133 x 48 mm



# CURRENT TRANSFORMERS

## IER/4



### WINDOW TYPE CURRENT TRANSFORMER

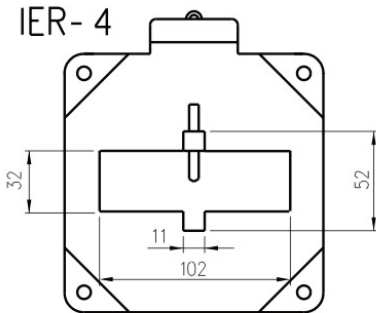
Primary bar 2 x 100 x 10 mm

Dimensions: 155 x 133 x 48 mm

#### IER/4 Technical Features, Executions

Primary rated current A	sec. 5 A or 1 A/ Rated burdens VA	
	Class 0,5	Class 1
250	1,25	3,75
400	3,75	7,5
500	5	10
600	10	15
750	10	15
800	10	15
1000	15	20
1200	15	20
1500	20	30
1600	20	30
2000	30	45

Included: Primary busbar  
On request



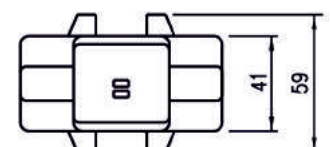
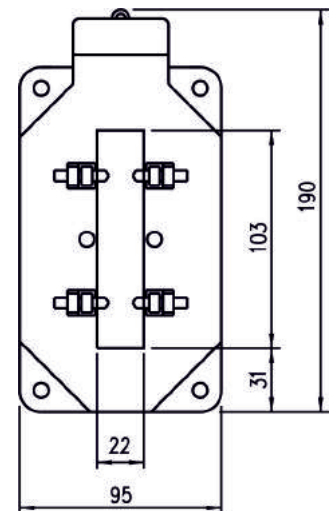
## IRP

### WINDOW TYPE CURRENT TRANSFORMER

On request: Secondary terminals on the long side of the current transformer

Primary bar 100 x 20 mm

Dimensions: 190 x 95 x 59 mm



#### IRP Technical Features, Executions

Primary rated current A	sec. 5 A or 1 A/ Rated burdens VA		
	Class 0,5	Class 1	Class 3
750	10	15	30
800	10	15	30
1000	15	20	30
1200	15	20	30
1500	20	30	45
1600	20	30	45
2000	30	45	45
2500	45	60	60

Included: Primary busbar

# CURRENT TRANSFORMERS

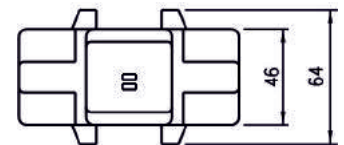
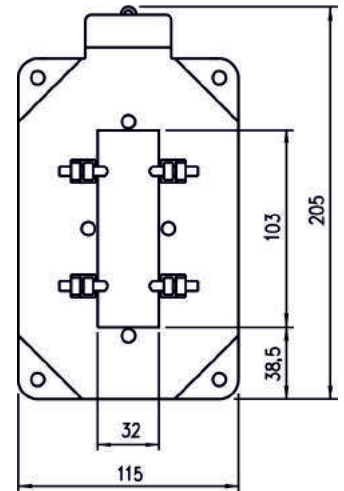
## IRM

### WINDOW TYPE CURRENT TRANSFORMER



On request: Secondary terminals on the long side of the current transformer

Primary bar	100 x 30 mm
Dimensions:	205 x 115 x 64 mm



#### IRM Technical Features, Executions

Primary rated current A	sec. 5 A or 1 A/ Rated burdens VA		
	Class 0,5	Class 1	Class 3
1500	20	30	45
1600	20	30	45
2000	30	45	60
2500	45	60	60
3000	45	60	60
4000	60	60	60

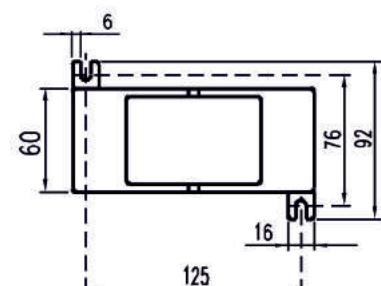
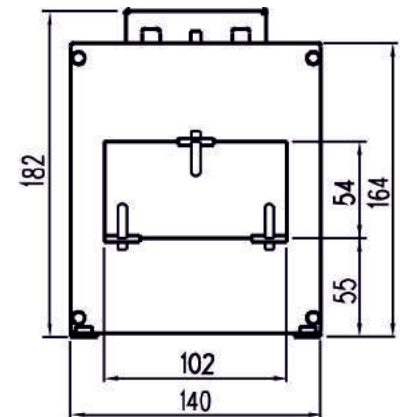
Included: Primary busbar

## ICM

### WINDOW TYPE CURRENT TRANSFORMER



Primary bar:	3 x 100 x 10 mm 2 x 100 x 20 mm
Dimensions:	182 x 100 x 20 mm



#### ICM Technical Features, Executions

Primary rated current A	sec. 5 A or 1 A/ Rated burdens VA		
	Class 0,5	Class 1	Class 3
750	15	20	30
800	15	20	30
1000	20	30	45
1200	30	45	60
1500	30	45	60
1600	30	45	60
2000	45	60	60
2500	60	60	60
3000	60	60	60

Included: Primary busbar  
Accessories: mounting feet



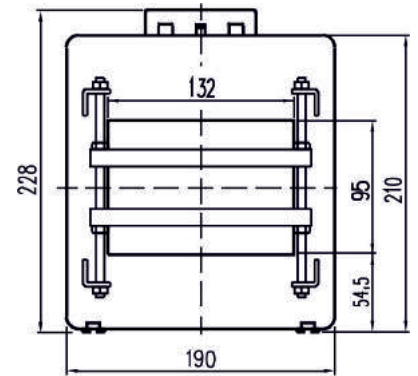
# CURRENT TRANSFORMERS

## ICG

### WINDOW TYPE CURRENT TRANSFORMER



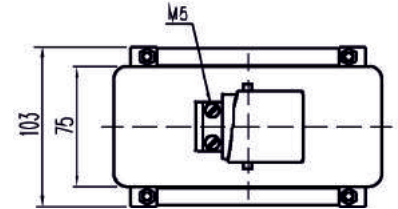
Primary bar	3 x 130 x 20 mm
	4 x 130 x 10 mm
Dimensions:	228 x 190 x 103 mm



### ICG Technical Features, Executions

Primary rated current A	sec. 5 A or 1 A/ Rated burdens VA		
	Class 0,5	Class 1	Class 3
3000	60	60	60
4000	60	60	60
5000	60	60	60
6000	60	60	60

Included: Primary busbar  
 Accesories: mounting feet



## IBO

### WOUND PRIMARY CURRENT TRANSFORMER



Form A



Form B

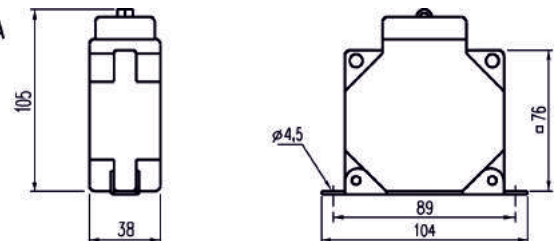
Form	Primary rated current	a	b	c	d	
A	5 A ... 20 A	-	-	-	-	-
B	25 A ... 150 A	38	90	115	3	M8

### IBO Technical Features, Executions

	Primary rated current A	sec. 5 A or 1 A/ Rated burdens VA		
		Class 0,5	Class 1	Class 3
Forma A	5	10	15	20
	10	10	15	20
	15	10	15	20
	20	10	15	20
Forma B	25	10	15	20
	30	10	15	20
	40	10	15	20
	50	10	15	20
	60	10	15	20
	75	10	15	20
	100	10	15	20
	125	10	15	20
150	10	15	20	

Included: mounting feet  
 Accesories: Snap on mounting EN 50022-35

#### IBO < 25 A



#### IBO > 25 A

