

IN-D

Passive current transformer

Differential current transformers

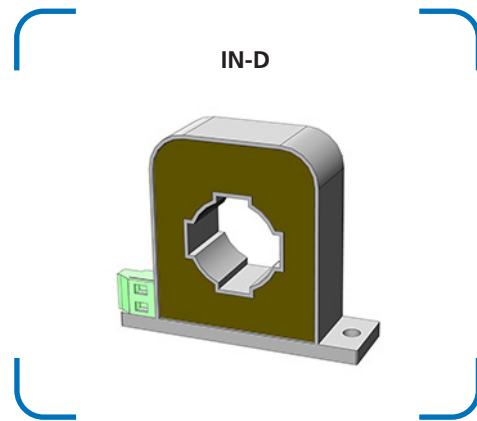
A differential current transformer permits the measurement of differential current in single-phase or three-phase supply cables or in individual lines. Both current-carrying conductors (outward conductor and return conductor) are led through the current opening of the current transformer. The current measurement is performed by comparing the two conductors. Any difference is displayed at the output of the differential current transformer. The use of highly permeable materials permits a typical current deviation of 10 mA upwards.

The wide opening allows the supply lines, with the exception of the earthing conductor, to be led through directly. High sensitivity to current enables measurement in several stages:

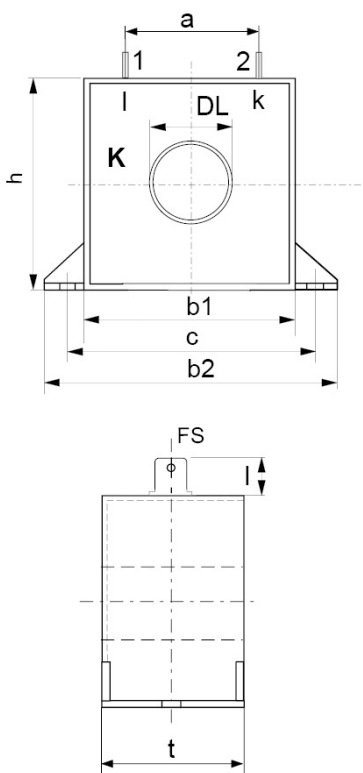
- Stage 1: Notice of a malfunction
- Stage 2: Alarm
- Stage 3: Switching off

Advantages

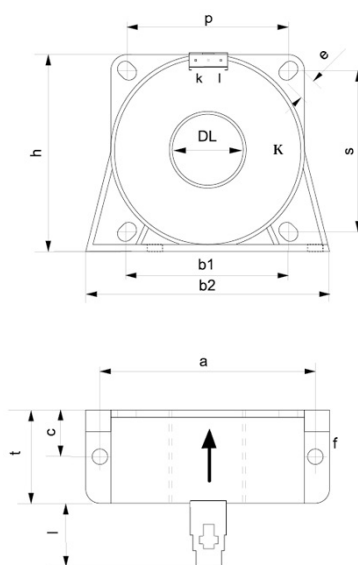
- Measurement from 25Hz to -400 Hz
- Use of nanocrystalline cores
- Current transformers for measuring
- High-quality UL listed insulating materials (e.g. UL94-V0)
- Safe electrically isolated primary and secondary circuits
- Assembly-friendly design (horizontal/vertical mounting)
- Variable connections
- Wide range of housings with various push-through openings
- Differential current range from 2 – 50 A



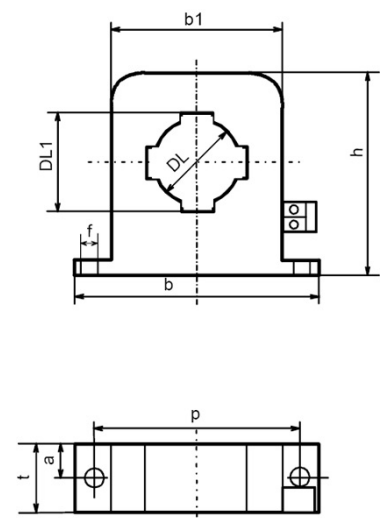
Housing 1



Housing 2



Housing 3



Technical data

IN-D										
Type		2	4	8	29	30	40	30	40	50
		Housing A			Housing B			Housing C		
Primary rated current [A]	I_{PN}	0,1 - 1	0,1 - 2	0,1 - 4	0,1 - 10	0,1 - 10	0,1 - 10	0,1 - 10	0,1 - 10	0,1 - 10
Max. primary rated current [A]	I_{maxPN}	2	4	8	20	30	40	30	40	50
Thermal short-time current	ITK	0,5	0,5	0,5	3,6	3,6	3,6	9	9	9
Secondary current [mA]	I_{aN}	2	4	4	20	10	5	20	16,67	10
Rated power [VA]	P_{sek}	0,004	0,008	0,016	0,030	0,030	0,015	0,06	0,05	0,06
Ratio	K_N	500	500	1000	500	1000	2000	500	600	1000
Load resistance [Ω]	R_B	1000	500	1000	75	300	600	150	180	600
Load voltage [V]	U_{RB}	2,0	2,0	4,0	1,5	3,0	3,0	3,0	3,0	6,0
Measuring accuracy 50 Hz [%]	F_U	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1
Ambient temperature [°C]	T_A	-10 to +50	-10 to +50	-10 to +50	-10 to +50	-10 to +50	-10 to +50	-10 to +50	-10 to +50	-10 to +50
Frequency [Hz]	f	25 to 400	25 to 400	25 to 400	25 to 400	25 to 400	25 to 400	25 to 400	25 to 400	25 to 400
Insulation test voltage Primary/Secondary / 2sec [kVac]	V_P	3	3	3	3	3	3	3	3	3
Connection	A	Flat connection 6,3 x 0,8 / Plug MKS 1853 / Clamp 1,5 mm ²								
Storage temperature	TS	-25 to +85	-25 to +85	-25 to +85	-25 to +85	-25 to +85-25 to +85	-25 to +85	-25 to +85	-25 to +85	-25 to +85
Coil resistance	RS	11	11	46	4,5	19	65	5,5	6,5	21
Weight	m	0,068	0,068	0,070	0,278	0,278	0,290	0,280	0,280	0,290
Standards		EN/IEC 61869-1/2								
Tracking resistance	CTI	Housing / resin 550/660M or 400/600M								
Creepage distance	dCp	18	18	18	8	8	8	18	18	18
Air distance	dCl	16	16	16	7	7	7	16	16	16



Typical applications: Industry, renewable energy sources, railway engineering, metrology and testing techniques, energy, automation and building technology

Dimensions in mm

IN-D													
Type	Design	PIN- Connection [mm ²]	h [mm]	b1/b2 [mm]	t [mm]	DL/DL1 [mm]	FS [mm]	p/s [mm]	a [mm]	c [mm]	f [mm]	e [mm]	l [mm]
IN-D / 2	A	1 - 2	38	38 / 54	20	13 / -	6,3 x 0,8	-	30	47	4,8	-	9
IN-D / 4	A	1 - 2	38	38 / 54	20	13 / -	6,3 x 0,8	-	30	47	4,8	-	9
IN-D / 8	A	1 - 2	38	38 / 54	20	13 / -	6,3 x 0,8	-	30	47	4,8	-	9
IN-D / 20	B	MKS1853	55	50 / 68	26	20,2 / -	-	45 / 45	60	13	4,3	6 x 4,0	23
IN-D / 30	B	MKS1853	55	50 / 68	26	20,2 / -	-	45 / 45	60	13	4,3	6 x 4,3	23
IN-D / 40	B	MKS1853	55	50 / 68	26	20,2 / -	-	45 / 45	60	13	4,3	6 x 4,3	23
IN-D / 30	C	clamps	83	100 / 70	28	35 / 38	-	86 / -	14	-	7	-	-
IN-D / 40	C	clamps	83	100 / 70	28	35 / 38	-	86 / -	14	-	7	-	-
IN-D / 50	C	clamps	83	100 / 70	28	35 / 38	-	86 / -	14	-	7	-	-