



4761/4764

Current Comparator



CURRENT RANGES

Secondary: 1 - 5 A
Primary: 5 ... 500 A*
500 ... 5000 A**

* in 94 steps at the terminals.

**in 62 steps, produced by one and two wires, respectively.

The range of type 4764 can be extended up to 10 000 A by means of the auxiliary transformer, type 4766 (Higher values on request).

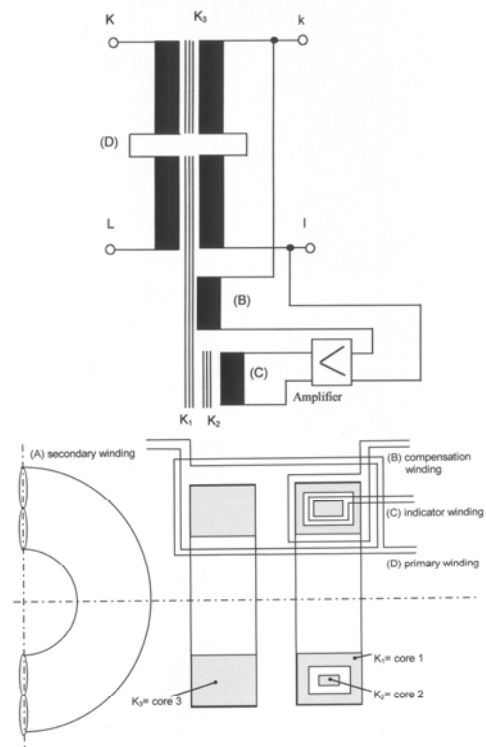
K1: Outside (hollow) annular core
K2: Inside annular core
K3: Auxiliary core
A: Secondary winding
B: Compensation winding
C: Indicator winding
D: Primary winding

GENERAL

The errors of conventional standard current transformers inevitably depend on the burden. A magnetic flux in the core produces the e.m.f. which sustains the secondary current in the burden. This disadvantage has now been eliminated by the development of the two new current comparators, types 4761 and 4764. An indicator winding measures the magnetic flux in the core, while an amplifier - by regulating the current in a compensating winding - makes sure that the flux in the core is approximately zero.

DESIGN

The housing of both comparators is made of a insulating material. All terminals and controls are mounted on the top panel.
The holes for the wires of the bushing transformer are on the lateral face of the unit.
Type 4761 is portable.
Type 4764 is equipped with castors.



TRANSFORMATION RATIOS OF 4764

SWITCH POSITIONS		PRIMARY CURRENT IN AMPERE					
		TERMINAL CONNECTIONS				EXTERNAL WINDINGS	
S1	S2	K2 - L4	K2 - L3	K2 - L2	K1 - L1	2 TURNS	1 TURNS
0	8	5	10				
0	9	5.625	11.25				
1	0	6.25	12.5	25	125	500	
1	1	6.875	13.75	27.5	137.5	550	
1	2	7.5	15	30	150	600	
1	3	8.125	16.25	32.5	162.5	650	
1	4	8.75	17.5	35	175	700	
1	5	9.375	18.75	37.5	187.5	750	1500
1	6	10	20	40	200	800	1600
1	7		21.25	42.5	212.5	850	1700
1	8		22.5	45	225	900	1800
1	9		23.75	47.5	237.5	950	1900
2	0			50	250	1000	2000
2	1			52.5	262.5	1050	2100
2	2			55	275	1100	2200
2	3			57.5	287.5	1150	2300
2	4			60	300	1200	2400
2	5			62.5	312.5	1250	2500
2	6			65	325	1300	2600
2	7			67.5	337.5	1350	2700
2	8			70	350	1400	2800
2	9			72.5	362.5	1450	2900
3	0			75	375	1500	3000
3	1			77.5	387.5	1550	3100
3	2			80	400	1600	3200
3	3			82.5	412.5	1650	3300
3	4			85	425	1700	3400
3	5			87.5	437.5	1750	3500
3	6			90	450		3600
3	7			92.5	462.5		3700
3	8			95	475		3800
3	9			97.5	487.5		3900
4	0			100	500		4000
4	1			102.5			4100
4	2			105			4200
4	3			107.5			4300
4	4			110			4400
4	5			112.5			4500
4	6			115			4600
4	7			117.5			4700
4	8			120			4800
4	9			122.5			4900
4	10			125			5000

Since the electrical behavior of the comparator is equal to that of a normal current transformer i.e. it can also be used inverted it works for primary currents < 5 A.

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TECHNICAL DATA

Type 4761

Standards: IEC, VDE, ANSI

Accuracy: Ratio error in a range of
1 ... 200 % I_N : ± 0.001 %
Phase angle: ± 0.05 min

Frequency: 47 ... 62 Hz

Connections: Primary I_N : 1 _ 2 _ 5 _ 10 _ 20 _ 50 _
100 _ 200 _ 500 _ 1000A
The ranges 500 ... 1000 A are produced
by 2 or 1 turns.
Secondary: 1 - 5 A
Output: max. 5 VA
Power supply: 115/230 V, 50/60Hz, 20VA

Overload protection: Built-in overload protection with
"Overload" warning and fuses in the power plug.

Dimensions: 435 x 260 x 450mm (17.1 x 10.2 x 17.7in)
Hole diameter for cable: 55 mm (2.1in)

Weight: approx: 35 kg (approx: 42 lb)



Type 4764

Standards: IEC, VDE, ANSI

Accuracy: Ratio error in a range of
1 ... 200 % I_N : ± 0.001 %
Phase angle: ± 0.05 min

Frequency: 47 ... 62 Hz

Connections: Primary I_N : 5 ... 500 A are connected
The ranges 500 ... 5000 A are produced
by 2 or 1 turns.
Secondary: 1 - 5 A
Output: max. 5 VA
Power supply: 115/230 V, 50/60Hz, 20VA

Overload protection: Built-in overload protection with
"Overload" warning and "Temperature" warning for excess
temperature.

Dimensions: 715 x 515 x 790mm (28.2 x 20.3 x 31.1in)
Hole diameter for cable: 130 mm (5.1in)

Weight: approx: 117 kg (approx: 257.4 lb)



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