

1 YEAR
WARRANTY

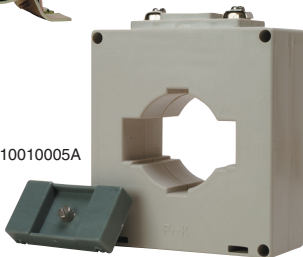


User's Guide



RCT1538005A

MFO10010005A



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The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

WARNING: These products are not designed for use in, and should not be used for, human applications.



CURRENT TRANSFORMERS

TECHNICAL FEATURES

- ABS self-extinguishing case
- Current: to the secondary 5A(1A and other on request)
Working frequency: 50/60Hz
- Dynamic nominal current of short circuit (I_{din}): 2,5 times during 1 sec.
Max peak value the C.T. can bear having the secondary in short circuit.
- Thermal nominal current of short circuit (I_{ter}): 40-80 times during 1 sec.
Max effective value with secondary in short circuit.
- Standing overcurrent: 1,2 times.
- Voltage insulating reference: 0,72KV(1,2KV) max voltage value.
- Testing voltage: 3KV(6KV) at 50/60 HZ during 1 min.
Max voltage value, between primary and secondary.
- Saturation factor (SF) or ratio between primary current value (that cause the magnetic core saturation), and the nominal current value.

The lower is the N value and the higher is the instrument protection.

- Working Temperature: -25+50C
 - Storage Temperature: -40+80C
 - Max temperature of the passing cable:70C
 - Relative Humidity: 90% without condensing
 - Insulation: on air, E class
 - Protection degree: IP30(CEIOEN 60529)
 - Construction: according to CEI 38-1. IEC 185, VDE 0414
- ✓ TAB, TAP series are with sealing terming terminal covers
✓ TAF series is with protected faston caps & din rail fixing
✓ MFO series is with protected terminals
✓ RCT series is with insulated wires output.
- P.S: *other values on request

• CONNECTIONS

PRIMARY P1(K) input-P2(L)output

SECONDARY s1 (L)INPUT - s2(L)output.



TABLE OF THE VOLTAGE DROP BETWEEN C.T. AND READING INSTRUMENT CABLES

Wire section In mm ²	For secondary 5A					
	VOLT					
	1m	2m	4m	6m	8m	10m
1,5	0,58	1,15	2,31	3,46	4,62	5,77
2,5	0,36	0,71	1,43	2,14	2,86	3,57
4	0,22	0,45	0,89	1,89	1,79	2,24
6	0,15	0,30	0,60	1,34	1,19	1,49
10	0,09	0,18	0,36	0,54	0,7	0,89

Wire section In mm ²	For secondary 1A					
	VOLT					
	10m	20m	40m	60m	80m	100m
1,5	0,23	0,46	0,92	1,39	1,85	2,31
2,5	0,14	0,29	0,57	0,86	1,14	1,43
4	0,09	0,18	0,36	0,54	0,71	0,89
6	0,06	0,12	0,24	0,36	0,48	0,60
10	0,04	0,07	0,14	0,21	0,29	0,36

For high voltage drop we suggest the use of current transducers (see our catalogue).



GENERAL FEATURES

The current transformers (C.T.) are used for reducing the line current to a secondary value of 5A or 1A.

For applications on electronic cards we made C.T. having secondary values:

✓ in A.C. current, 50mA- 60mA-100mA-200mA

✓ in A.C. voltage, 2V-5V-10V

✓ in D.C. voltage, 10V

The C.T. are composed by iron cores at oriented grains and -
-they can be toroidal or rectangular, the number of turns has been calculated according to the secondary current.

Insulation between core and winding has been made by thermoplastic insulating materials.

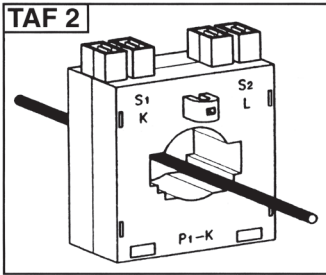
Testing of technical features of our production is made singularly by S.I.T. certificated equipments.

- Wound primary executions: for primary current low values or when it is necessary an high power with C.T. low dimensions.
- Primary passing executions: for other primary current values.

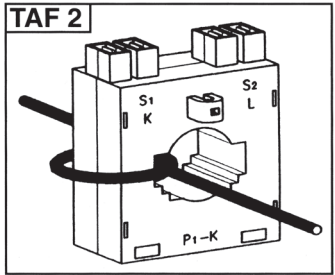


CURRENT TRANSFORMERS EXAMPLE OF USE

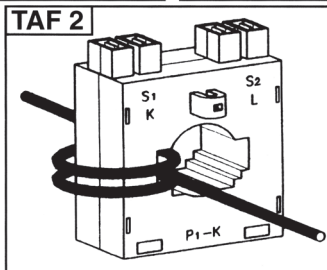
The number of passages of the primary cable does not modify the technical features or the precision class, but it reduces the primary current value at a parity of secondary current.



300/5A
standard

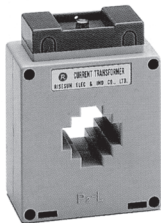


300/5A
2 Loops=150/5A

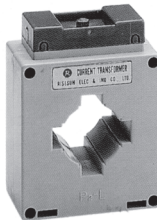


300/5A
3 Loops=100/5A

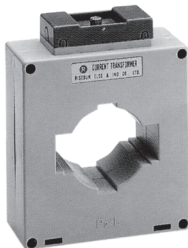
CURRENT TRANSFORMERS FOR AMMETERS. (LOW VOLTAGE)



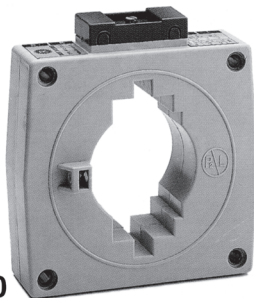
MFO-30



MFO-40



MFO-60

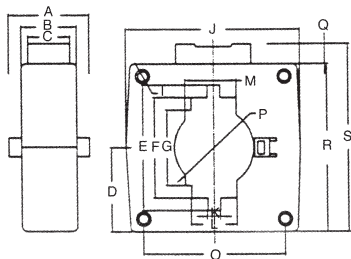


MFO-100

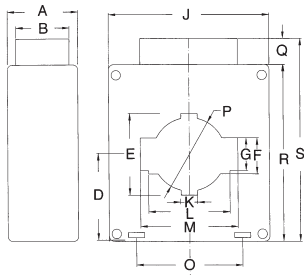


MOTD	MFO-30		MFO-40		MFO-60		MFO-100	
RATIO	POWER	CLASS	POWER	CLASS	POWER	CLASS	POWER	CLASS
50/5A	2VA*	1A						
60/5A	2VA*	1A						
75/5A	2,5VA*	1A						
100/5A	2,5VA*	1A						
125/5A	2,5VA*	1A						
150/5A	3VA*	1A						
200/5A	5VA	1	3VA*	1A				
250/5A	5VA	1	3VA*	1A				
300/5A	5VA	1	5VA	1				
400/5A	5VA	1	5VA	1				
500/5A	5VA	1	5VA	1	7,5VA	1		
600/5A					7,5VA	1		
700/5A					7,5VA	1		
750/5A					7,5VA	1		
800/5A					7,5VA	1		
1000/5A					7,5VA	1	10VA	1
1200/5A					10VA	1	10VA	1
1500/5A					10VA	1	10VA	1
2000/5A							10VA	1
2500/5A							10VA	1
3000/5A							10VA	1

MFO-100



MFO-30 ~ MFO-60



MODEL	A	B	C	D	E	F	G	I	J	K	L	M	O	P	Q	R	S
MFO-30	43.5	31		41.8	30.5	20.5	10.7		75	10.7	20.5	30.5	48		16.5	82.5	99
MFO-40	43.5	31		41.8	41.5	13.3	10.5		75	13.5	30.6	41.5	48	31	16.5	82.5	99
MFO-60	43.5	31		53.4	50.2	22.2	20.7		99	10.7	50.5	60.3	65	45.8	16	108	124
MFO-100	64	44	31	67	100	80	60	8	140	10.5	35.8	41	110	63.4	16.5	133.5	150



CURRENT TRANSFORMER

RCT-15-4



RCT-15-3

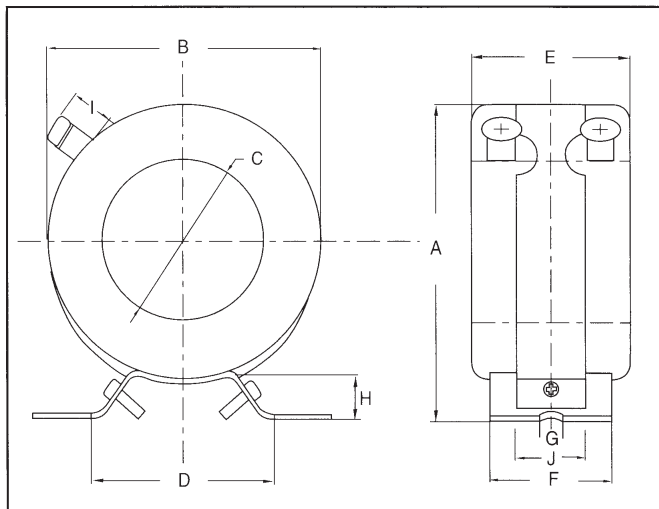


RCT-15-2



RCT-15-1







Model	Primary Current Rating(Amp)	Sec Current(A)	Burden (VA)	Accuracy Strength	Power	Weight
RCT-51-1	20~300	5	5~10	1.0	40	0.8
RCT-15-2	400~600	5	15	1.0	40	1
RCT-15-3	800~1200	5	15	1.0	40	1.3
RCT-15-4	1600~3000	5	15	1.0	40	2

Model	A	B	C	D	E	F	G	H	I	J
RCT-15-1	92	78	35	67	55	45	8	17	14	25
RCT-15-2	116	100	60	67	57	45	8	17	15	25.5
RCT-15-3	150	135	91	67	59	45	8	17	15	26.2
RCT-15-4	178	160	110	72	60	45	8	19	16	26.7



NOTES:

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence. The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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