

HIGH FREQUENCY ALTERNATING CURRENT TRANSFORMER

Protection grade/measurement grade

MHFCT-Series

Introduction:

MHFCT series of high precision high frequency A.C. current transformer four measurement/protection grades are available in more than 20 different regular models apart from tailor mode modules. These sensors offer same galvanic isolation as offered by an alternating current transformer. These sensors current from 400-80,000Hz over wide range of harmonics with same accuracy and precision and are the first choice for telecom, airlines, railways, electrical utilities, battery operated vehicles, electrochemical, corrosion, petrochemical industry, organic/inorganic chemical, heavy electrical/mechanical industries, machine tools, non-conventional energy, solids state physics application and many uncountable defense/nuclear applications. These are being successfully acknowledged in power sector at distribution/transmission level and generation for measurement/control/protection applications.

Operating Principle:

A circular core carrying bifilar/unfillar winding is placed around the conductor to concentrate the field in magnetic circuit of core. current flowing through central conductor generate proportional a voltage. This sensor also offers a galvanic isolation without any offset. These sensors are sensitivity to Short current peaks in the circuit: according to the hysteresis properties of the core material, these peaks can cause a static magnetization in the core those results in a permanent remanence, and finally to an offset alteration of the Hall element.



MHFCT-0080001

MHFCT-1000001

MHFCT-200001

Electrical Specification of High Frequency Current Transformer: Current range: 0.01 ampere to 20000 ampere

Model	Current m.a.	Step-down ratio	kHz	T _{max} °C	Model	Current ampere	Step-down ratio	k.hz	T _{max} °C
MHFCT-0012001	120.0	0.1:100	0.4/1.0/10/50	90	MHFCT-002000001	00050.0	1/5:100	0.4/1.0/10/50	90
MHFCT-0020001	200.0	0.1:100	0.4/1.0/10/50	90	MHFCT-4000001	00100.0	1/5:100	0.4/1.0/10/50	90
MHFCT-0040001	400.0	0.1:100	0.4/1.0/10/50	90	MHFCT-5000001	00250.0	1/5:100	0.4/1.0/10/50	90
MHFCT-0080001	800.0	0.1:100	0.4/1.0/10/50	90	MHFCT-8000001	01000.0	1/5:100	0.4/1.0/10/50	90
MHFCT-0160001	1600.0	0.1:100	0.4/1.0/10/50	90	MHFCT-1000001	02000.0	1/5:100	0.4/1.0/10/50	90
MHFCT-0400001	4000.0	0.1:100	0.4/1.0/10/50	90	MHFCT-1200001	05000.0	1/5:100	0.4/1.0/10/50	90
MHFCT-0800001	8000.0	0.1:100	0.4/1.0/10/50	90	MHFCT-1500001	10000.0	1/5:100	0.4/1.0/10/50	90
MHFCT-1000001	10000.0	0.1:100	0.4/1.0/10/50	90	MHFCT-2000001	20000.0	1/5:100	0.4/1.0/10/50	90

General High frequency current transformer Specification:

Sensing current: as in data sheet

Burdon: 5/10 v.a.

Output voltage at defined burdon: 0.0-10.0 Volts. Proportional to current.

Operating frequency 0.0-10, 0000 Hz

Voltage/current control accuracy 99.9% of set point

Phase/gain error: as per I.S.I.I.E.E.

Repeatability 100 percent

Response time 0.5 -1.1 micro seconds

Interface Signal 0.0-12.0 volts D.C. proportional to current

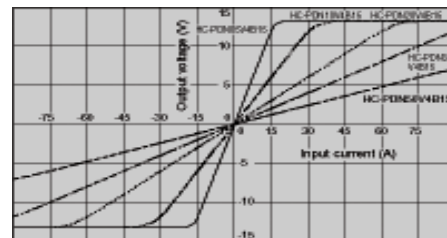
Current measurement range 10-3 milli-100x108 amps [steady/transient]

Protection over voltage/short ckt.

High Frequency current transformer dimension;(c.m.)

MHFCT-00020001	08X07X07	MHFCT-04000001	14X14X14
MHFCT-00040001	08X09X09	MHFCT-08000001	16X16X16
MHFCT-00080001	09X08X08	MHFCT-10000001	16X16X46
MHFCT-00160001	09X09X09	MHFCT-20000001	16X12X12
MHFCT-00400001	10X08X08	MHFCT-40000001	16X14X24
MHFCT-00800200	12X09X09	MHFCT-80000001	18X16X36
MHFCT-01000001	12X10X10	MHFCT-99999901	20X18X48

1. Five numerals after MHFCT indicates voltage of Hall Effect current Transformer and two numerals Indicates o/p voltage. 2. All dimensions are in centimeter and may be altered to suit convenience.



Input/output characteristic of sensor

MOTORON SEMICONDUCTORS CORPORATION

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HIGH FREQUENCY ALTERNATING POTENTIAL TRANSFORMER

Protection grade/measurement grade

MHFCT-Series

MHFPT series of high precision high frequency A.C. potential transformer four measurement/protection grades are available in more than 20 different regular models apart from tailor made modules. These sensors offer same galvanic isolation as offered by an alternating current transformer. These sensors current from 400-80,000Hz over wide range of harmonics with same accuracy and precision and are the first choice for telecom, airlines, railways, electrical utilities, battery operated vehicles, electrochemical, corrosion, petrochemical industry, organic/inorganic chemical, heavy electrical/mechanical industries, machine tools, non-conventional energy, solids state physics application and many uncountable defense/nuclear applications. These are being successfully acknowledged in power sector at distribution/transmission level and generation for measurement/control/protection applications.

Operating Principle:

A circular/E-shape special core carries primary/secondary winding meeting faraday law either in bifilar/unfillar topology. Complet transformer is casted in polymer to meet desired I.R. level. Output voltage is linearly ptoprtional to input v voltage signal Over specified voltage/frequency range.This sensor also offers a galvanic isolation without any offset. These sensors are sensitive to fast varying signal voltage without any D.C. offsetsignal.



Electrical Specification of Hig Frequency Potential Transformer:

Voltage range: 110 volt to 220,000 volt

Model	Volt r.m.s.	Step-down ratio	kHz	T _{max} °C	Model	Volt r.m.s.	Step-down ratio	k.hz	T _{max} °C
MHVPT-0012001	00120.0	0.1:100	0.0/0.4/1.0/10/50	90	MHVPT-0012001	000100.0	1/5:100	0.0/0.4/1.0/10/50	90
MHVPT-0020001	00220.0	0.1:100	0.0/0.4/1.0/10/50	90	MHVPT-0020001	000012.0	1/5:100	0.0/0.4/1.0/10/50	90
MHVPT-0040001	00440.0	0.1:100	0.0/0.4/1.0/10/50	90	MHVPT-0040001	000018.0	1/5:100	0.0/0.4/1.0/10/50	90
MHVPT-0080001	00660.0	0.1:100	0.0/0.4/1.0/10/50	90	MHVPT-0080001	000024.0	1/5:100	0.0/0.4/1.0/10/50	90
MHVPT-0160001	00880.0	0.1:100	0.0/0.4/1.0/10/50	90	MHVPT-0160001	000033.0	1/5:100	0.0/0.4/1.0/10/50	90
MHVPT-0400001	01100.0	0.1:100	0.0/0.4/1.0/10/50	90	MHVPT-0400001	000055.0	1/5:100	0.0/0.4/1.0/10/50	90
MHVPT-0800001	03300.0	0.1:100	0.0/0.4/1.0/10/50	90	MHVPT-0800001	000088.0	1/5:100	0.0/0.4/1.0/10/50	90
MHVPT-1000001	06600.0	0.1:100	0.0/0.4/1.0/10/50	90	MHVPT-1000001	000100.0	1/5:100	0.0/0.4/1.0/10/50	90

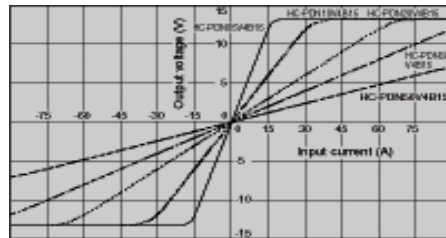
General High frequency current transformer Specification:

Sensing current: as in data sheet
 Burdon: 5/10 v.a.
 Output voltage at defined burdon: UPTO-6.6 KV Proportional to VOLTS.
 Operating frequency upto 80,000 hz
 Voltage/current control accuracy 99.9% of set point
 Phase/gain error: as per I.S.I/E.E.
 Repeatability 100 percent
 Response time 0.5 -1.1 micro seconds
 Interface Signal 0.0-12.0 volts D.C. proportional to current
 over voltage/short ckt.

High Frequency Potential transformer dimension; (c.m.)

MHVPT-00012001	08X06X06	MHVPT-02000001	14X12X12
MHVPT-00020001	08X07X07	MHVPT-04000001	14X14X14
MHVPT-00040001	08X09X09	MHVPT-08000001	16X16X16
MHVPT-00080001	09X08X08	MHVPT-10000001	16X16X46
MHVPT-00160001	09X09X09	MHVPT-20000001	16X12X12
MHVPT-00400001	10X08X08	MHVPT-40000001	16X14X24
MHVPT-00800200	12X09X09	MHVPT-80000001	18X16X36
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1. Five numerals after MHVPT indicates voltage of Hall Effect current Transformer and two numerals Indicates o/p voltage. 2. All dimensions are in centimeter and may be altered to suit convenience.



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