Product Specification Sheet

Slim Plug-In CT Transmitter with Isolated Single/Dual Output

Model: MS3720

DESCRIPTION

The MS3720 is a slim, plug-in CT transmitter that calculates the rms values of AC current signals from a CT, converts them into commonly used DC signals, and provides isolated single or dual output.

ORDERING CODE

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Model —	7
Power Supply ———	
• • •)112)
A : 100 to 240V AC (50 to 60 D : 24V DC P :	
D. 24V DC P.	100 to 240V DC
	_
Input (AC Current Signa	al) ———
1 : 0 to 1A AC, 50/60Hz	
5 : 0 to 5A AC, 50/60Hz	
Output 1	
A : 4 to 20mA DC	1 : 0 to 10mV DC
D : 0 to 20mA DC	2 : 0 to 100mV DC
Z : Other DC current signal	3 : 0 to 1V DC
=. Other Be carrent signar	4: 0 to 10V DC
	5 : 0 to 5V DC
	6 : 1 to 5V DC
	3W : ±1V DC
	4W : ±10V DC
	5W : ±5V DC

Output 2

No code: None

The codes are the same as for Output 1.

0: Other DC voltage signal

Note 1: When a voltage output is selected for Output 1, a current output cannot be selected for Output 2.

Note 2: When the code A (4 to 20mA) is selected for both of the two outputs, the output load will be 550Ω maximum for Output 1 and 350Ω maximum for Output 2.

Options

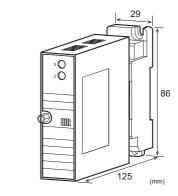
No code: None

/L: Dual current output with high output load

* Not subject to CE approval. (OUT-1: 750Ω / OUT-2: 550Ω)

/X: Others (Special order)

* For non-standard options, ask MTT for availability.



ORDERING INFORMATION

To place an order, please use the ordering code format as shown on the left.

(e.g.) MS3720-A-5A6

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Other Ordering Examples:

For an output code of "0": MS3720-A-160 (Output: 2 to 5V) For an option code of "X": MS3720-A-1AA/X (0-90%

response time: 100ms max.)

Note: If you wish to include multiple options in your order, specify the option codes in series (e.g. /LX)

SPECIFICATIONS

	●POWER SECTION				
	Power	100 to 240	V AC: 85 to	264V AC (47	
	Requirements	to 63Hz)			
		24V DC: 2	24V DC±10%))	
		100 to 240	V DC: 85 to	264V DC	
	Power Sensitivi	ty Better than	$1\pm0.1\%$ of sp	oan for each	
		power sup	ply range.		
	Power Line Fus	se 160mA fu	se is installed	(standard).	
	Power Consumption				
	Power	100-240V AC	24V DC	100-240V DC	
	Single Output	4.5VA max	1.2W max	4.8W max	
	Dual Output	5.5VA max	1.6W max	6.0W max	

OINPUT SECTION

Input Resistance	5A AC input: $2m\Omega$ (Shunt resistor)
	$1A AC input: 10m\Omega (Shunt resistor)$
Allowable Input	Continuous: 120% of the rated input
Current	value
	Instantaneous: 10 times the rated
	input value (within 3 seconds)
Crest Factor	3 max.

OUTPUT SECTION		
Allowable Output I	Load	
Voltage Output	1V span and up	2mA max.
(DC)	10mV	$10k\Omega$ min.
	100mV	100 k Ω min.
Current Output	4-20mA single output	750Ω max.
(DC)	4-20mA dual output	Output 1:
		550Ω max.
		Output 2:
		350Ω max.



Zero Adjustment	Approx. $\pm 5\%$ of span.	
	(Adjustable by the f	front-accessible
	trimmer.)	
Span Adjustment	Approx. ±5% of spa	an.
	(Adjustable by the f	front-accessible
	trimmer.)	
Ranges Available		
	Current Signal	Voltage Signal
Output Range (DC)	0 to 20mA	-10 to 10V
Output Span (DC)	4 to 20mA	10mV to 20V
Output Bias	0 to 100%	-100 to 100%
* For current output signals, the accuracy of any current		
output smaller than 0.1mA is not guaranteed.		
Output Spec. Ex.1: For 4 to 20mA output, the output span is		
16mA and the bias +25%.		
Output Spec. Ex. 2: For -1 to 4V output, the output span is		
5	V and the bias -20%.	- •

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PERFORMAN	CE
Accuracy Rating	Better than $\pm 0.25\%$ of span with at
	least 10% input (at 25°C±5°C).
Temperature	Better than ±0.2% of span per 10°C
Effect	change in ambient.
Response Time	400ms max. (0 to 90%) with a step
	input at 100%.
CMRR	100dB min. (500V AC, 50/60Hz)
Isolation	4-way isolation between input, output
	[Output 1/Output 2], power, and
	ground.
Insulation	100MΩ min. (@ 500V DC) between
Resistance	input, output [Output 1/Output 2],
	power, and ground.
Dielectric	Input / Output [Output 1/Output 2] /
Strength	[Power, Ground]: 2000V AC for 1
	minute (Cutoff current: 0.5mA)
	Power / Ground: 2000V AC for 1
	minute (Cutoff current: 5mA)
	Output 1 / Output 2: 500V AC for 1
	minute (Cutoff current: 0.5mA)
Surge Withstand	Tested as per ANSI/IEEE
Capability	C37.90.1-1989.
Operating	Ambient temperature: -5 to 55°C
Environment	Humidity: 5 to 90% RH
	(non-condensing)
Storage	-10 to 60°C
Temperature	

PHYSICAL

Installation	Wall/DIN rail mounting
Wiring	M3.5 screw terminal connection
	(with a power terminal block cover &
	drop-out prevention screws)
	The supplied shunt resistor should be
	connected to the terminal block. (The
	two brackets of the resistor should be
	fixed to the terminals (9) and (10).
Screwing Torque	0.8 to 1.0 [Nm] * Recommended
External	W29 × H86 × D125mm
Dimensions	(including the mounting screw and
	socket, but not including the shunt
	resistor)
Weight	Main unit: 120g max.
-	Socket: 80g max.
	Shunt resistor: 5g max.

MATERIALS

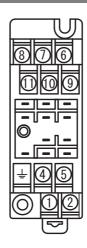
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Housing	ABS resin (UL 94V-0)
Terminal Block	PBT resin (UL 94V-0)
Terminal Block	PC resin (UL 94V-2)
Cover	
DIN Rail Stopper	PP resin (UL 94HB)
Screw Terminal	Nickel-plated steel
Contacts Material	Brass with 0.2µm gold plating
and Finish	
Printed Circuit	Glass fabric epoxy resin
Board	(FR-4: UL 94V-0)
Anti-Humidity	HumiSeal® 1A27NS (Polyurethane)
Coating	

^{*} HumiSeal $^{\mathbb{R}}$ is a registered trademark of Chase Corporation.

OSTANDARDS CONFORMITY

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EC Directive	EMC Directive (2014/30/EU)
Conformity	EN61326-1: 2013
	Low Voltage Directive (2014/35/EU)
	IEC61010-1/EN61010-1: 2010
	Installation Category II
	Pollution Degree 2
	Maximum operating voltage 300V
	Reinforced insulation between
	[input/output/GND] and power.

TERMINAL ASSIGNMENT



\bigcirc	P (+) POWER
\bigcirc	N (-)
\dashv	GND
4	+ OUTPUT 1
5	- OUTPUT 1
6	(L) INPUT
7	+ OUTPUT 2
8	- OUTPUT 2
9	L INPUT
10	N INPUT
(11)	(N) INPUT

BLOCK DIAGRAM

