



Standard Specifications Type : MS3008

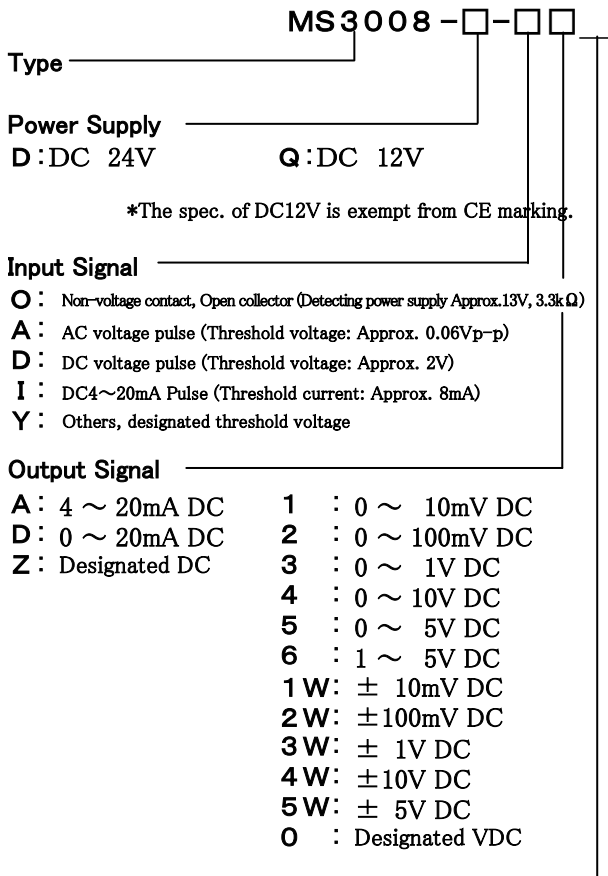
MS3000

Terminal Block Type Pulse/Analog Converter with Isolated Single Output

Overview

MS3008 is a terminal block type pulse/analog converter with isolated single output to convert pulse train frequency signals from a flow sensor, etc. into various DC signals as selected.

Ordering Format



Option

No entry: None.

/ X : Custom Order.

*Contact us for custom-order requirement.

Please specify upon ordering

•Product Model Number (Measuring Temperature Range)
 (Example) MS3008-D-D6(0~850Hz)

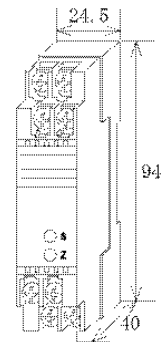
Other items to be specified:

•For input "Y": MS3008-D-YA(0~500Hz/ Input DC Voltage pulse 0~12V
 SH=8.5V, SL=2.5V)

•For input "Y": MS3008-D-YA(0~500Hz/ Input AC pulse
 200Vp-p S=2Vp-p)

*For DC pulse, specify the pulse width in the range between 0~100μA and 0~100mA.

*SH=High threshold level, SL=Low threshold level, S=Threshold level



Specifications

●Power Supply Section

Range of allowable	DC24V : DC24V±10%
	DC12V : DC12V±20%

Power Sensitivity Within ±0.1% of Span for each power supply voltage.

Power Supply Fuse 250mA Fuse

Maximum Power Consumption

Power Supply	DC24V	DC12V
Single Output	50mA max. / 85mA max.	
Dual Output	25mA max. / 40mA max.	

*The above values apply when the rated supply voltage is used.

●Input Section

Input Resistance

Voltage input(DC)	With excitation: 1MΩ min. (Standard, 5V input) Without excitation: 30kΩ min.
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Current input(DC) 250Ω (4~20mA: Standard)

Input Voltage Allowable

DC voltage input	30V DC max. continuous
DC current input	40mA DC max. continuous
AC voltage input	200Vp-p AC (±100V with reference value of 0V) max. continuous

Input Pulse Width 20μ sec. min.

Duty Ratio 40~60%

Range of Products Available

	AC Voltage Pulse	DC Voltage Pulse
Input Range	-300~300V	0~300V
Input Voltage Span	0.1~600Vp-p	1~300V
Input Bias	—	0~+300%
Threshold Voltage	50mVp-p min.	Hi-Lo width 0.2Vmin.
Input Frequency	Within range between 0~20Hz and 0~20kHz (e.g.) 10~15V⇒ Input Span 5V, Bias 200%	

●Output Section

Maximum Output Load

Voltage Output (DC)	1V Span min. 10mV 100mV	2mA max. 10kΩ min. 100kΩ min.
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Current Output (DC) 550Ω max.

Zero Adjustment Range Approx. ±2.5% of Span (Adjustable by Trimmer on front panel)

Span Adjustment Range Approx. ±2.5% of Span (Adjustable by Trimmer on front panel)

Range or Products Available

	Current Signal	Voltage Signal
Output Range	0~20mA	-10~10V
Output Span(DC)	4~20mA	10mV~20V
Output Bias	0~100%	-100~100%

*For current output smaller than 0.1mA, the accuracy is not guaranteed.

4~20mA⇒Output Span 16mA, Bias 25%

-1~4V⇒Output Span 5V, Bias -20%

● Standard Performance

Conversion	Within $\pm 0.3\%$ F.S.
Accuracy	Ripple: Within 0.2% p-p/F.S. (Input 10% min.) (@25°C $\pm 5^\circ$ C)
Temp. Characteristics	Within $\pm 0.2\%$ of Span with every 10°C variation
Response Time	
Input Frequency	(0~90%)@100% step input
20Hz	8sec max.
200Hz	1sec max.
2kHz	500msec max.
20kHz	500msec max.
CMRR	100dB min. (500V AC, 50/60Hz)
Signal Isolation	Between Input -Output - Power Supply
Isolation Resistance	100M Ω min. (@500V DC) Between Input -Output - Power Supply
Dielectric Strength	Between Input -Output - Power Supply :1500V AC, Shut Down Current 0.5mA for 1 min.
Measures against SWC	Conform to ANSI/IEEE C37.90.1-1989
Operating Environment	Temperature : -5~55°C Humidity : 5~90%RH (Non-Condensing)
Storage Temp.	-10~60°C

● Installation / Physical Specifications

Installation	DIN-rail mounting
Wiring	M3.5 screw terminal connection (Screw drop-protection)
Screw Tightening Torque	0.8~1[N·m] Recommendable
Outer Dimension	W24.5×H94.0×D40.0mm
Mass	90g max.

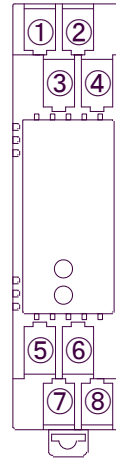
● Materials

Housing	ABS Resin (UL-94V-0)
Terminal Screws	Iron/Nickel-plated
P.C.Board	Glass-Epoxy (FR-4:UL-94V-0)
Moisture-proof Coating	HumiSeal Coating :HumiSeal 1A27NS(Polyurethane Resin)

● Compatible Standards

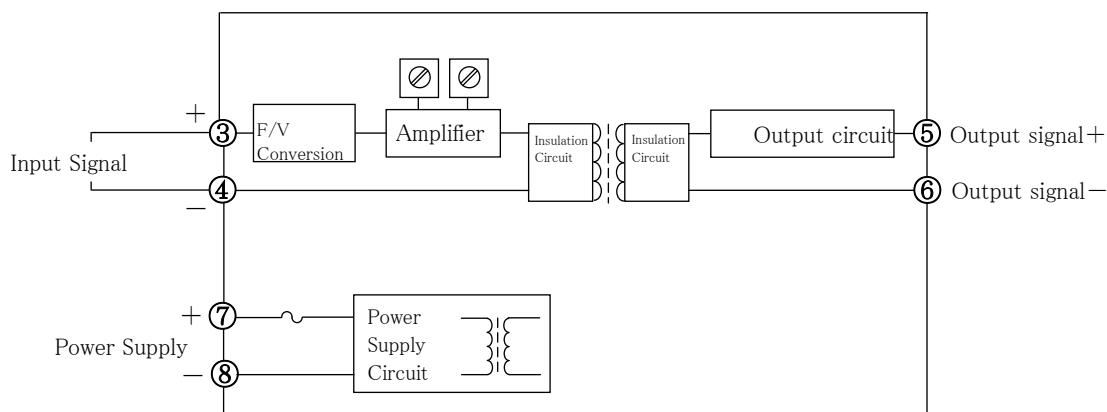
Compatible EC Directive	EMC Directive (2004/108/EC) EN61326-1:2006 Class A Low Voltage Directive (2006/95/EC) IEC61010-1/EN61010-1 Installation category II, Pollution degree 2
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Terminal Arrangement / Signal Assignment

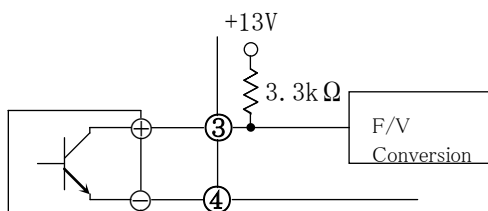


①	N. C
②	N. C
③	INPUT +
④	INPUT -
⑤	OUTPUT +
⑥	OUTPUT -
⑦	+ Power
⑧	- Supply

Block Diagram



* In case of non-voltage contact, open collector input



* In case of voltage pulse input

