

HD SIGNAL CONDITIONER SERIES

FREQUENCY to SIGNAL TRANSMITTER

MODEL
HD-2FDC

MODEL & SUFFIX CODE SELECTION

MODEL HD-2FDC

Input signal

2INPUT

1	Voltage pulse
2	Open collector
3	Dry contactor
4	Current pulse
O	2 INPUT

Output1 signal

1	0-10mVDC	A	4-20mADC
2	0-100mVDC	B	1-5mADC
3	0-1VDC	C	0-20mADC
4	0-10VDC	D	0-1mADC
5	0-5VDC	O	Spec Order
6	1-5VDC		

Output2 signal

Availability as Output1
N:None

Power

X:110V AC Y:220V AC
Z:24V DC O:Others



INPUT & OUTPUT

INPUT

Frequency range : 0 - 50Hz through 10kHz or 10 - 253Hz
Pulse width (time) requirement : duty ratio 20 - 80%
at 100 input

• **Dry contact** : mechanical contact or open collector
Sensing : approx. 7.5V DC @1mA
ON/OFF level : $\leq 200\Omega$ for ON, $\geq 100k\Omega$ for OFF

• **Voltage Pulse** : square or sine waveforms
Input amplitude : 2 - 50V p-p
Input impedance : 100k Ω minimum

OUTPUT

• **DC Current** : 0 - 20mA DC
Minimum span : 1mA
Zero suppression/elevation : max. 1.5 times span
Load resistance : output drive 15V maximum

Output	Load Resistance
4 - 20mA	: 750 (Ω maximum)
2 - 10mA	: 1500
1 - 5mA	: 3000
0 - 20mA	: 750
0 - 16mA	: 900
0 - 10mA	: 1500
0 - 1mA	: 15k

ORDERING INFORMATION

Specify code number and variables.

- **Code number** : HD-FDC-1AANY
- **Frequency range** (e.g. 0 - 10 kHz)
- **Special input and output ranges** : code:0
A : -10 ~ 20mA
V : 0 ~ $\pm 15V$

GENERAL SPECIFICATIONS

Construction : plug-in
Connection : M3.5 screw terminals
Housing material : flame-resistant resin (black)
Isolation : input to output to power
Input pulse sensing : capacitor coupled; detecting pulse rise
Overrange output : 0 - +120% at 1 - 5V
Front adjustments : zero and span ; $\pm 5\%$
Low-end cutout : 2 - 5%

•DC Voltage : -10 ~ +12V DC
 Minimum span : 5mV
 Zero suppression/elevation : max. 1.5 times span
 Load resistance : output drive 10mA maximum;
 5mA for negative voltage output; at $\geq 0.5V$

Output	Load Resistance
0 ~ 10mV	: 10k (Ω minimum)
0 ~ 100mV	: 100k
0 ~ 1V	: 100
0 ~ 10V	: 1000
0 ~ 5V	: 500
1 ~ 5V	: 500
-10 ~ +10V	: 2000
-5 ~ +5V	: 1000

PERFORMANCE in percentage of span

Accuracy : $\pm 0.1\%$
 Temp. coefficient : $\pm 0.02\%/^{\circ}C$ ($\pm 0.01\%/^{\circ}F$)
 Ripple : 0.25% p-p max. (100/120Hz)
 Response time : (0 ~ 90%)
 approx. 2 seconds for 0 ~ 50Hz
 approx. 1 seconds for 0 ~ 100Hz
 approx. 0.5 seconds for 0 ~ 500Hz
 approx. 0.5 seconds for 0 ~ 10Hz
 Ripple : 0.2% p-p max. with input $\geq 10\%$
 Line voltage effect : $\pm 0.1\%$ over voltage range
 Insulation resistance : $\geq 100M\Omega$ with 500V DC
 Dielectric strength : 1500V AC @1 minute
 (input to output to power to ground)
 Surge withstand Voltage : 1.2/50 μ sec, $\pm 5kV$
 (INPUT to OUTPUT to GROUND)

INSTALLATION

Power input

AC : rating $\pm 10\%$, 50/60 ± 2 Hz, approx. 2VA
 DC : rating $\pm 10\%$ (ripple 10% p-p max.)
 approx. 2.5W (100mA at 24V)

Operating temperature : -5 to +55 $^{\circ}C$ (23 to 131 $^{\circ}F$)

Operating humidity : 30 to 90% RH (non-condensing)

Mounting : surface or DIN rail

Dimensions : W50 x H80 x D123 mm

See General Spec. Sheet Page B-1.

Weight :

Terminal assignment : See General Spec. Sheet Page B-1.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

