

HD SIGNAL CONDITIONER SERIES

LOW FREQUENCY TRANSMITTER

MODEL
HD-LFC

MODEL & SUFFIX CODE SELECTION

MODEL HD-LFC

Input signal

1	Voltage pulse
2	Open collector
3	Dry contactor
4	Current pulse
0	Spec Order

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

Display

A:Percent
B:Input signal
C:Output signal
O:Others
N:None

Power

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



INPUT & OUTPUT

INPUT

Excitation : 12V DC $\pm 2V$ @30mA ; shortcircuit protection

• Open Collector

Frequency range : 0 - 0.01Hz through 50Hz

Pulse width (time) requirement : 10 millise. Min. at $\leq 20Hz$;
duty ratio 20 - 80% at $\geq 20Hz$

Sensing : approx. 12V DC @3mA

ON/OFF level : $\leq 800\Omega$ for ON, $\geq 1.2k\Omega$ for OFF

• Voltage Pulse : square or sine waveforms

Frequency range : 0 - 0.01Hz through 50Hz

Pulse width (time) requirement : 10 millise. Min. at $\leq 20Hz$;
duty ratio 20 - 80% at $\geq 20Hz$

Input amplitude : 2 - 50V p-p

Input impedance : 10k Ω minimum

• Mechanical Contact

Frequency range : 0 - 0.01Hz through 5Hz

Pulse width time requirement : 10 millise. Min. for ON
and OFF

Sensing : approx. 12V DC @3mA

ON/OFF level : $\leq 800\Omega$ for ON, $\geq 1.2k\Omega$ for OFF

ORDERING INFORMATION

Specify code number and variables.

•Code number : ex)HD-LFC-1ANNY

•Frequency range (e.g. 0 - 50Hz)

•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

Overrange output : 0 - 120% at 1 - 5V

Front adjustments : zero and span : $\pm 5\%$

■ 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

•DC Voltage : -10 – +12V DC

Span : min. 5mV, max. 20V

Zero suppression/elevation : max. 1.5 times span

Load resistance : output drive 1mA maximum;
at $\geq 0.5V$

Output	Load Resistance
0 – 10mV	: 10k (Ω minimum)
0 – 100mV	: 100k
0 – 1V	: 1000
0 – 10V	: 10k
0 – 5V	: 5000
1 – 5V	: 5000
-10 – +10V	: 10k
-5 – +5V	: 5000

INSTALLATION

Power input

AC : rating $\pm 10\%$, 50/60 ± 2 Hz, approx. 3VA

DC : rating $\pm 10\%$ (ripple 10% p-p max.)
approx. 2W (90mA at 24V)

Operating temperature : -5 to +55°C (23 to 131°F)

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

Mounting : surface or DIN rail

Dimensions : W50 x H80 x D132 mm

See General Spec. Sheet Page B-1.

Weight :

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

PERFORMANCE in percentage of span

Accuracy : $\pm 0.1\%$

Temp. coefficient : $\pm 0.0015\%/^{\circ}\text{C}$ ($\pm 0.008\%/^{\circ}\text{F}$)

Ripple : 0.25% p-p max. (100/120Hz)

Response time : 0.4(400ms) sec.

plus one pulse cycle (0 – 90%)

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 μsec , $\pm 5KV$

(INPUT to OUTPUT to GROUND)

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

