

Dual HART[®] Isolator DHI733

DESCRIPTION

The DHI733 combines two fully independent HART[®] transparent isolator channels in one housing. Optional 10A rated trippoint for monitoring and alarming is available on channel 2.

The DHI733 can be used in a number of ways:

- Two channel isolation of HART[®] transmitters.
- Series connect the inputs to split the input signal into two isolated full drive output signals while still maintaining the digital HART[®] communication.
- Split one HART[®] transmitter into an isolated HART[®] transmitter output plus a conditioned analogue process signal to drive meters or other devices.




Channel 1 is 4-20mA HART[®] transparent input and output.

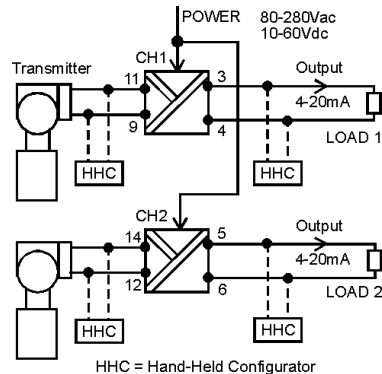
Channel 2 is 4-20mA HART[®] transparent input and output or a coding plug configurable output for common process signals.

Final calibration of the mA signal can be trimmed by using the front accessible SPAN (S) and ZERO (Z) potentiometers. The optional alarm point on channel 2 is also set by potentiometer utilising the adjacent test socket. The wide swing DC/DC converter allows for two power supply ranges: 10-60Vdc (16-42Vac), 80-280Vac (80-300Vdc). Isolation is 2kVr.m.s. between all 6 ports. Connection is via unpluggable 8-way screw terminals.

General Specifications

Mounting:	35mm DIN-Rail.
Termination	Plug-in screw terminals.
Weight:	0.300 kg.
Protection class:	IP40 (IP65 Enclosure optional.)
Size:	60W x 70H x 110D (mm).
Housing material:	ABS, aluminium.
Calibration accuracy:	<0.2% of range.
Auxiliary Supply:	19V/22mA (fitted on current inputs only).
Ambient temperature	
Operating range:	0...+60°C.
Storage temp. range:	-20...+70°C.
Temperature effect:	0.02% per °C.
Output drive:	0 to 22mA (20V drive). or 0 to 20V (20mA drive).
Response time:	500ms standard (5ms link).
Zero/Span adjust:	Typically ±20%
Contact rating:	10A/250Vac resistive.
Trip repeatability:	<0.5% of range.
Trip response time:	<100ms.
Switching hysteresis:	1 to 25% of input range. Factory set 1%.
Power requirements:	4VA.
6-way Isolation:	2kV r.m.s.
Electromagnetic compatibility:	Complies with AS/NZS 4251.1 (EN 50081.1) 
Digital Signal Bandwidth:	100Hz to 10kHz.
Input Drive:	16V at 20mA.
Output Load:	1k ohm.

Block Diagram



Type No. Designation

DHI733 – X XX X X

Supply:

- 1 = 80-300Vdc / 80 – 280Vac.
- 2 = 10-60Vdc / 16 – 42Vac

In/Out:

- *) 01 = CH1 4-20mA HART® transparent in/out.
CH2 4-20mA HART® transparent in/out.
Connect inputs in series for HART® splitting.
- 02 = CH1 4-20mA HART® transparent in/out
CH2 link selectable output (default 4-20mA) that follows CH1 input.
This provides an extra isolated signal to drive non-HART® instrumentation.
- 03 = CH1 4-20mA HART® transparent in/out.
CH2 link selectable input (default 4-20mA), link selectable output (default 4-20mA).
- 04 = CH1 link selectable input (default 4-20mA), link selectable output (default 4-20mA).
CH2 4-20mA HART® transparent in/out.

Alarm:

- 0 = Not fitted.
- *) 1 = Channel 2 change over 1% hysteresis.

Option:

- 0 = none.
- *) 2 = Customised response time.

Link Selectable Ranges

Refer to the 'In/Out' code for your module, only inputs or outputs that are link selectable can be changed.

All input selections are on the C203 PCB, SW1 is for channel 1, SW2 is for channel 2.

All output selections are on the C204 PCB, SW1 is for channel 1, SW2 is for channel 2.

X = coding plug inserted

To change output ranges:

- 1) Disconnect power to unit.
- 2) Unscrew right-side cover and withdraw PCB assembly.
- 3) Set the coding plugs as required.
- 4) Reassemble unit and connect power.
- 5) Adjust "span" and "zero" pots to recalibrate.
- 6) Change the label information to the new input/output values.

Input Table 1 Selection C203 PCB

Input	1	2	3	4	5
4-20mA	X	X	X		X
0-20mA	X	X	X	X	
0-10V				X	
0-1V		X	X	X	
0-5V		X		X	
1-5V			X		X

Output Table 2 Selection C204 PCB

Output	1	2	3	4	5
4-20mA	X		X		
0-20mA		X			
0-5V		X			X
1-5V	X		X		X
0-10V		X		X	

*) = Price Extra.

In the interest of development and improvement, A.P.C.S. Pty. Ltd. reserve the right to amend, without notice, details contained in this publication. A.P.C.S. PTY. LTD. will accept no legal liability for any errors, omissions or amendments.