

General Specifications

Model DH5
Isolator
(with Square Root Extractor)

JUXTA

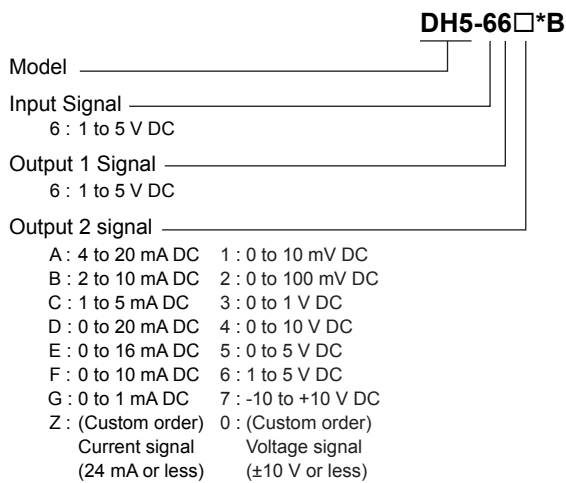
GS 77J05H05-01E

General

The DH5, a nest-mounting type DCS-supported isolator, extracts the square root of 1 to 5 V DC signals and converts them into isolated DC current or DC voltage signals.

On-site zero/span adjustment and I/O monitoring etc. can be performed from the host system or a handy terminal via the communication interface.

Model and Suffix Codes



Power supply: 24 V DC±10%

Ordering Information

Specify the following when ordering.

- Model and suffix codes: e.g. DH5-66A*B
 - Lowcut point: e.g. 0.3%
- (If not specified, the low cut point is set to 0.6%.)

Input/Output Specifications

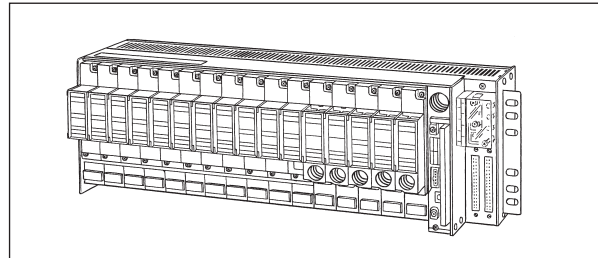
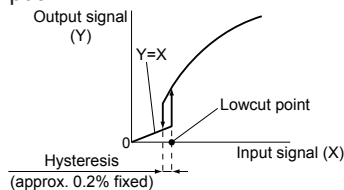
Input signal: 1 to 5 V DC
Input resistance: 1 MΩ during power on, 100 kΩ during power off
Maximum allowable input: ±9 V DC or less
Input-output characteristics:

$$Y = \left(\sqrt{\frac{X - (\text{input 0 \% value})}{\text{input span}}} \right) \times (\text{output span}) + (\text{output 0 \% value})$$

X: Input value, Y: Output value

Lowcut point setting range: 0.3 to 100%

Output characteristic: Output for lowcut point or less is cramped with straight line proportional to input.



Output 1 signal: 1 to 5 V DC

Output 2 signal: DC current or DC voltage signal
(In the case of DC current, only either from the front terminals 3-4 or from the connector can be output)

Allowable load resistance:

DC current output	Allowable load resistance	DC voltage output	Allowable load resistance
4 to 20 mA	750 Ω or less	0 to 10 mV	250 kΩ or more
2 to 10 mA	1500 Ω or less	0 to 100 mV	250 kΩ or more
1 to 5 mA	3000 Ω or less	0 to 1 V	2 kΩ or more
0 to 20 mA	750 Ω or less	0 to 10 V	10 kΩ or more
0 to 16 mA	900 Ω or less	0 to 5 V	2 kΩ or more
0 to 10 mA	1500 Ω or less	1 to 5 V	2 kΩ or more
0 to 1 mA	15 kΩ or less	-10 to +10 V	10 kΩ or more

Input adjustment: ±1% of span (Zero/Span)

Output adjustment: ±10% of span (Zero/Span)

In the case of the output 2 specification code 7, it is ±5% of span.

Standard Performance

Accuracy rating:

Output 1: ±0.1% of span

Accuracy is ±1% of span for input level 2% or less.

Output 2: Relative error between output-1 and 2 is within ±0.2%. Accuracy is not guaranteed for output level less than 0.5% of the span of a 0 to X mA output range type.

Response speed: 200 ms, 63% response (10 to 90%)

Insulation resistance: 100 MΩ or more at 500 V DC between input and output, output and power supply, and input and power supply.

Withstand voltage: 1500 V AC/min. between input and (output and power supply). 500 V AC/min. between output and power supply.

Environmental Conditions

Operating temperature range: 0 to 50°C

Operating humidity range: 5 to 90% RH (no condensation)

Power supply voltage: 24 V DC±10% (ripple content 5% p-p or less)

Effect of power supply voltage fluctuations: ±0.1% of span or less for fluctuation within the operating range of power supply voltage specification.

Effect of ambient temperature change: ±0.2% of span or less for a temperature change of 10°C.

Current consumption: 24 V DC 80 mA (4 to 20 mA), 50 mA (1 to 5 V)

■ Mounting and Dimensions

Mounting method: Nest-mounting (Signals and power supply are connected through back board and connector)

Connection method:

External wiring; connection to M4 screw terminals of the dedicated nest

Connection to I/O card; via dedicated cable (connector)

External dimensions: 130.6(H)×23.6(W)×126(D) mm
Weight: Approx. 120 g

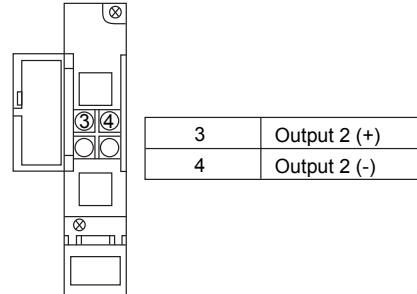
■ Standard Accessories

Tag number label: 1

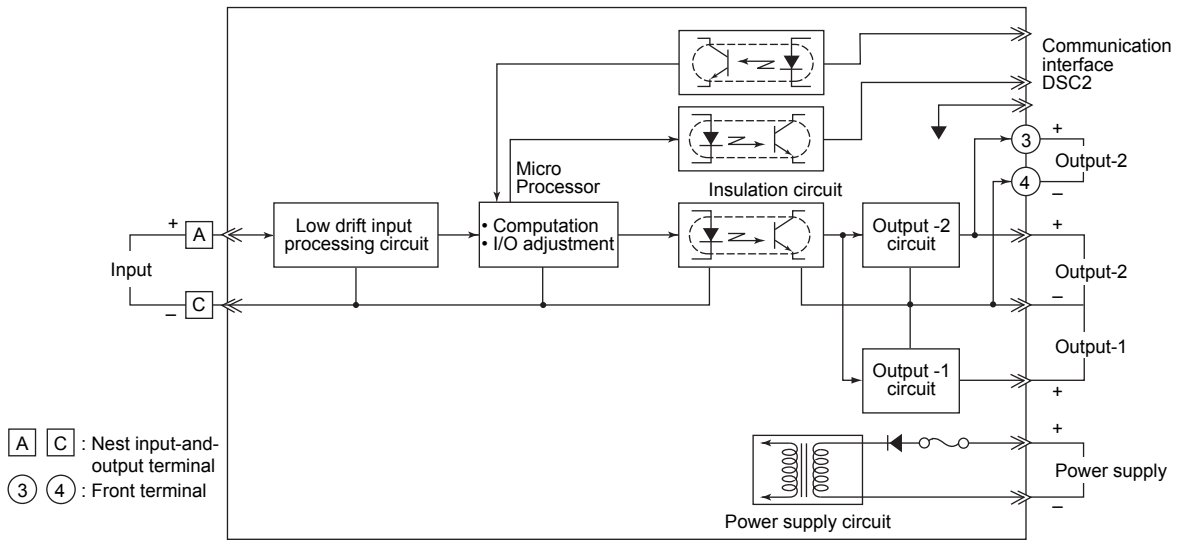
■ Custom Order Specifications

	Current signal	Voltage signal
Output range (DC)	0 to 24 mA	-10 to +10 V
Span (DC)	1 to 24 mA	10 mV to 20 V
Zero elevation	0 to 200%	-100 to +200%

■ Terminal Assignments



■ Block Diagram



■ External Dimensions

