# iC334 EVAL IC334 BiSS-D-SUB
CONNECTION ADAPTER WITH CLAMP TERMINAL



## ORDERING INFORMATION

| Type | Order Designation | Description Options |
|---|---|---|
| Connection Adapter | iC334 EVAL IC334 | BiSS connection adapter<br>sub-D 9 pole female connector to clamp terminals<br>with optional external sensor power supply (VDD) |

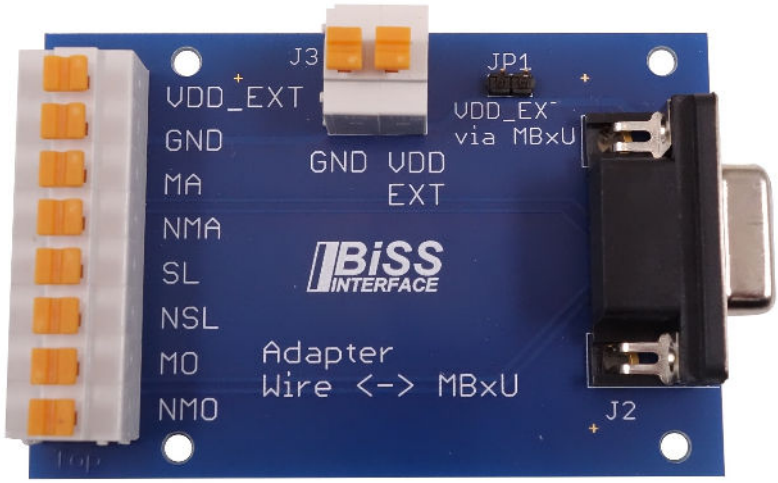


Figure 1: iC334 Connection Adapter

## ORDERING INFORMATION: RECOMMENDED TOOLS

| Type | Description | Options | Order Designation |
|---|---|---|---|
| PC Adapter | BiSS/SSI-to-PC adapter (USB) | For BiSS/SSI master | iC-MB3 iCSY MB3U |
| PC Adapter | BiSS/SSI-to-PC adapter (USB) | For BiSS/SSI master | iC-MB3 iCSY MB3U-I2C |
| PC Adapter | High performance BiSS/SSI-to-PC adapter (USB) | For BiSS/SSI master | iC-MB4 iCSY MB4U |
| PC Adapter | High performance BiSS/SSI-to-PC adapter (USB) | For BiSS/SSI master | iC-MB5 iCSY MB5U |


Figure 2: Adapter MB4U

## EVALUATION KIT: COMPONENT


Figure 3: BiSS/SSI connection adapter iC334 - scope of delivery

## ADAPTER iC334

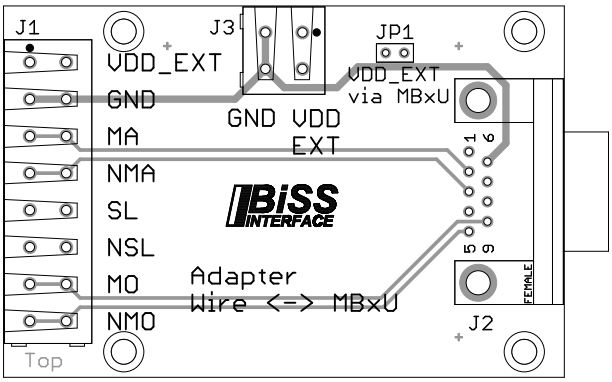


Figure 4: Component side

| TERMINAL | DESCRIPTION |
|---|---|
| J1 | Clamp terminal<br>(connection to BiSS/SSI slave or encoder) |
| J2 | Sub-D connector<br>(connection to a BiSS/SSI master interface adapter MBxU) |
| J3 | Clamp terminal for<br>external power supply input<br>(JP1 removed) |
| JP1 | Slave power supply via MBxU<br>(JP1 bridged, default and setting when shipped) |

## RELATED PRODUCTS AND DOCUMENTATION

- Protocol Documentation: BiSS.
  → Please check website for more information.
- BiSS/SSI Software Installer: Evaluation with BiSS Reader Software ZIP Packages.
  → Please check BiSS Reader software ZIP installer packages.
  → BiSS Reader Software with RTE (recommended)
  → BiSS Reader Software without RTE
- BiSS-to-PC Adapter MBxU Descriptions
  → http://www.ichaus.de/MB3U_datasheet_en
  → http://www.ichaus.de/MB4U_datasheet_en
  → http://www.ichaus.de/MB5U_datasheet_en

## PHYSICAL DIMENSIONS

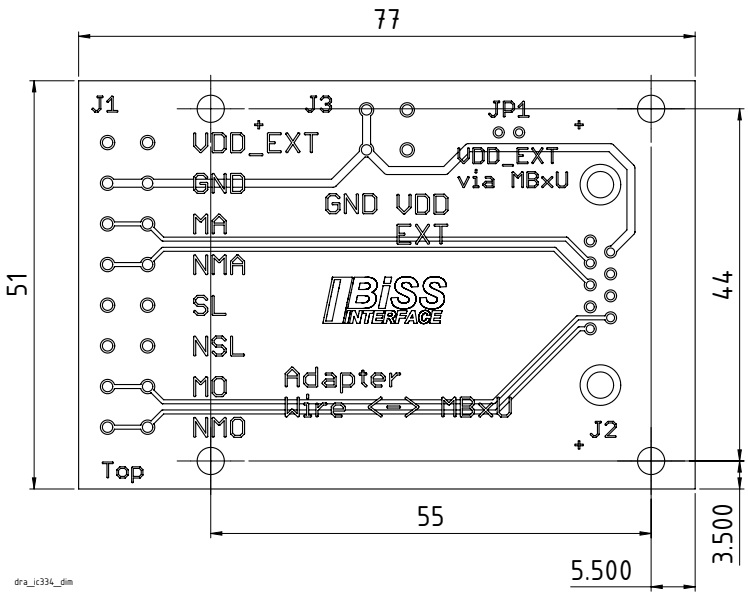


Figure 5: Dimension

## PINOUT OF CONNECTORS AND TERMINALS

**J1: BiSS/SSI interface output (Slave/Encoder)**
8-pin clamp terminals

| PIN | Name | Function |
|---|---|---|
| 1 | VDD_EXT | Power supply |
| 2 | GND | 0 V ground |
| 3 | MA | Clock,<br>Master → Slave |
| 4 | NMA | Clock,<br>Master → Slave (inverted) |
| 5 | SL | Data line,<br>Slave → Master |
| 6 | NSL | Data line,<br>Slave → Master (inverted) |
| 7 | MO | Master data output,<br>Master → Slave<br>(optional, not usable with SSI) |
| 8 | NMO | Master data output,<br>Master → Slave<br>(inverted, optional, not usable with SSI) |

**J2: BiSS interface input (Master)**
9-pin Sub D Connector - female

| PIN | Name | Function |
|---|---|---|
| 1 | n.c. | not connected |
| 2 | MA | Clock,<br>Master → Slave |
| 3 | NMA | Clock,<br>Master → Slave<br>(inverted) |
| 4 | VDD | +5 V supply voltage |
| 5 | NSLI - (NMO) | Data input<br>(inverted, optional Data output provided by NMO of BiSS Master) |
| 6 | GND | 0 V ground |
| 7 | SL + (SL) | Data line |
| 8 | SL - (NSL) | Data line<br>(inverted) |
| 9 | SLI + (MO) | Data input<br>(optional Data output provided by MO of BiSS Master) |

**J3: External Power Supply (Slave)**
2-pin clamp terminals

| PIN | Name | Function |
|---|---|---|
| 1 | VDD_EXT | Power supply of J1<br>Please keep JP1 open before connecting and during an external power supply connection. |
| 2 | GND | 0 V ground |

## DESCRIPTION OF JUMPERS

| Jumper JP1 | Function |
|---|---|
| Closed | Slave/Encoder power supply via MBxU (default and setting when shipped). |
| Open | Slave/Encoder power supply via J3 external power supply. |

A connected external power supply and a closed (bridged) jumper JP1 at the same time may cause damages do the connected devices.

## CIRCUIT SCHEMATIC

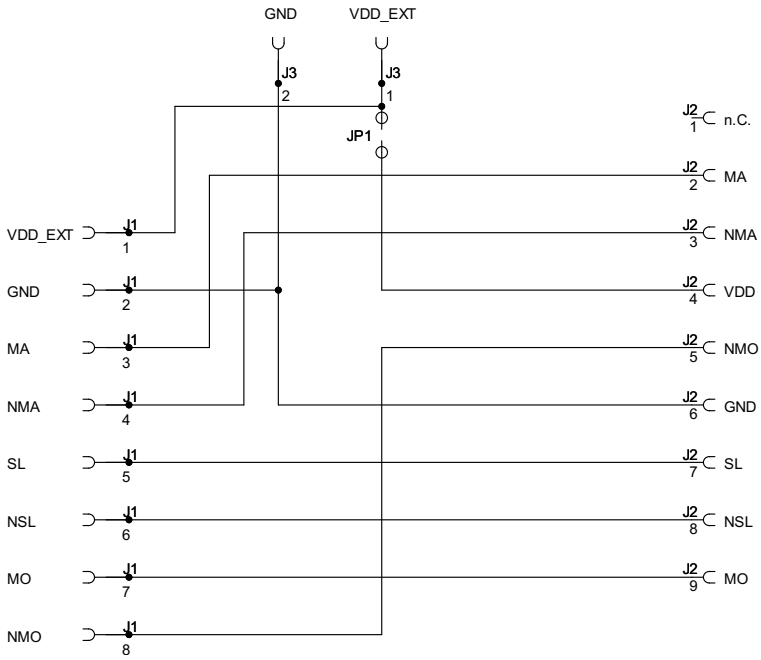


Figure 6: Circuit diagram iC334

## ASSEMBLY PART LIST

| Device | Value (typical) | Comment |
|---|---|---|
| J1 | MRT1P5.08-08 | Clamp terminal 8-pin, double W8x1 |
| J2 | Sub-D 9 pol. (female) | Sub-D connector |
| J3 | MRT1P5.08-02 | Clamp terminal 2-pin, double W2x1 |
| JP1 | SLLP10972G | Jumper 2-pin |

Table 1: Board IC334

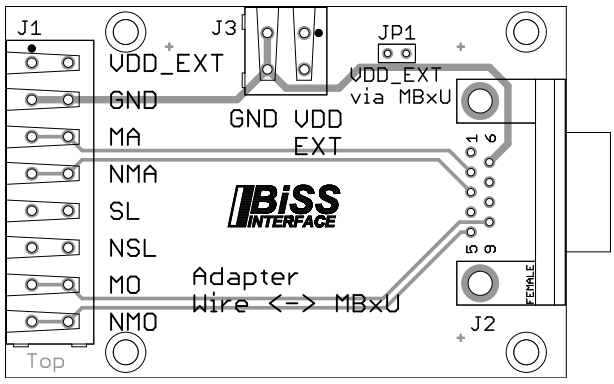


Figure 7: Board IC334 - top side

## ADAPTER MOUNTING EXAMPLE


Figure 8: IC334 connected to iC-MB5 iCSY MB5U

### External Power Supply

The connected sensor at clamp terminals J1 can be supplied with an external power supply via J3. In this case JP1 must be removed (not bridged). The grounds of connectors J1, J2 and J3 (signal GND) are connected together.

### Power Supply via MBxU

The connected sensor at clamp terminals J1 can be supplied from the interface adapter MBxU via connector J2 pin 4 (signal VDD). In this case be ensure that no external power supply is connected.

## REVISION HISTORY

| Rel. | Rel. Date* | Chapter | Modification | Page |
|---|---|---|---|---|
| A1 | 2018-05-09 | | Initial Version | All |



* Release Date format: *YYYY-MM-DD*