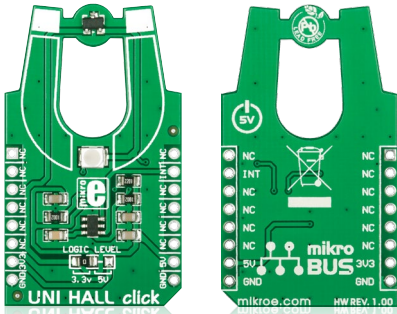# UNI HALL click™

## 1. Introduction

UNI HALL click™ is a simple solution for adding an unipolar Hall switch to your design. It carries the Melexis US5881 unipolar Hall-effect switch and a 74LVC1T45 single bit, dual supply translating transceiver. UNI HALL click™ communicates with the target board through the **mikroBUS™** INT line. The board is designed to use either a 3.3V or 5V power supply (which also defines the logic level of the output signal).
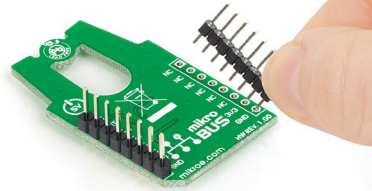
## 2. Soldering the headers

Before using your click™ board, make sure to solder 1x8 male headers to both left and right side of the board. Two 1x8 male headers are included with the board in the package.
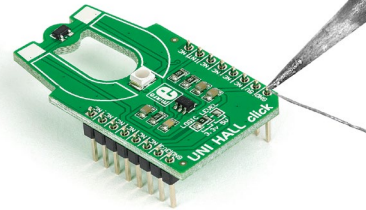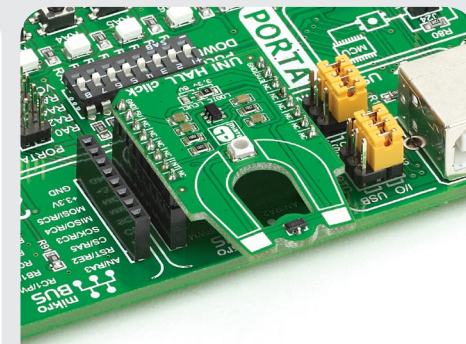
❶

❷

Turn the board upside down so that the bottom side is facing you upwards. Place shorter pins of the header into the appropriate soldering pads.

❸

Turn the board upward again. Make sure to align the headers so that they are perpendicular to the board, then solder the pins carefully.

## 3. Plugging the board in

Once you have soldered the headers your board is ready to be placed into the desired mikroBUS™ socket. Make sure to align the cut in the lower-right part of the board with the markings on the silkscreen at the mikroBUS™ socket. If all the pins are aligned correctly, push the board all the way into the socket.
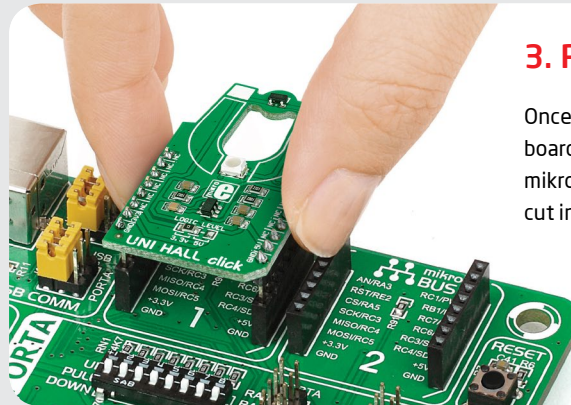
## 4. Essential features

The unipolar Hall effect sensor on UNI HALL click™ is sensitive to north pole magnetic fields—when exposed to such a field, it outputs a LOW logic level. Othewise the output is a HIGH logic level. In its simplest application, UNI HALL click™ can be employed as part of a long lasting contactless proximity switch. However, magnets can be employed in various ways to infer the speed, position, or other properties of an object; there are countless ways to utilize UNI HALL click™ in your design.

# click™ BOARD

www.mikroe.com

UNI HALL click™ manual
**ver. 1.00**

0 100000 026939

# 5. UNI HALL click™ board schematic
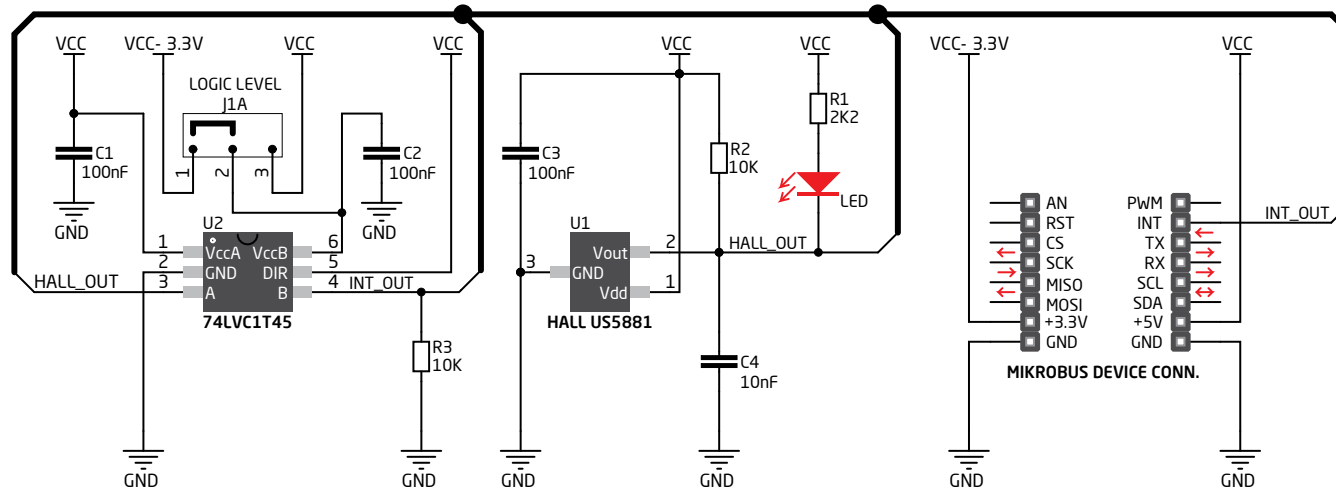
VCC   VCC- 3.3V   VCC   VCC

LOGIC LEVEL
J1A

C1 100nF

C2 100nF

GND   GND

HALL_OUT

**U2**

| | | | |
|---|---|---|---|
| 1 | VccA | VccB | 6 |
| 2 | GND | DIR | 5 |
| 3 | A | B | 4 |

**74LVC1T45**

INT_OUT

R3 10K

GND   GND

---

VCC   VCC

C3 100nF

R2 10K

R1 2K2

LED

**U1**

| | | | |
|---|---|---|---|
| 2 | Vout | | |
| 3 | GND | | |
| 1 | Vdd | | |

**HALL US5881**

HALL_OUT

C4 10nF

GND   GND

---

VCC- 3.3V   VCC

| AN | PWM |
|---|---|
| RST | INT |
| CS | TX |
| SCK | RX |
| MISO | SCL |
| MOSI | SDA |
| +3.3V | +5V |
| GND | GND |

**MIKROBUS DEVICE CONN.**

INT_OUT

GND   GND

---
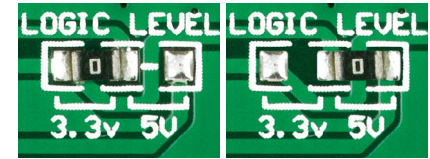
## 6. SMD jumper

To switch between 3.3V and 5V power supplies, use the on-board zero-ohm SMD jumper. By default it's soldered in the 3.3V position.

## 7. Code examples

Once you have done all the necessary preparations, it's time to get your click™ board up and running. We have provided examples for mikroC™, mikroBasic™ and mikroPascal™ compilers on our **Libstock** website. Just download them and you are ready to start.

**LIBSTOCK**®.com

## 8. Support

MikroElektronika offers **free tech support (www.mikroe.com/support)** until the end of the product's lifetime, so if something goes wrong, we're ready and willing to help!

**MikroElektronika**
DEVELOPMENT TOOLS | COMPILERS | BOOKS

# X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for* Magnetic Sensor Development Tools *category:*

*Click to view products by* MikroElektronika *manufacturer:*

Other Similar products are found below :

AS5134 AB  MMC5633NJL-B  MIKROE-1647  MIKROE-1646  EVAL-CN0332-PMDZ  AS5510-SO_EK_AB  AS5510-WL_EK_DB  ADA4571R-EBZ  AS5170A-SO_EK_AB  4366  AS5013-QF_EK_AB  AS5040 DB V2  AS5047D-TS_EK_AB  AS5048A-EK-AB-STM1.1  AS5048-TS_EK_DB  AS5050A-QF_EK_AB  AS5132 AB  AS5132 DB  AS5132-PB  AS5145B-EK-AB-STM1.0  AS5147P-TS_EK_AB  AS5162-EK-AB  AS5172B-TS_EK_AB  AS5247-MF_EK_AB  AS5247-MF_EK_SB  AS5247U-TQ_EK_AB  AS5247U-TQ_EK_SB  AS5262-MF_EK_AB  AS5306-TS_EK_AB  AS5311-TS_EK_AB  AS5510-SOIC8-AB  AS5600-SO_EK_AB  AS5600-SO_EK_ST  AS5601-SO_EK_ST  AS5601-SO_RD_ST  AS5X47U-TS_EK_AB  SD4Y-EK-XX  USB I&P BOX  EVAL-CN0323-SDPZ  EVAL-CN0368-SDPZ  DFR0033  S2GO3DSENSETLV493DTOBO1  S2GOCURSENSETLI4970TOBO1  TLE5012BE5000MS2GOTOBO1  TLE5014PROGKITTOBO1  EVB90316-DC  EVB90316-GO  EVB90333-DC  EVB90393  EVB922xx