

# Modbus Register Map

## About these Registers:

DEVICE\_ID / REMOTE\_TERMINAL\_UNIT (RTU) / SLAVE\_ID:

Each sensor on a single multi-drop bus line must have a unique DEVICE\_ID / RTU / SLAVE\_ID:  
By Default the DEVICE\_ID / RTU / SLAVE\_ID is the **LAST 2 DIGITS OF THE SENSORS SERIAL NUMBER**

The serial number (and therefore, the RTU number) can be found on the side of the TwinProx on the white label.

## INDEXING:

Note that **the listed registers** below are considered **0-Indexed (the first value starts at 0)**

**Some Modbus masters will need to shift all the values up by one** value if their master recognized the first Modbus value at 1 (known as 1-indexed).

## SERIAL COMMUNICATION SETTINGS:

**Baudrate:** 115200

**Parity:** None

**Handshakes:** None

**Data Bits:** 8

**Stop Bits:** 1

## FUNCTION CODES:

The function codes supported by TwinProx Sensor are:

03 - (0x03) READ MULTIPLE **HOLDING** REGISTERS

16 - (0x10) WRITE MULTIPLE **HOLDING** REGISTERS

--- If you want to read or write to just a single register, you can do this by setting the length/offset/number of registers to 1 ---

# Endianness:

The TwinProx sensor uses the **Big Endian** memory allocation paradigm.

In computing, **endianness** is the order or sequence of bytes of a word of digital data in computer memory. Endianness is primarily expressed as **big-endian (BE)** or **little-endian (LE)**. A big-endian system stores the most significant byte of a word at the smallest memory address and the least significant byte at the largest. A little-endian system, in contrast, stores the least-significant byte at the smallest address.

# Modbus Register Map

Register Address	Number of Registers	Register Contents Description	Range	Default Value	Scale	Unit	Data Type	Read / Write	Notes
40176	1	Channel A Gap / Distance		n/a		mils	16-bit Unsigned Integer	R	
40177	1	Channel B Gap / Distance		n/a		mils	16-bit Unsigned Integer	R	
40178	1	Channel A Displacement		n/a		mils Pk-Pk	16-bit Unsigned Integer	R	
40179	1	Channel B Displacement		n/a		mils Pk-Pk	16-bit Unsigned Integer	R	
40201	2	Channel A Temperature		n/a		Celcius	32-bit Floating Point	R	
40203	2	Channel B Temperature		n/a		Celcius	32-bit Floating Point	R	