

V13/04-2024



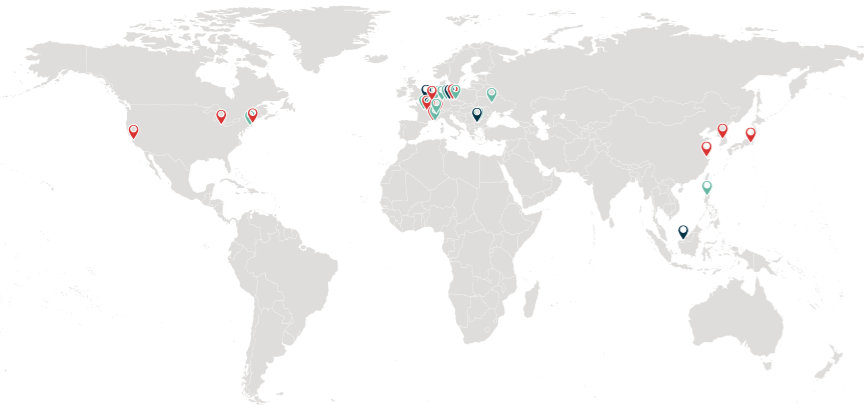
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- Research & Development
- Sales & Applications
- Manufacturing



The sea turtle's ability to locate its home beach is truly remarkable. As with many migratory animals, sea turtles accomplish this feat by measuring the Earth's magnetic field. A close link with our variety of magnetic sensors. The sea turtle's shield ensures safety at all times, just like our products do. A must for an important player in the automotive industry.

SELECTION GUIDE

PTC-04 AND DAUGHTERBOARD

PTC-04 AND DAUGHTERBOARD

The Melexis family of programmable sensors are designed to be integrated into an application and then programmed. Programming allows for setting the various operating modes inside the chip and for performing an end-of-line calibration which reduces or removes residual error due to mechanical tolerances for example.

To program the sensor the PTC-04 (programmed through connector) programming tool is used. The PTC-04 connects between a PC and the sensor to be programmed and manages the conversion of commands from the PC to the sensor. An easy to use UI is provided for every product allowing for easy development. For production environments, a DLL is also provided that can be called from Labview, Visual Basic, C#, or any language that supports ActiveX COM libraries thus enabling the automation of the calibration process.

The PTC-04 programmer contains its own programmable power supply and measurement circuitry. It's similar to a standard EEPROM programmer, but adds many special features such as 16-bit voltage and current measurement capability, and configuration options that will accommodate users from the prototyping phase directly into production. A PC is required to load software to the programmer and control the functions of the programmer.

Communication is done through a standard RS-232 null modem cable to a COM port of the PC or via USB. The PC requires no custom configuration, allowing the programmer to be used with any PC with a COM port speed of 115.2kbs or a standard USB 1.1 or USB 2.0 (Type A) interface.



PTC-04 programming tool

```
using System;
using System.Windows.Forms;
using PSF090365AAMLXModule;
using PTC04PSFModule;
using ComUnit;
using MLX9PTCommon;

namespace MLX90316_C_sharp_Demo
{
    public partial class Form1 : Form
    {
        private static PSF090365AAMLXDevice Dev;
        private PSF090365AAMLXAdvanced Advanced;
        private PSF090365AAMLXSolver Solver;
        private PTC04PSFDevice PTC04;
        private PSF090365AAMLXManager PSFMan;

        private bool connected = false;
        private ObjectCollection devicesCol;

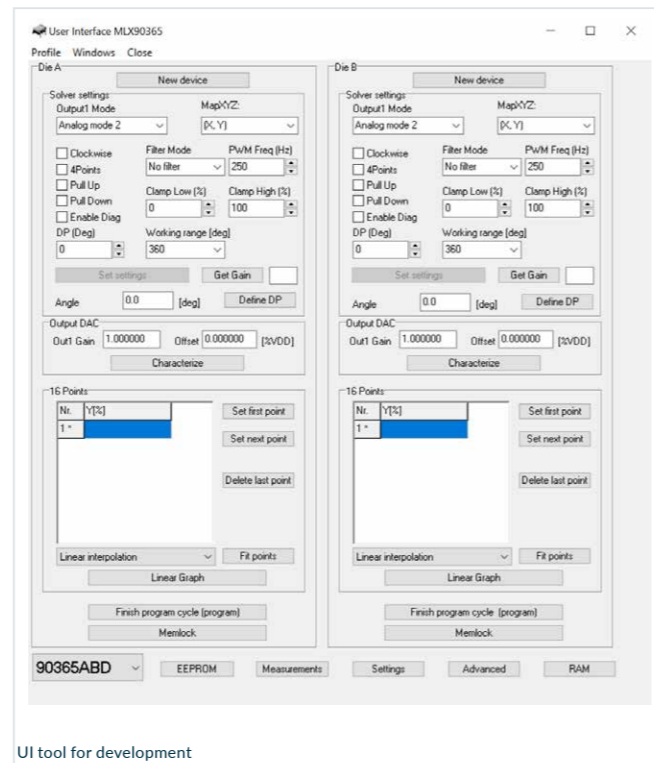
        public Form1()
        {
            InitializeComponent();
        }

        private void Exit_click(object sender, EventArgs e)
        {
        }

        private void BTN_Connect_Click(object sender, EventArgs e)
        {
            int temp;
            PSFMan = new PSF090365AAMLXManager();
            devicesCol = new ObjectCollection();
            if (connected == false)
            {
                devicesCol = (ObjectCollection)PSFMan.ScanStandalone(DeviceType.dtSerial);

                if (devicesCol.Count <= 0)
                {
                    MessageBox.Show("No PTC-04 programmers found.");
                    return;
                }
                if (devicesCol.Count >= 1)
            }
        }
    }
}
```

Example C# code for automation



UI tool for development

| Daughterboards for Triaxis position sensor products | |
|---|---|
| Triaxis sensor ICs | Daughterboard required |
| MLX90316 | PTC-04-DB-90316 |
| MLX90324 | PTC-04-DB-90316 |
| MLX90333 | PTC-04-DB-90316 |
| MLX90340 | PTC-04-DB-90316 |
| MLX90360 | PTC-04-DB-90316 |
| MLX90363 | DB-SPI or N/A (1) |
| MLX90364 | PTC-04-DB-90316 or PTC-04-DB-HALL06 (4) |
| MLX90365 | PTC-04-DB-90316 or PTC-04-DB-HALL06 (4) |
| MLX90366 | PTC-04-DB-90316 or PTC-04-DB-HALL06 (4) |
| MLX90367 | PTC-04-DB-90316 or PTC-04-DB-HALL06 (4) |
| MLX90371 | PTC-04-DB-HALL06 |
| MLX90372 | PTC-04-DB-HALL06 |
| MLX90373 | PTC-04-DB-HALL06 (5) |
| MLX90374 | PTC-04-DB-HALL06 |
| MLX90376 | PTC-04-DB-HALL06 |
| MLX90377 | PTC-04-DB-HALL06 |
| MLX90378 | PTC-04-DB-HALL06 |
| MLX90392, MLX90393, MLX90394, MLX90395, MLX90397 | N/A (1) |
| MLX90421 | PTC-04-DB-HALL06 |
| MLX90422 | PTC-04-DB-HALL06 |
| MLX90423 | PTC-04-DB-HALL06 |
| MLX90425 | PTC-04-DB-HALL06 |
| MLX90426 | PTC-04-DB-HALL06 |

| Daughterboards for Linear Hall position sensors | |
|---|--|
| Linear Hall sensor ICs | Daughterboard required |
| MLX91377 | PTC-04-DB-HALL06 |
| MLX90293 | PTC-04-DB-90316 |
| MLX90292 | PTC-04-DB-HALL03 (2) or PTC-04-DB-HALL04 (3) |
| MLX90288 | PTC-04-DB-HALL03 |
| MLX90251 | PTC-04-DB-HALL01 |
| MLX90215 | PTC-04-DB-HALL01 |

- (1) Programmable via SPI (do not require the use of the PTC-04).
- (2) PWM Output.
- (3) PSi5 Output.
- (4) version 3 or higher
- (5) version 4 or higher
- (6) version 7 or higher

| Daughterboards for Inductive position sensors | |
|---|---|
| Inductive sensor ICs | Daughterboard required |
| MLX90510 | PTC-04-DB-HALL06 (4) or PTC-04-DB-MUPET |
| MLX90513 | PTC-04-DB-HALL06 (4) |
| MLX90517 | PTC-04-DB-HALL06 (4) |

| Daughterboards for Latches & Switches | |
|---------------------------------------|--|
| Latch & Switch ICs | Daughterboard required |
| MLX92232 | PTC04-DB-922xx |
| MLX92242 | PTC04-DB-922xx |
| MLX92292 | PTC04-DB-922xx or PTC-04-DB-HALL06 (4) |
| MLX92352 | PTC-04-DB-HALL06 (4) |
| MLX92362 | PTC-04-DB-HALL06 (4) |
| MLX92442 | PTC04-DB-922xx |

| Daughterboards for current sensors | |
|------------------------------------|------------------------|
| Current sensor ICs | Daughterboard required |
| MLX91206 | PTC04-DB-HALL03 |
| MLX91207 | PTC04-DB-HALL03 |
| MLX91208 | PTC04-DB-HALL05 |
| MLX91209 | PTC04-DB-HALL05 |
| MLX91216 | PTC04-DB-HALL05 |
| MLX91217 | PTC04-DB-HALL05 |
| MLX91218 | PTC04-DB-HALL05 |
| MLX91219 | PTC04-DB-HALL05 |

| Daughterboards for Pressure sensors | |
|---|------------------------|
| Pressure sensor ICs | Daughterboard required |
| Standard SMD MLX90809, MLX90817, MLX90818, MLX90821 | PTC04_DB_Pressure01 |
| Bare die MLX90819, MLX90820 | PTC04_DB_Pressure01 |
| PCB-less MLX90822, MLX90823, MLX90824, MLX90825 | PTC-04-DB-HALL06 (4) |
| Triphibian™ MLX90830 | PTC-04-DB-HALL06 (4) |
| Pressure interface MLX90328, MLX90329 | PTC04_DB_Pressure01 |