MYLAPS
SPORTS TIMING

MYLAPS X2 TrackSensor

Quick Start Guide

Contents

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Features & Typical Application

Features:

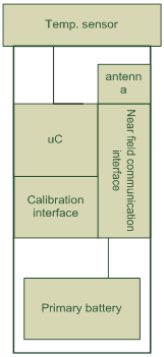
- Track Surface Temperature measurement at every X2 Loop location
  - 1 minute update of the track temperature
  - Integrated with the timing system
- Factory calibrated temperature measurement
  - 0.1 °C Resolution
  - ±1 °C Accuracy
- Fast thermal response time
- Timing loop diagnostics
  - A test signal is sent to an X2 Decoder every minute
- Permanent installation
  - 5 Year battery life
- Compatible with current loops of the MYLAPS CAR/BIKE and KART systems for loop diagnostics only

Typical application:

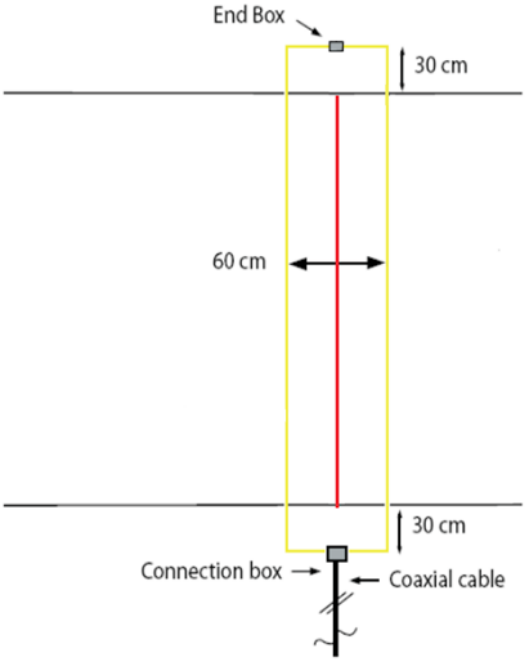
- Track Surface Temperature measurement
- Timing Loop Installation Diagnostics

Schematic, Installation & Specifications

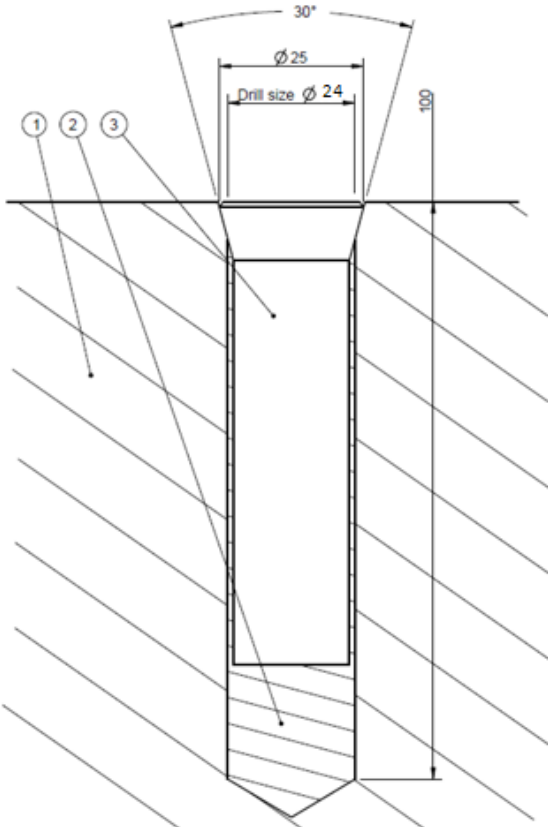
Schematic
Please see below a schematic design of the X2 TrackSensor



Installation
Install the Sensor in a position in the middle of the loop (red line in the below drawing)



Install the X2 TrackSensor in a position in the middle of the loop (red line in the drawing on previous page). Recommended drill hole diameter is 24mm. Once you have drilled the hole please put a layer of silicon into it first and then press the X2 TrackSensor in the hole. Please use a rubber headed hammer to get the X2 TrackSensor into the asphalt. Do not use excessive force as this will damage the X2 TrackSensor.

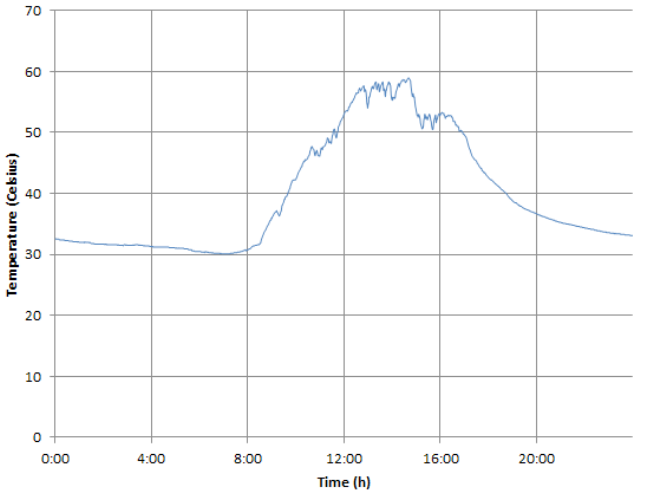


1. Asphalt
2. Silicon
3. X2 TrackSensor

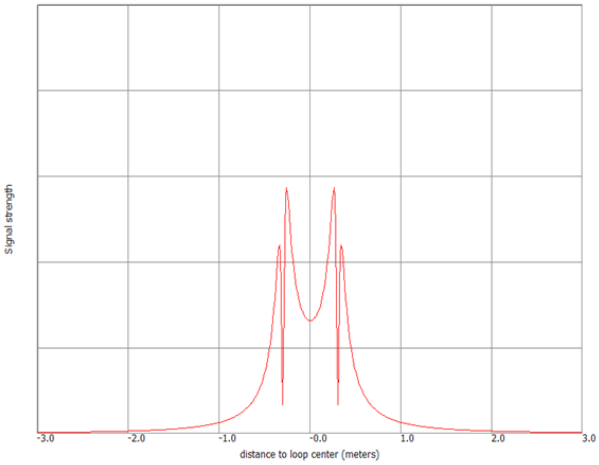
Specifications

• Resolution	0.1 °C
• Accuracy	±1 °C
• Measurement Frequency	Every minute
• Signal transfer	Magnetic induction
• Battery life	5 year
• Overall dimensions	78mm x Ø 25mm
• Weight	45 gram

Typical track surface temperature chart

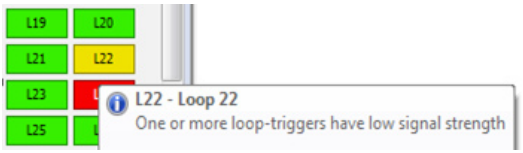


Typical signal strength versus loop wire distance



Loop diagnostics, warning example

This type of loop diagnostics warning is shown within the X2 Manager only.



Software implementation

In order to use track temperature information and loop diagnostics in a custom made application, it is possible to extract this information from the X2 server using the example code below:

```
// Request the loop- trigger data from the MTA.
mta_eventdata_subscribe(event_handle, mtaLoopTrigger, 0, false);
// Request the loop-trigger' data from the MTA.
mta_notify_loopstatus(event_handle, NotifyLoopTrigger);

// Loop-trigger notification function.
static void STDCALL NotifyLoopTrigger(mta_eventdata_handle_t handle,
MDP_NOTIFY_TYPE nType, const looptrigger_t* trigger, void* context)
{
    const loop_t* loop;
    mta_handle_t app_handle = mta_eventdata_get_appliance_handle(handle);

    if (nType != MDP_NOTIFY_CLEAR) {
        char str[32], str2[32];
        loop = mta_loop_find(app_handle, trigger ->loopid);
        fprintf(stdout, "Loop trigger received [Loop:%s, UTC:%s, Time:%s,
        Temperature:%0.1f Celcius]\n",
        loop ? loop->name : "",
        mdp_get_time_as_string(str, sizeof(str), trigger ->utctime, false, 0),
        mdp_get_time_as_string(str2, sizeof(str2), trigger->timeofday, false,  0),
        loopstatus_get_trigger_temperature(trigger));
     } else
            fprintf(stdout, "[CLR] Loop-trigger info\n");
}
```

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