



Maintenance Interval Monitor with USB Output

The MiniMinder™ is a miniature module that monitors and records the run time of equipment during the current maintenance period and the grand total run time for all maintenance intervals, simply by connecting to your equipment's switched side supply.

A green LED provides indication of time remaining before the next maintenance procedure and a visual alarm indication when the current maintenance interval has been exceeded. The LED can be also used to show the current total hours run for the monitored equipment.

Maintenance intervals of up to 11.4 years (in 1 hour steps) can be quickly programmed using the 2 pin programming plug supplied. Versions are available powered from 230Vac, 110Vac, 48Vdc, 24Vdc or 12Vdc.

Models Available

MINIMINDER

Maintenance Interval Monitor

MINIMINDER-USB

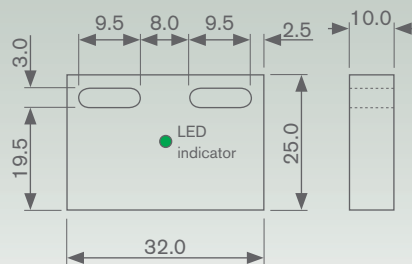
Maintenance Interval Monitor with Alarm and USB Output

Product Features

- Monitor maintenance intervals
- User programmable up to 99999 hours
- Optional dual function opto isolated alarm and 2400 bps serial data output
- Ideal for machines, vehicles, lighting etc.
- Solid state technology
- Small enclosure protected to IP30
- LED indication shows time left status
- 230Vac powered
- 110Vac, 12Vdc, 24Vdc, 48Vdc versions

For monitoring and indicating machine run time to schedule maintenance

Dimensions



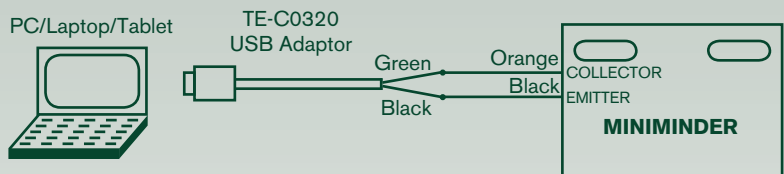
All dimensions in mm

Connections

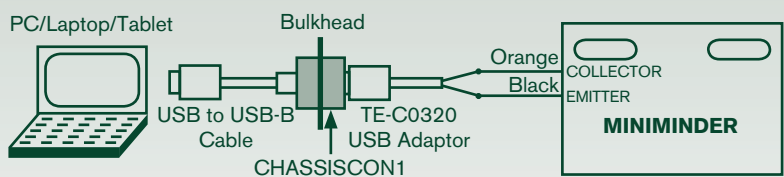


*Supply connection wires are red and black for DC versions

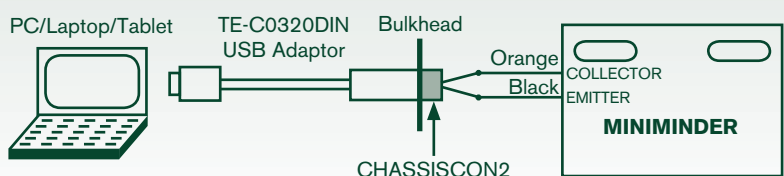
Direct Connection



Inbuilt USB Adaptor



External USB Adaptor



Ordering information

Model	Code	Description
	MINIMINDER	Maintenance Interval Monitor
	MINIMINDER-USB	Maintenance Interval Monitor with Alarm and USB Output

Input Voltage	Code	Description
	230	230Vac
	110	110Vac
	48	48Vdc
	24	24Vdc
	12	12Vdc

Options	Code	Description
	TE-C0320	USB adaptor cable (wire ended for direct connection or internal installation)
	TE-C0320DIN	DIN plug terminated USB adaptor for external installation use
	CHASSISCON1	Bulkhead connector for USB-B connection to internally installed TE-C0320
	CHASSISCON2	Bulkhead DIN socket and cable assembly for external TE-C0320DIN use

Example **MINIMINDER-USB230**

Optional Dual Function Output

Typical application uses include:

1. Remote indication of programmed alarm condition (OK or exceeded).
2. Control switching the machine to restrict or inhibit operation when the maintenance interval has been exceeded.
3. Direct connection to a PLC or PC machine controller.
4. USB stored data (Unit Identifier, Current Run Time, Programmed Maintenance Interval, Total Run Time, OK/EXpired status) transfer to PC.

LED Indication

Green Status LED	Indication
On Continuously	>80% Time Remaining
On, blinking off (25ms every 0.8 seconds)	>60% Time Remaining
0.4 second flash every 0.8 seconds	>40% Time Remaining
0.2 second flash every 0.4 seconds	>20% Time Remaining
Blinking on (25ms every 0.8 seconds)	<20% Time Remaining
3 flash bursts every 2.4 seconds	Interval Expired

Factory Pre-Programming

MiniMinder modules can be supplied with pre-programmed maintenance intervals and output modes, which are factory set during manufacture.

The modules can also be assigned a unit identifier and labelled accordingly, if required. Please enquire for further details.

Eltime Controls: Hall Road, Maldon, Essex, CM9 4NF UK.

ELTIME CONTROLS

Specification**Power Supply Voltage Options:**

- 230Vac, 110Vac (±15%)
- 48Vdc, 24Vdc, 12Vdc (±15%)

Power Consumption:

- 0.65 Watts

Maintenance Interval:

- User programmable to 99999 hours (11.4 years)
- Factory set 08760 hours (1 year)
- Factory custom set (to special order)

Total & Current Time Intervals:

- 0 to 99999 hours (user resettable)

User Programming (using 2 pin plug):

- Programme maintenance interval
- Programme alarm output polarity
- Readout stored data
- Reset current run time/factory reset

Leads:

- 150mm 7/0.2 PVC insulated wires

Electrical Connections:

- AC version: supply L (brown)
- AC version: supply N (blue)
- DC version: supply positive (red)
- DC version: supply negative (black)

Alarm Connections**(MINIMINDER-USB):**

- Optocoupler emitter (black)
- Optocoupler collector (orange)

Dual Output Programming:

- Output on when maintenance interval exceeded or on demand USB
- Output on when maintenance interval OK or on demand USB
- Output replicates status LED or on demand USB
- USB output only, automatic at power up and every hour runtime
- 50V maximum (off), 10mA maximum (on)

Operating Temperature:

- -20°C to 65°C

Enclosure:

- Crastin® PBT SK643 enclosure material
- Flame retardant to UL94V-0

Enclosure Fixing:

- 17.5mm fixing centres
- Two M3 x 15mm screws

Status LED Indication:

- Green LED indicates time remaining (see table)

Enclosure Code:

- Case IP30

Weight:

- 25g