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Electronic Counter
Tool Usage and Life Management

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Agenda

- Product Overview
- Example Solutions
- Design Features
- Competitive Comparison
- Applications
- Value

Product Overview

TULMan Electronic Counter

- What is it?
  - Tracks small pneumatic power tools usage in time and cycles

Product Analogies

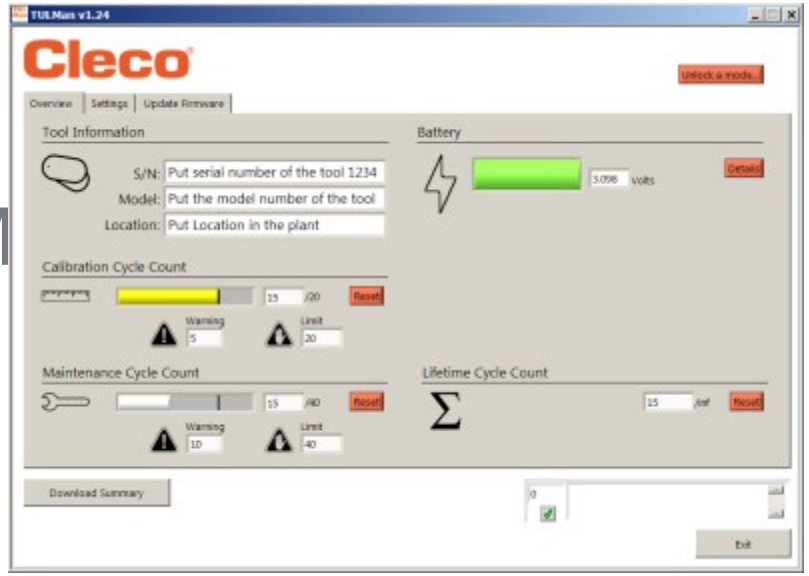
"An odometer/tripometer for your small pneumatic power tools"

"A fitbit TM for your small pneumatic power tools"

Product Overview

Product Overview

TULMan Electronic Counter Software



- Free WEB download
- Multiple Password Access M
  - BASIC to view and file download only
  - TOOL ROOM to reset only
  - PROGRAMMING to set parameters
  - PASSWORD MANAGER
- PROGRAMMING
  - By cycles or run time
  - Minimum time for a cycle can be set

Example Solution

- Used on 19 series pistol and angle assembly tools
- Tracking usage between calibrations - system is currently calendar based
- Will know when some tools are used more than others and can balance their usage
- Data being gathered to review implementing a usage based calibration and extend the calibration period

Major Aerospace OEM

Click icon to add picture

Example Solution

Major Aerospace OEM

- Using on competitor pistol drill
- Tracking usage
- Use to monitor time between failure
- Evaluate tool life over time

Click icon to add picture

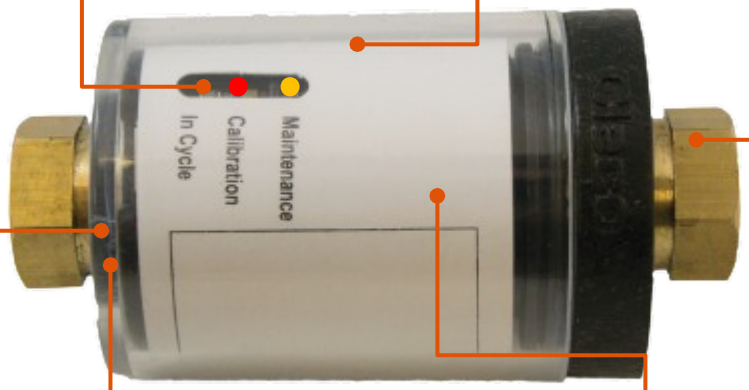
Design Features

- Rugged Polymer construction drop tested and crush-resistant
- Low weight 2.8oz/80g

- LED's turn YELLOW Warning when Cycle or Run Time Limits are being reached

- LED's turn RED when Cycle or Run Time Limits are reached

- Micro USB connection for Program Set Up and Data Download



- 1/4" NPT Outlet and Inlet making in Easy to Install on ANY Small Pneumatic Tool *

- Tamper proof cover for micro usb access requires T10 torx driver

- Electronics isolated from air to prevent contamination

Small pneumatic tools based on airflow min 5cfm/145 lpm – Max 20cfm/570lpm – If tool requires greater air flow tool performance will be affected

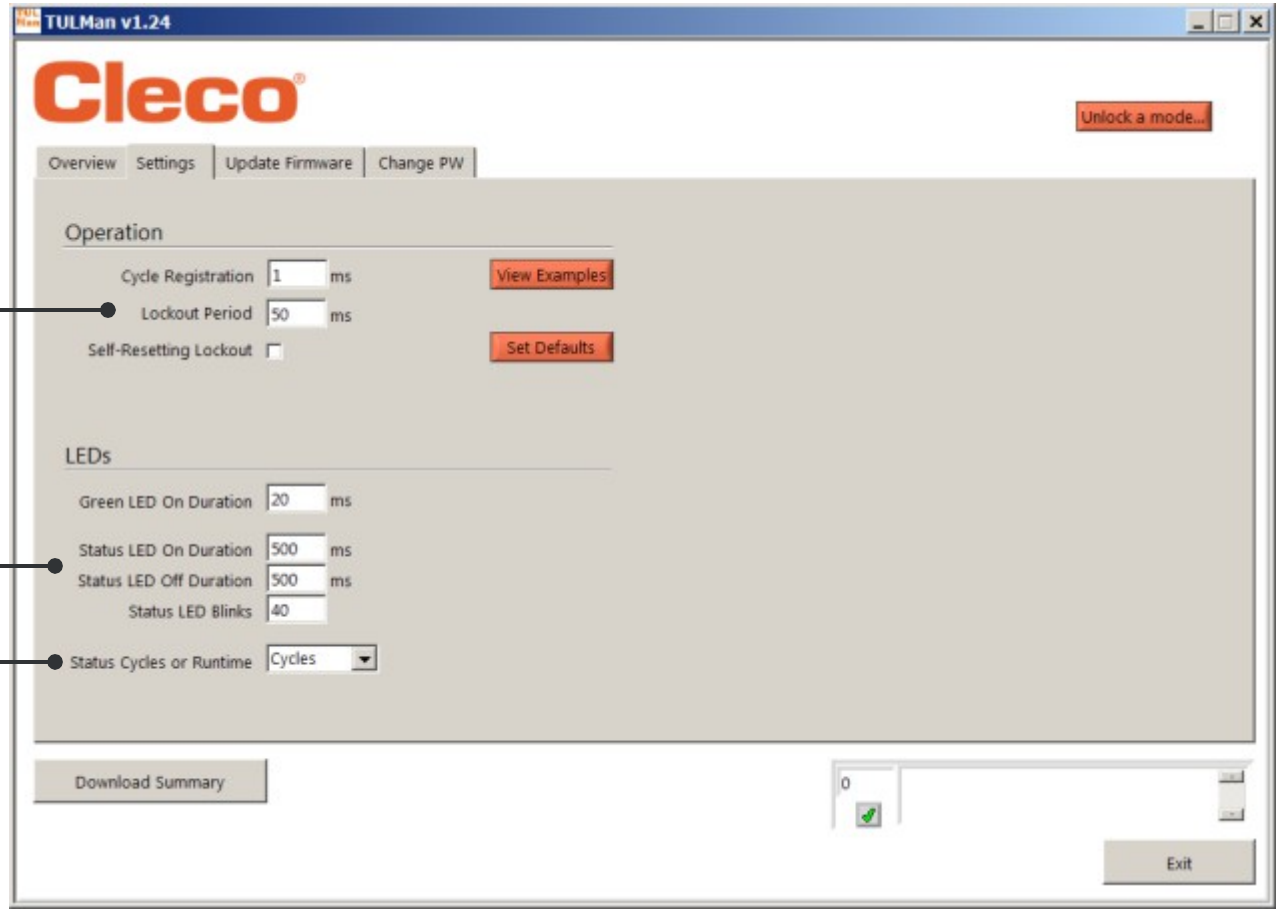
Design Features

- Associate with tool and Plant Location
- Password Management
- Password protected Access to Tool Room, Programming and Password Admin

- Set count warnings and limits for LED warning actuation
- Download results file in csv format
- Life can be reset to zero to move to a new tool

Design Features

- Define cycle parameters e.g. minimum time to be a cycle, time between cycles
- Define LED on/off and number of blinks – can conserve battery life
- Set count to be either cycles or run time



Applications

- Pneumatic Assembly Tools

Reduce Incidence of Calibration for Torque Tools

Estimated annual value $170* per tool

PM vs Repair when failed

Estimated annual value $300** per tool

Knowing tool has not completed too may cycles and is producing correct quality

Priceless

*Based on saving 2 hrs at $85 per hour

** Based on More Uptime (10%), less parts cost (10%), less time to PM vs Repair

Applications

- ## Material Removal – Hand Drills

PM vs Repair when failed

Estimated annual value $300** per tool

* Based on More Uptime (10%), less parts cost (10%), less time to PM vs Repair

Applications

- Material Removal – Sanders, Grinders Polishers

PM vs Repair when failed

Estimated annual value $300** per tool

* Based on More Uptime (10%), less parts cost (10%), less time to PM vs Repair

Competitive Comparison

Click icon to add table

- There is currently NO product like this on the market.
- There are counters for “process” control e.g. Torque Verifier – TVP but these are NOT targeted at Tool Usage and Life Management. They are larger and more expensive.
- This product can be used on Competitive small pneumatic tools.

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What if you knew?

How long, where, when tools were actually used over time?

The Power of Data

- Kevin Myhill

Thank you