0% error
100% accuracy

TOM
Tightening Operation Monitor

TOM - Tightening Operation Monitor

Tightening and monitoring with TOM: the intelligent simplicity

It verifies in real-time the tightening process status and guarantees reliability regardless of operator influence. Innovative, practical and inexpensive **Poka Yoke** system (anti-error): at tightening end, the operator is warned about the outcome thus can quickly move to the next assembly job.

- It warns the operator at the end of cycle
- It warns the operator in case of error
- It can stop the working cycle in case of error caused by the operator

- For air shut-off screwdrivers equipped with pneumatic pick-up signal (ported)

- The same unit can manage **up to 8 tools** (used by one operator) with different torque and speed setting, moreover it can enable one tool at a time according to programmed sequence

- Display (mm 77 x 25,2 wide) showing program number, number of screws to be tightened, set sequence, number of tightened screws on total

- Easy to use: through a **SINGLE PROGRAM** or a **SEQUENCE of PROGRAMS** (up to 8) with **99 tightenings each.** The programs can be selected also from external PLC through the available I/O signals

- It **discriminates the untightenings by decreasing the count** of the performed tightenings

- Equipped with **TIME-OFF**, a deactivation time after the OK tightening that keeps the screwdriver off: so it is possible to avoid the wrong interventions of the operator as the 'double hit' which may damage the components.

OK
CYCLE END
NOK

TOM

www.fiamairtools.com

ACOUSTIC SIGNALS

- = Screw OK
- = Program end
- = Error
- = Sequence end

- Italian
- French
- English
- Spanish

3,2,1
NUMBER OF SCREWS TO BE TIGHTENED

TOWER-LIGHT
In addition to OK, CYCLE END, NOK, also other functions can be connected e.g. program end, untightening, screwdriver stop
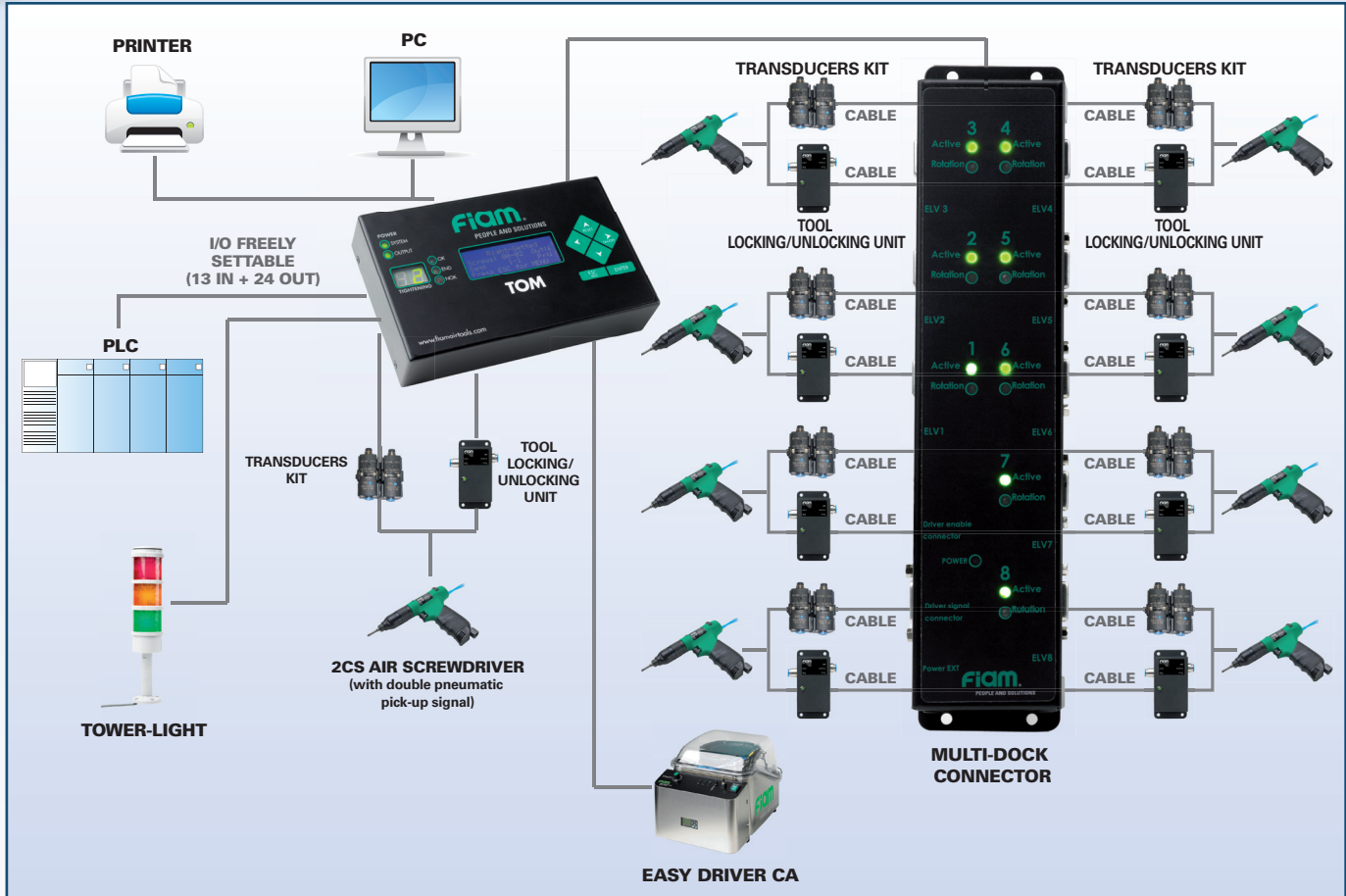
PRINTER

PC

I/O FREELY SETTABLE (13 IN + 24 OUT)

PLC

TRANSDUCERS KIT

TOOL LOCKING/ UNLOCKING UNIT

TOWER-LIGHT

2CS AIR SCREWDRIVER (with double pneumatic pick-up signal)

TRANSDUCERS KIT

TOOL LOCKING/UNLOCKING UNIT

CABLE

TRANSDUCERS KIT

TOOL LOCKING/UNLOCKING UNIT

CABLE

MULTI-DOCK CONNECTOR

EASY DRIVER CA

FEATURES

13 INPUTS	• 8 for programmes selection, 5 for remote functioning: switching off, program activation, tool stop, tool loosening, program reset
24 OUTPUTS	• For results, active program, screwdriver status and possible electro-valve activation, auxiliary output
AUTOMATIC CHECK OF TIGHTENING TIME	• Which can be adjusted by setting the cycle time thus discriminating the different KO results
SINGLE PROGRAM 99 tightenings	• Tightening with min/max time equal for all screws • Screws count • 3 different acoustic signals: tightening end, single program end, error • It can be selected from PC
SEQUENCE PROGRAM 99 tightenings x 8	• More single programmes (up to 8) in sequence • 4 different acoustic signals: tightening end, single tightening end, sequence end, error

- For each tightening sequence it is possible to program the **maximum number of tightening attempts for NOK screws**
- RS232 serial port to print the following results in sequence: Date/hour – Number active output - Result – Tightening time – Screw number - Program number- Sequence
- **PASSWORD** with 4 characters: if it is activated, the operator can't change the set parameters
- **TIME**, can be activated, without buffer-battery to be replaced
- **MEMORY** - parameters for statistics (they can be printed through RS232): OK pieces – NOK screws – Pressed resets (NOK pieces) – Number of screws counted by TOM (data not resettable) – It stores data related to last 6.000.000 screws
- **TOOL TEST** It controls tool air ports and connections works properly
- **REMOTE FUNCTIONING** from external PLC or sensor, it is possible to stop the tool with the dedicated locking/unlocking unit. For instance, when we work with jigs, the tool is activated only when parts are correctly positioned

Model	Description	Code	Dimensions (mm) width x depth x height	Electric feed
TOM	Monitoring unit	685001062	208 x 128 x 42	24V,110/220V, 50/60 Hz

Standard equipment
• Feeder • Feed cable • Use and maintenance manual • Eco-friendly packaging

TOM must be purchased together with **Transducers Kit**; Each tool to connect requires a transducers kit (except for TOM connected with CA EasyDriver). Code **685001068**

ACCESSORIES AVAILABLE UPON REQUEST

MULTI-DOCK CONNECTOR

Connecting up to 8 tools (each tool has a dedicated program) that can operate individually depending on TOM programming. There are 2 LEDs for each screwdriver:
one indicates the enabled screwdriver (to be used) and one indicates the tool is working.
Geared for additional feeding in case of need (feeder upon request).
Supplied with adapter for connection with TOM and 2 connecting cables.

Multi-dock connector	Code **685001065**

TOOL LOCKING/ UNLOCKING DEVICE

It permits to TOM unit to enable/disable connected tool. Including status led.
For 15C/26C screwdrivers, AD/AG angle models and IHE hydraulic pulse wrenches with air shut-off.

Unit for 15C/26C (including couplings for 10 mm Ø hose bore)	Code **685001069**
Unit for AD/AG/IHE (including couplings for 12 mm Ø hose bore)	Code **685001070**

TOWER-LIGHT

3 colour tower-light to be connected to TOM through supplied cable. It allows immediate, visual display of the tightening outcome.

3 colours tower-light	Code **687041018**

CABLES

To connect TOM with locking/unlocking device when a **single** screwdriver is used.

Cable TOM / stop unit	Code **685001071**

To connect multi-dock connector with locking/unlocking device when several screwdrivers are used.

Cable multi-dock connector / locking/unlocking device	Code **685001072**

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