



DATALOGIC
THE VISION IS YOURS



AREX 400
Mark the Difference

October, 2018

AREX 400

Mark the Difference



**NEW
DESIGN**



**ENHANCED
PERFORMANCES**

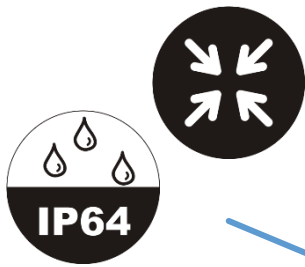


**NEW
FEATURES**



**NEW
ACCESSORIES**

Top 6 Key Selling Arguments



Ultra-Compact &
Environment protected



MARVIS
fully supported



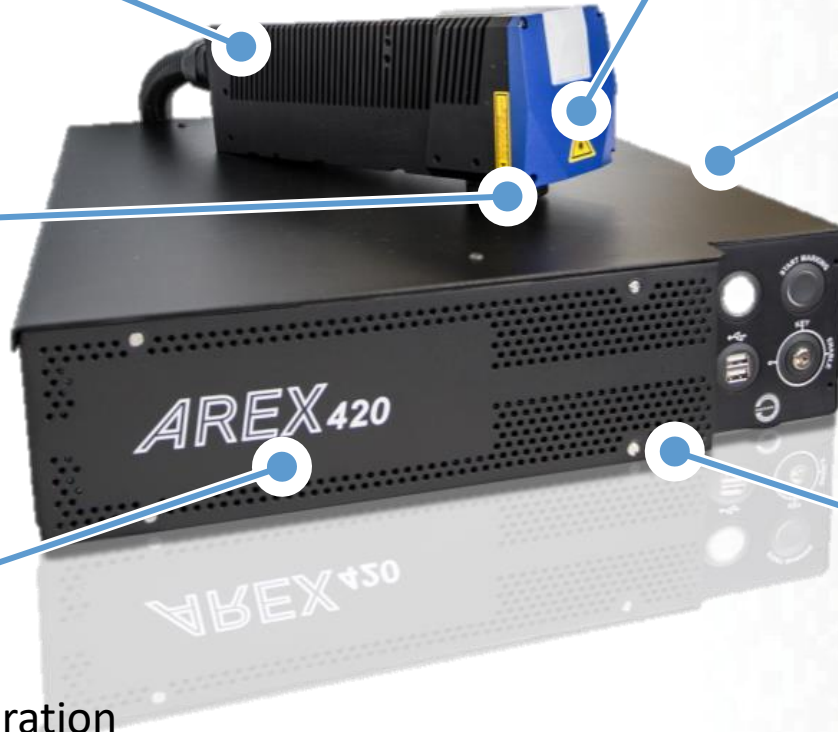
NEW! SLO
Safe Laser Off



NEW! Laser Marking
Green Spot



Quiet operation





NEW SCANHEAD

NEW! ULTRA COMPACT DESIGN



The smallest scanhead in the market is now
SMALLER!

Volume down to 89x96x311 mm³ = 2.6 liters

50% smaller than KEYNCE MD-F3100

86% smaller than KEYNCE MD-X1000

Footprint down to 311x89 mm² = 2.8 dm²

18% smaller than actual AREX v3

- IMPROVED marking center repeatability (± 0.5 mm)
- BACK COMPATIBLE with AREXv3 (with adapter)

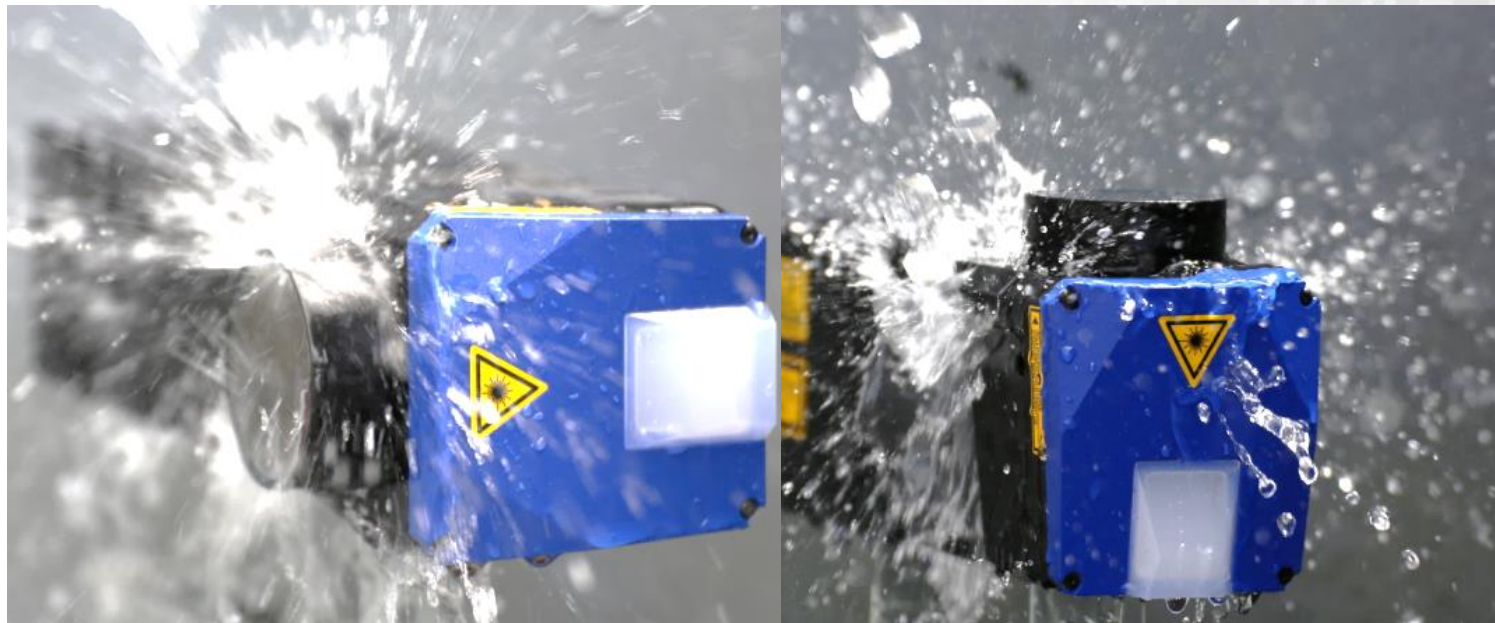


NEW! High resistance conduit,
suitable for robotic installation



NEW! IP64 Environmental Protection

- Robust, high stability body machined from solid aluminum
- Environmental Protection: IP 64
 - NEW sealing material, lubri-coolant and alcohol resistant
- Heat sink fins for improved thermal stability and precision
 - NEW IP64 f -Theta lens cup disposable protection



NEW! Laser Marking GREEN SPOT



NEW! GREEN SPOT on LASER MARKING (Patent Pending)

→ Immediate visible feedback directly on marking area.

→ Programmable visual indication for:

- MARKING JOB COMPLETED
- LASER READY TO MARK
- CODE VALIDATED (WITH MARVIS)

LASERMARKING GREEN SPOT:
Productivity and efficiency booster
in attended processing stations.





NEW CONTROLLER

NEW! Front Panel Design

NEW Front Design

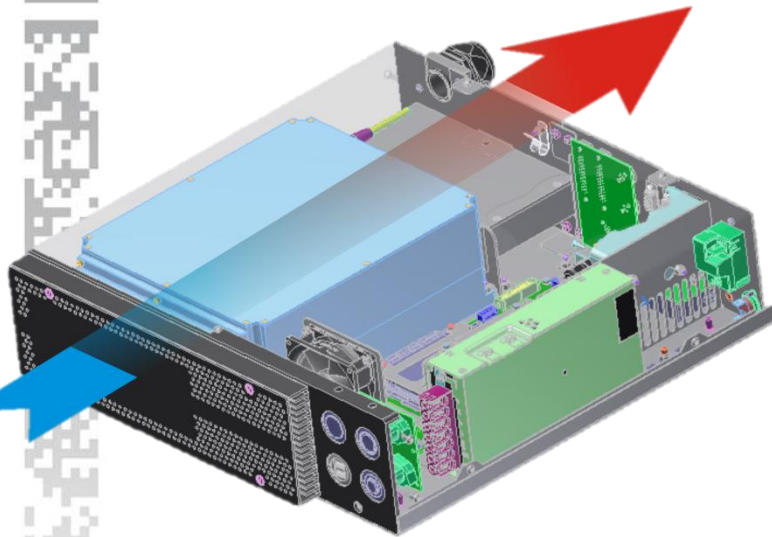
- Product Logo with power indication on front panel
- Easy to clean, washable AIR filter
- NEW 3-positions KEY SWITCH OFF-ST.BY-ON
- NEW “START MARKING” pushbutton
- Double front USB



NEW! LOW NOISE Air Cooling System

NEW, LOW NOISE, COOLING SYSTEM

- NOISE LEVEL **65db@1m** (2 times quieter Vs AREXv3)
- NEW, integrated, sealed AIR to AIR heat exchanger
 - IMPROVED DUST and OIL PROTECTION
 - Easy to clean, easy to replace Metal Air Filter
- Operative temperature up to 40°C @ 100% power



MODEL	Operative Temperature (@100% power, 70% duty cycle)
AREX 410 AREX 420 AREX 420MW AREX 430	5°C ÷ 40°C
AREX 450	5°C ÷ 35°C

NEW! Improved PC Performances



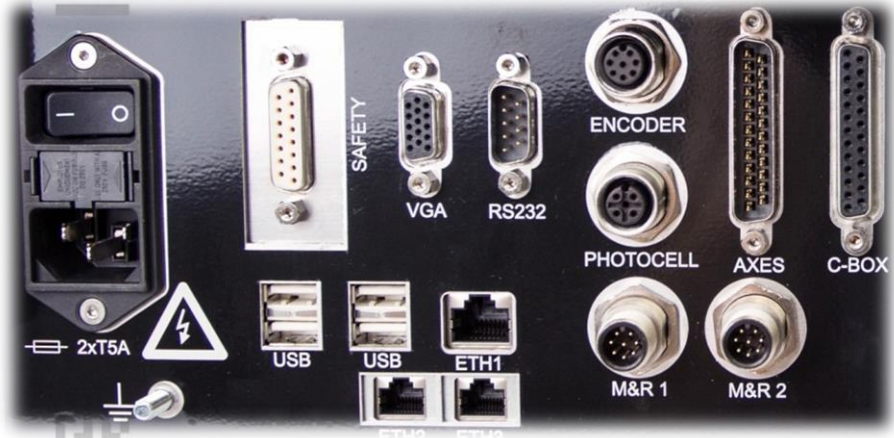
NEW, HIGH PERFORMANCE embedded PC

- Fanless Quad Core Celeron Processor
- 4 GB RAM
- On board 16 Gb Flash disk for Operative System
- 16 Gb SSD (Solid State Disk) for data storage
- EWF (Enhanced Write Filter) for windows safe power off
- WES 7 (Windows Embedded Standard 7)

CPU	Celeron® N2930 1.83GHz Quad core
RAM	4GB
CACHE	2MB
STORAGE (OS)	On board flash 16 GB With EWF (Enhanced Write Protection)
STORAGE (DATA)	2,5 " SSD 16 GB
CPU Mark	1637 (+190% Vs Arex v3)



NEW! Improved connectivity



IMPROVED CONNECTIVITY

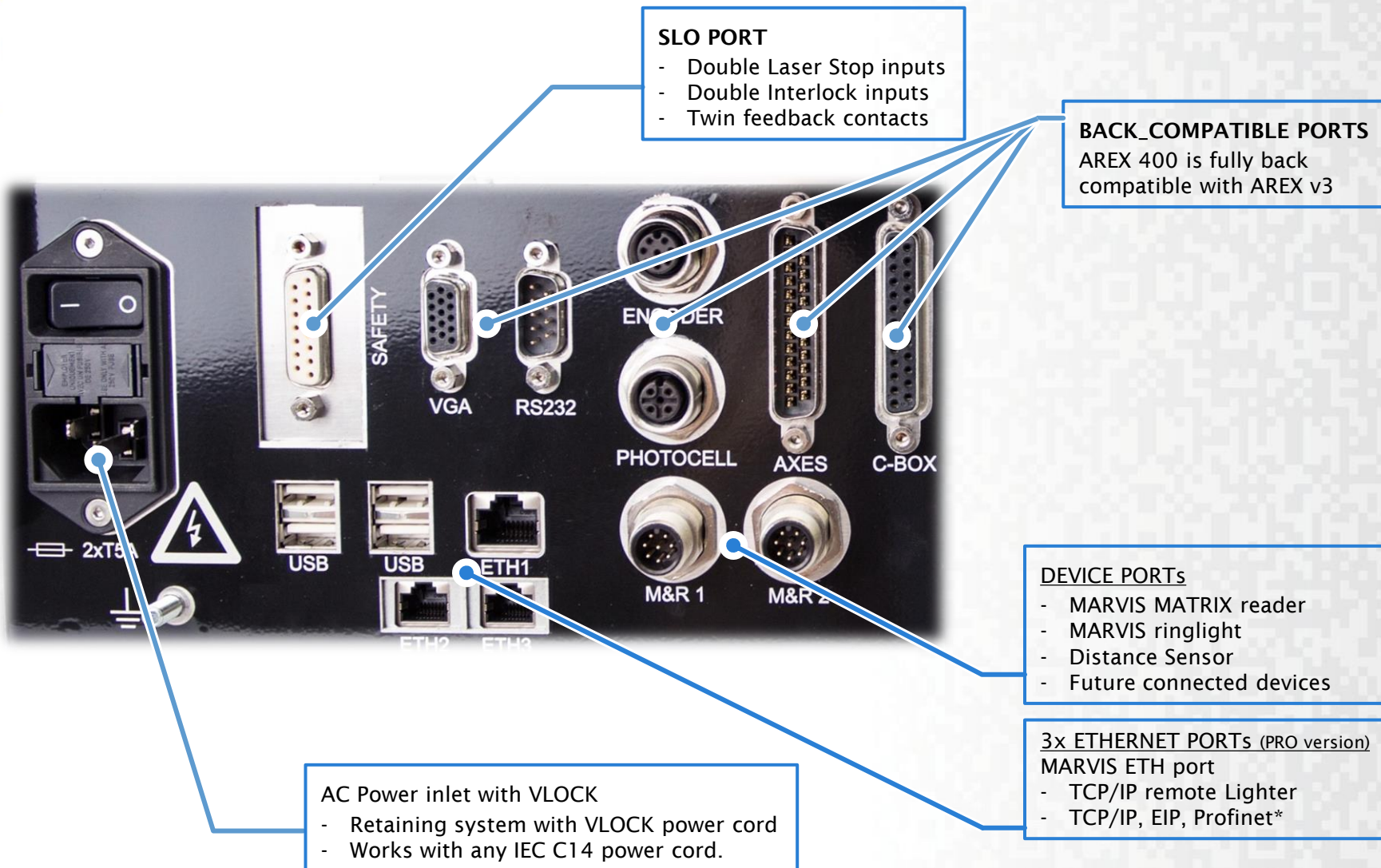
- 3 x RJ45 ETHERNET PORTs (AREX 400 PRO only)
- 4x USB
- 1x VGA, RS-232, Encoder, Photocell
- NEW V-LOCK power cord with retain system
- 2 x DEVICE PORTs
 - Dedicated connection ports for:
 - MATRIX readers and Smart Cameras
 - MARVIS lighting system
 - Distance sensors and accessories

SUPPORTED PROTOCOLS AND FIELDBUS

- ETHERNET TCP/IP
- ETHERNET IP
- PROFINET (1Q2019)



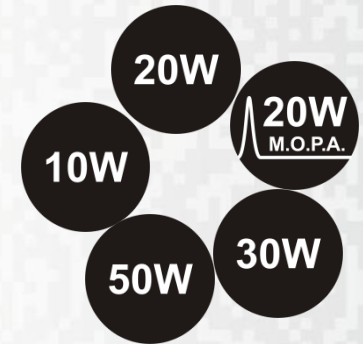
Back Panel Connectors



New Laser Sources Performances

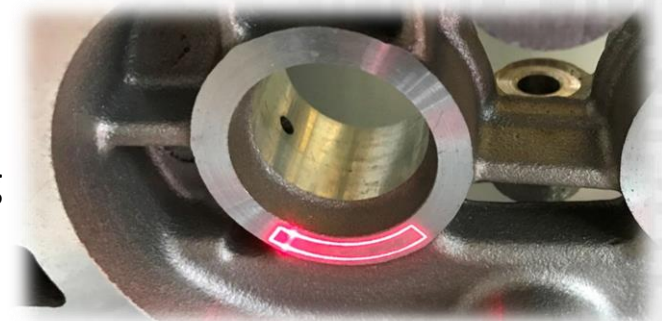
COMPLETE RANGE OF LASER SOURCES:

Ensures the best solution for any application and material.



AIMING BEAM AND FOCUS BEAM:

High visibility red guide laser for accurate positioning



NEW!: EXTENDED REPETITION RATE: 2 ÷ 200 KHz

Extended marking capability for plastic and heat sensitive materials

NEW! : REDUCED LASER ON/OFF TIME: 2 μsec

Reduced marking time on complex or high density filling graphics



SLO: SAFE LASER OFF

SLO Safety Laser Off

SLO (Safe Laser Off) is a redundant failsafe circuitry dedicated to safely inhibit laser emission keeping alive all other laser system, preventing re-enabling lags and productivity losses.

SLO combines two main Safety Functions:

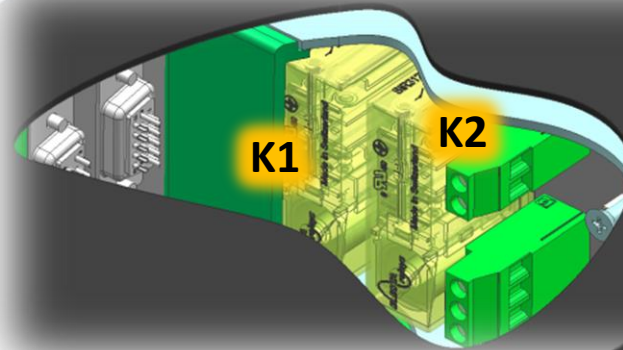
- **REMOTE INTERLOCK**
Double failsafe circuitry CAT 3 for SRS up to PLe (PRO VERSION ONLY)
Typical application: SERVICE PANEL INTERLOCK – EMERGENCY STOP
Manual RESET required
(rif. EN ISO 11553-1, EN 60825-1)
- **LASER STOP**
Double failsafe circuitry CAT 3 for SRS up to PLe (PRO VERSION ONLY)
- Typical application: PROTECTIVE HOUSING DOOR
Dedicated to **operative** inhibits of laser emission
Does not require manual RESET (AUTO-RESET)*
(rif. EN ISO 11553-1, EN 60825-1)



* Manual reset may be required in some specific installation environment

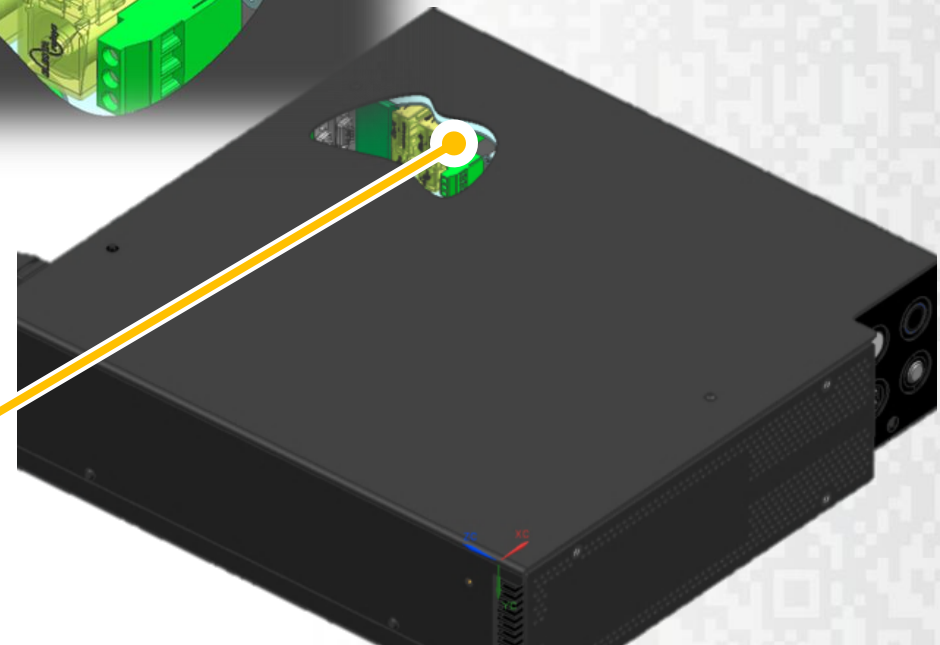
SLO: Built-in “Safe Laser Off”

AREX 400 embeds the new safety circuit SLO (Safe Laser Off) that dramatically simplify integration in environment that require compliance with EN13849-1 –



SLO (Safe Laser Off)

Failsafe circuit, circuit with Double Safety Relays and redundant feedback.

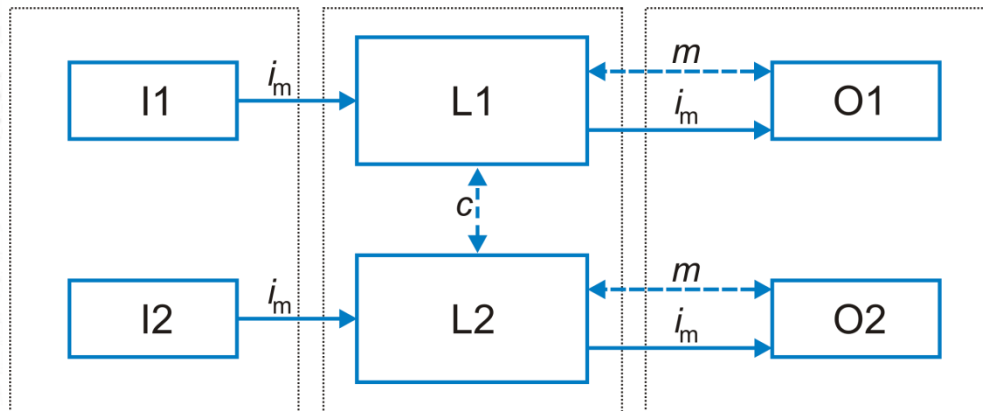


SLO: Built-in “Safe Laser Off”

Safe Laser Off, is a function that ensure zero laser emission but keep alive the system controller, for fast and safe restart of laser operation.

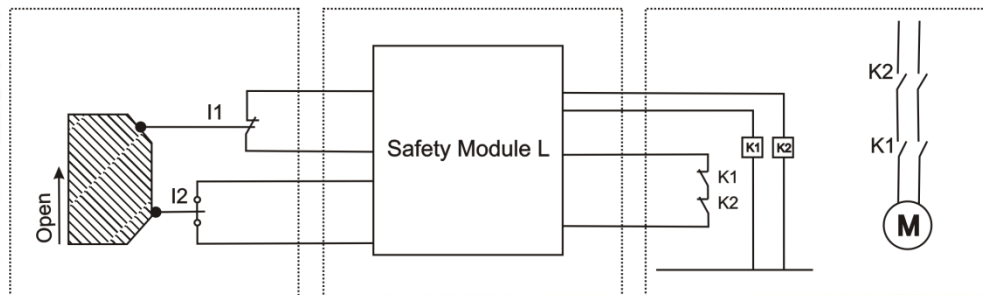
SLO = DISABLE LASER EMISSION, KEEP ALIVE SYSTEM LOGIC

SLO circuitry is extremely easy and simple to integrate since it works exactly as illustrated in regulatory examples!



ISO EN13849-1

Category 3 and 4
Hardware architecture



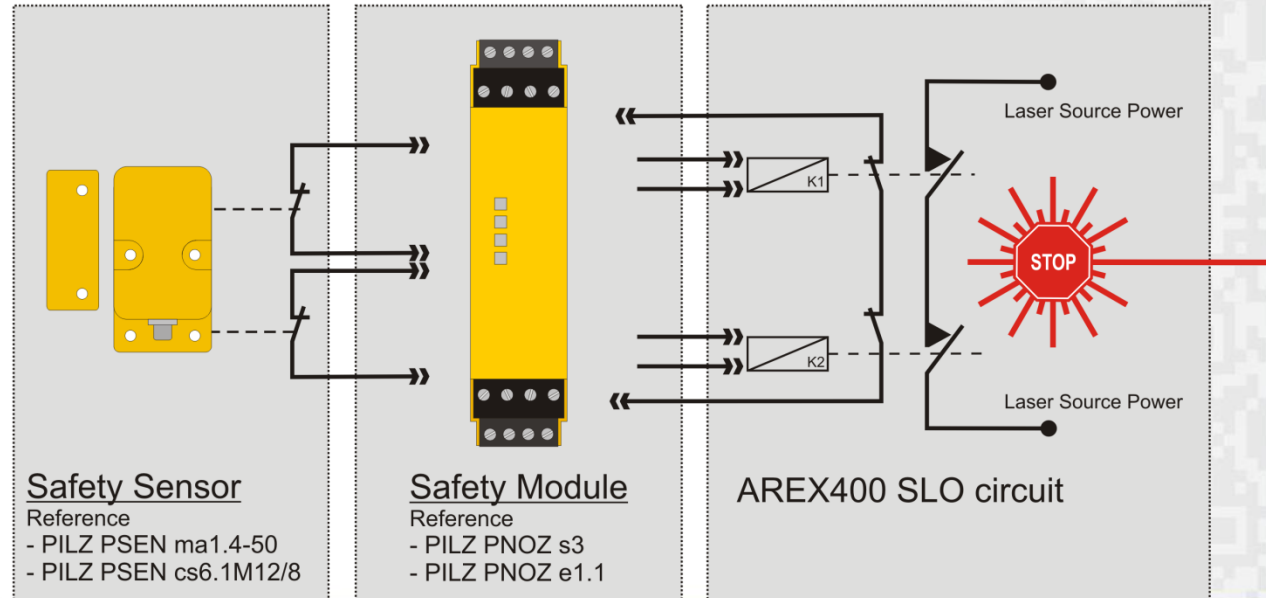
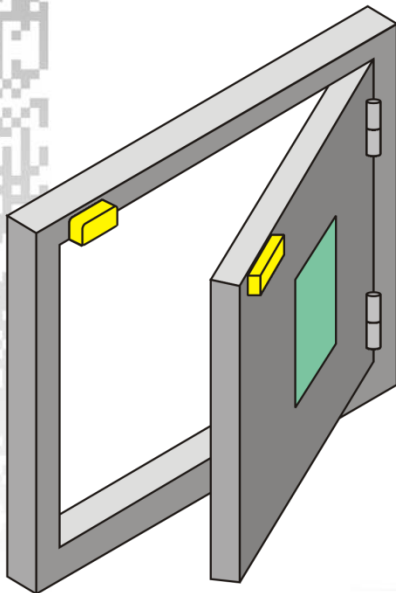
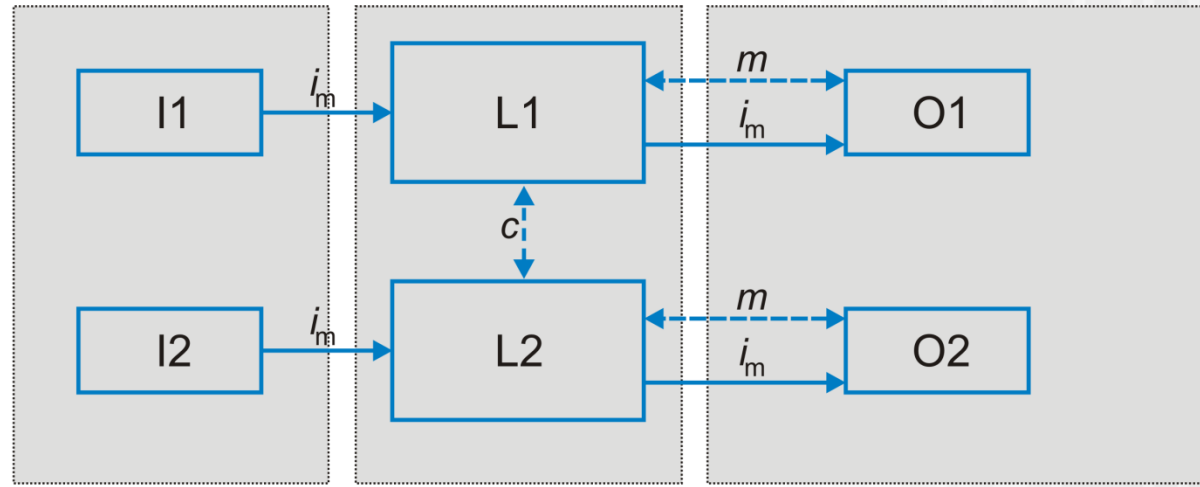
ISO EN13849-1

Example of circuit diagram

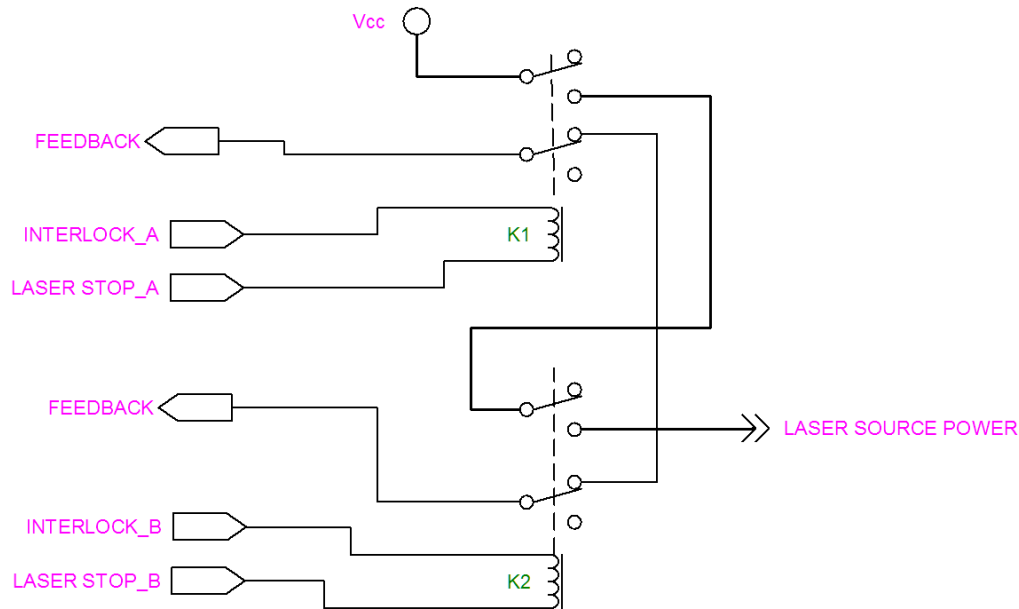
SLO for Protective Housing Door (CAT3)

ISO EN13849-1

Category 3 and 4
Hardware architecture



SLO Safety functions



SAFETY FUNCTION	AREX400PRO	Description
SF1 INTERLOCK	PLe CAT.3	Safely inhibits laser emission in case of EMERGENCY STOP / SERVICE PANEL INTERLOCK A manual reset is required to restore laser emission Typical operation: ~ 1 operation / DAY
SF2 LASER_STOP	PLe CAT.3	Safely inhibits laser emission in case of a PROTECTIVE HOUSING DOOR A manual reset is not required to restore laser emission (may depend on installation) Typical operation: ~ 2.150 operations / DAY ($T_{cycle} \sim 15$ sec) TYP TIMING ON --> OFF tyme = 420 ms OFF --> ON time = 600 ms
ENABLE	PLc CAT.1	Former ENABLE command (for back compatibility)



UL Listed

- UL (Underwriters Laboratories) is a the most important companies approved to perform safety testing by the U.S. federal agency.
- The “**UL Listed**” Mark means that **UL** has tested representative samples of a product and determined that it meets **UL's** requirements.
- A product carrying a “**UL Listed**” mark demonstrates safety, confirm compliance, quality and performances and are covered by UL's Follow-Up Service program to verify that they continue to be manufactured in compliance with UL's requirements





NEW ACCESSORIES

Accessory – Foot Switch



START MARKING FOOTSWITCH

Optional accessory dedicated to hands-free operations in manual loading machine and semi-automatic system

- Rugged, long life cast-iron FootSwitch
- Non-skid base and 3 m cable
- M12 connector to Laser Unit



**ORDER CODE:
985350035 - REMOTE START FOOT SWITCH**

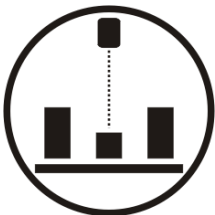
NEW Distance Sensor



High Resolution DISTANCE MEASURING SENSOR

Automatically measure target position displacement from optimal focus position, and correct laser head position acting directly to (optional) Z-axis

- simplified connectivity (dedicated “DEVICE PORT”)
- complete kit, with mounting brackets and protective YAG filter.



**ORDER CODE:
985350037 - MICROMETRIC DISTANCE SENSOR KIT**

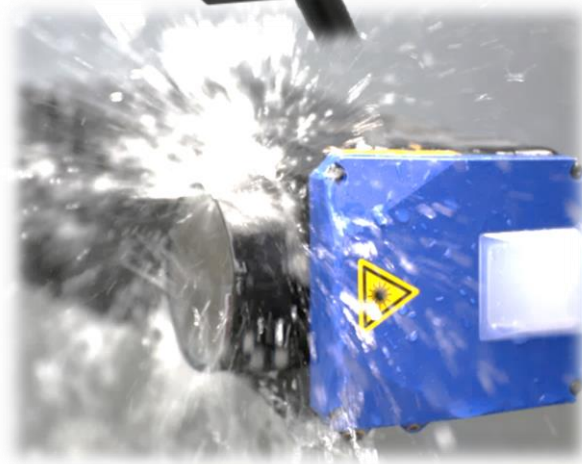
Accessory – Protective Lens CUP



PROTECTIVE LENS CUP

Easy to install, easy to replace, simplify preventive/periodic maintenance cleaning operation on F-theta lens and allow no-stop operations.

- Ensure complete IP64 protection
- Protect expensive lens from dust and scratches
- Suitable for F160S and F254S lenses



ORDER CODE:
985350038 - M39 F-THETA PROTECTIVE CAP



MARVIS Add-on Kit



MARVIS and AREX 400

AREX400 fully support MARVIS the most advanced MARK AND VALIDATE solution for traceability

- Dedicated space-saving mounting bracket
- MATRIX and RINGLIGHT direct connection to laser (no external power supply or adapter needed)
- Suitable for F160S and F254S lenses

ORDER CODE:

937600124 - MARVIS ADD-ON for AREX400

93ACC1918 - MARVIS SW LICENCE

93ACC1916 - MOUNTING BRACKET AREX400

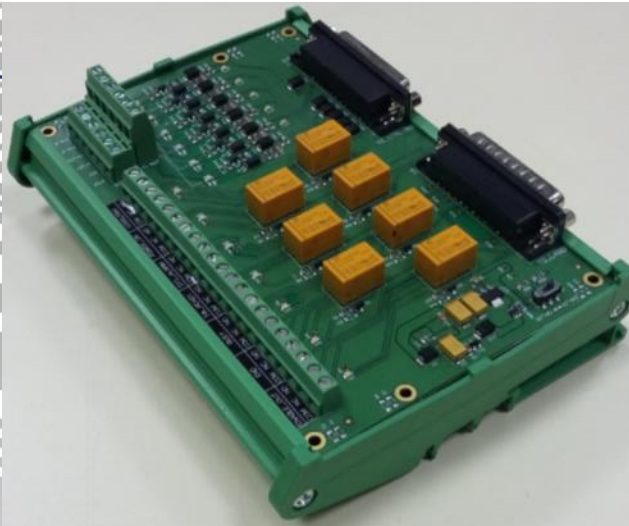
93A051394 - MARVIS LED LIGHTLING ID 50 mm - WHITE



RELAYS INTERFACE



I/O SIGNAL CONDITIONING BOARD



Isolated Digital I/O Signal conditioning board with DIN-rail adapter:

Ideal for on site quick & easy termination, PLC interfacing, System Test, I/Os troubleshooting, etc.

- Easy assembly thanks to screw down termination
- Pass-through Command Box Connector
- I/O Monitoring LED lamps
- Dry contact outputs
- Dry contact inputs



ORDER CODE:
985330032 - RELÈ INTERFACE

COMPATIBLE ACCESSORIES

(AREX 400 is fully back-compatible with all existing AREX's accessories)

CONTROL BOX



REMOTE PENDANT CONTROLLER

- Remote pendant controller allow simple and easy operations when the Laser controller is not accessible
- START/STOP pushbutton and LED status indicator ensure full control in low-productivity application.
- 2m DB25-DB25 cable included
- Fully compatible with AREX, UniQ and Vlase

ORDER CODE:
985330031 – CONTROL BOX STANDARD

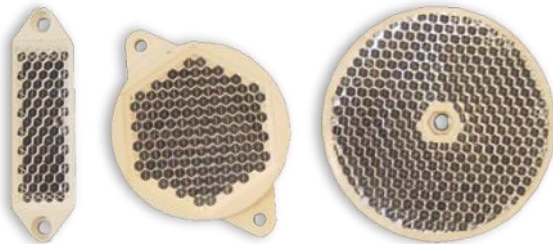
MARKING ON FLY STARTER KIT

STARTER KIT for MARKING-ON-THE-FLY APP

Complete KIT for Marking on the fly with:

- Encoder ENC-58-s10-5000 M12 [95B080480]
- Photocell S51-PA-B01 PNP M12 [952701271]
- 2 X M12 cables
- REFLECTOR SET [S9440700972 - S9407000048 - 95A151340]

- Fully compatible with AREX, UniQ and Vlase



ORDER CODE:

985330027 – STARTER KIT for Marking on the fly

LASER FUME EXTRACTOR

FUME EXTRACTOR FOR LASER MARKING

Entry level fume extractor for demo/lab/small production



- adjustable suction power
- max air flow = 190 m³/h
- three stage filter
- Ø 50 air inlet

ORDER CODE:
985340035 – FUME EXTRACTOR [...] MODEL LAS 160

FAN-OUT CABLE

Command Box DB25-to-free leads cable



3 m cable DB25 Male-to-free-leads for simple and easy field connection to PLC or control system.

- Connect laser units, quickly and easily onsite without having to solder or crimp contacts
- Individually labelled leads
- Fully compatible with AREX, UniQ and Vlase

ORDER CODE:
985350032- DB25-TO-FREE LEADS CABLE

MODEL & ACCESSORIES ORDER CODES

AREX₄₀₀ Models and Order Codes

ORDER CODE	MODEL	DESCRIPTION
985180103	AREX 110-964 Fiber Laser Marker	AREX 410 PRO with 100L
985180104	AREX 110-364 Fiber Laser Marker	AREX 410 PRO with 160S
985180124	AREX 110-354 Fiber Laser Marker	AREX 410 BASIC with 160S
985180105	AREX 110-664 Fiber Laser Marker	AREX 410 PRO with 254S
985180125	AREX 110-654 Fiber Laser Marker	AREX 410 BASIC with 254S
985180106	AREX 120-964 Fiber Laser Marker	AREX 420 PRO with 100L
985180107	AREX 120-364 Fiber Laser Marker	AREX 420 PRO with 160S
985180126	AREX 120-354 Fiber Laser Marker	AREX 420 BASIC with 160S
985180108	AREX 120-664 Fiber Laser Marker	AREX 420 PRO with 254S
985180127	AREX 120-654 Fiber Laser Marker	AREX 420 BASIC with 254S
985180110	AREX 120-A64 Fiber Laser Marker	AREX 420 PRO with 330L
985180111	AREX 120-B64 Fiber Laser Marker	AREX 420 PRO with 420L
985180112	AREX A20-964 Fiber Laser Marker	AREX 420mw PRO with 100L
985180113	AREX A20-364 Fiber Laser Marker	AREX 420mw PRO with 160S
985180114	AREX A20-664 Fiber Laser Marker	AREX 420mw PRO with 254S
985180116	AREX A20-A64 Fiber Laser Marker	AREX 420mw PRO with 330L
985180117	AREX A20-B64 Fiber Laser Marker	AREX 420mw PRO with 420L
985180118	AREX 130-464 Fiber Laser Marker	AREX 430 PRO with 160L
985180119	AREX 130-764 Fiber Laser Marker	AREX 430 PRO with 254L
985180120	AREX 130-A64 Fiber Laser Marker	AREX 430 PRO with 330L
985180121	AREX 150-464 Fiber Laser Marker	AREX 450 PRO with 160L
985180122	AREX 150-764 Fiber Laser Marker	AREX 450 PRO with 254L
985180123	AREX 150-A64 Fiber Laser Marker	AREX 450 PRO with 330L

Accessories: Order Codes and Compatibility

MODEL	DESCRIPTION	AREX 400	AREX v3	VLASE	UNIQ
937600124	MARVIS ADD-ON for AREX400	✓			
937600122	MARVIS ADD-ON for AREX / VLASE		✓	✓	
937600123	MARVIS ADD-ON for UNIQ				✓
93ACC1918	MARVIS SW LICENCE	✓	✓	✓	✓
93A051394	MARVIS LED LIGHTLING ID 50 mm - WHITE	✓	✓	✓	✓
93ACC1916	MARVIS MOUNTING BRACKET for AREX400 & M300N	✓			
93ACC1914	MARVIS MOUNTING BRACKET for AREX & M300N		✓		
93ACC1915	MARVIS MOUNTING BRACKET for UNIQ & M300N				✓
985350035	REMOTE START FOOT SWITCH	✓	✓	✓	✓
985330032	RELE INTERFACE	✓	✓	✓	✓
985330031	CONTROL BOX STANDARD	✓	✓	✓	✓
985350038	M39 F-THETA PROTECTIVE CAP	✓			
985350037	MICROMETRIC DISTANCE SENSOR KIT AREX 400	✓			
985350036	MICROMETRIC DISTANCE SENSOR KIT AREX/VLASE/UNIQ		✓	✓	✓
985350039	RACK HANDLES AREX 400	✓			
985340035	LAS 160 FUME EXTRACTOR	✓	✓	✓	✓
985350032	DB25-TO-FREE LEADS CABLE	✓	✓	✓	✓
985330027	STARTER KIT FOR MARKING ON THE FLY	✓	✓	✓	✓

Summary

AREX400: All new and back compatible

New Controller:

- New design: Overall dimensions: 108 x 427 x 450 mm (HxWxD)
- Back compatible with AREX v3
- New three positions key switch, 2 x USB, Start Button
- Quiet cooling system (65dB)
- UL listed
- Washable air metal filter
- New range of accessories

Scan Head:

- New ultra compact design 95x90x326mm (HxWxD)
- Back compatible with AREX v3 (with adapter)
- Weight: < 4Kg
- IP 64 design
- Laser Marking Green Spot Technology
- Protective lens cup
- New robotic grade protective tube



Thank You

This presentation contains statements that are neither reported financial results nor other historical information. These statements are forward-looking statements. These forward-looking statements rely on a number of assumptions and are subject to a number of risks and uncertainties, many of which are outside the control of Datalogic S.p.A., that could cause actual results to differ materially from those expressed in or implied by such statements, such as future market conditions, currency fluctuations, the behavior of other market participants and the actions of governmental and state regulators

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