

AREX400

DATALOGIC

The AREX400 is the new generation of high performance Laser Markers based on Fiber Laser technology developed to achieve the highest reliability even in harsh manufacturing environments.

Because of its' exceptionally small and robust scanhead machined from solid aluminum, the AREX400 is unbeatable in tight space installations where a small footprint is mandatory and reliability is a must.

The AREX400 incorporates the new LASER GREENSPOT, the programmable visual indicator for immediate and effective visible process feedback directly on the marking area.

The totally new embedded controller is now offering improved performances, cost effective embedded communication protocols (TCP/IP, Ethernet IP, Profinet), reduced noise level down to 65 dB and a new Safety Laser Off (SLO) feature.



HIGHLIGHTS

Scanhead

- Ultra-compact, lightweight
- Robust design for durability even in harsh environments
- IP64 protection against dust, water, oil and lubri-coolant droplets
- High resistance conduit suitable for robotic applications
- Laser marking GreenSpot
- Lens protective cup

Controller

- All-inclusive design; no external PC or hardware required
- High performance Embedded PC
- Windows 10 IOT Enterprise 2019
- High reliability, high resolution full-fiber-laser technology
- Space saver form factor 19 inch 2.5U
- Cost effective embedded communications protocols:
- Embedded communications protocols: TCP/IP, Ethernet IP, Profinet
- Fully compatible with MARVIS (Mark and Validate Integrated Solution) for zero-defect code marking
- Low noise air cooling system

APPLICATION

Traceability

- Excellent contrast high readability text and codes on metals and color-enhanced thermoplastic materials
- Quick and clear black laser annealing, without cracks or thermal damages
- High speed deep engraving

Branding and texturing

- Personalization and branding with high resolution logo and graphics
- Flexible and cost effective aesthetic permanent marking

QUICK INSTALLATION AND SETUP

AREX400 design and configuration dramatically simplifies and speeds up machine design and system integration

- New generation of Embedded Marking Controller (EMC) up to Quadcore 1.83 GHz with latest version of LIGHTER Suite ensures quick and easy installation, setup, control and system diagnostics, even remotely via Ethernet TCP/IP
- Windows 10 IOT Enterprise 2019 Operative System, with built-in end-to-end security
- Unified Write Filter (UWF) to ensure Operative System reliability in case of abrupt power off, reduce wear on solid-state drives, increasing performances
- Built-in step motor controller, completely integrated in software editor, dramatically simplifies integration of rotary indexers, x-y tables and z axis, compatible with Micrometric Displacement Sensor for auto-focus operations

FLEXIBLE PROGRAMMING AND CONTROL

LIGHTER Suite, with its intuitive and easy-to-learn interface, simplifies the development of a complete and cost effective Laser Marking Station for OEM and Machine builders.

AREX400 can be operated in a STAND ALONE MODE with built-in control and software resources, and in a MASTER-SLAVE mode with a with supervising computer for advanced network-oriented Laser Marking Applications.

MAIN BUILT-IN FEATURES ARE:

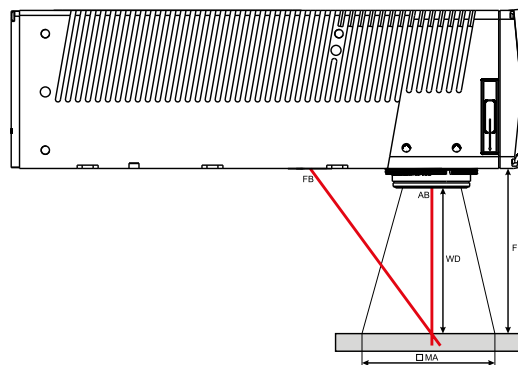
- Advanced Graphical Layout
- Local and Remote laser diagnostic
- Local and Remote I/O and axis control
- Local and Remote ActiveX
- Ethernet protocol for easy integration PLC and industrial environments
- Marking On-the-Fly capabilities
- Native support for Ethernet TCP/IP, Ethernet IP and Profinet communications



AREX SERIES

AREX 400		AREX 410	AREX 420	AREX 420 MW	AREX 430	AREX 450
Nominal power	[W]	10	20	20	30	50
Peak power (max)	[kW]	10	10	≥ 10	10	10
Pulse energy	[mJ]	1,0	1,0	≥ 0.75	1,0	1,0
Modulation	KHz	2-200	2-200	20-500	2-200	2-200
Pulsewidth	ns	100	100	ADJ 4-250	100	100
Marking capabilities		Static, on the rotary indexer, on the fly (marking in motion); Extended-Layer (combination with X,Y Axis)				
Fiber length	[m]	3				
Integration		Built-in 4 axis step motors controller INPUTS: 10 programmable digital inputs OUTPUTS: 10 programmable digital outputs (NPN) Dedicated ports for Encoder, Photocell, MATRIX family Barcode Reader.				
Interfaces		6 x USB, 3 x Ethernet (PRO VERSION), 1 x RS-232, Digital I/O				
Protection rating		Head: IP64; Controller: IP31				
Power supply		100/240 VAC – 50/60 Hz – 400 W (MAX)				
Cooling		Low noise, Forced air				
Head dimensions/weight		89 mm x 96 mm x 311 mm – 3,5 kg				
Controller dimensions		427 mm x 111 mm x 435 mm – 17,5 kg				

F-THETA MODEL	MARKING AREA [MA] MM ²	MARKING AREA [MA] MM ²	FIXING DISTANCE [FD] MM	WORKING DISTANCE [WD] MM
	AREX 410 AREX 420 AREX 420 MW	AREX 430 AREX 450		
	mm	mm	mm ²	mm ²
F = 100L	50 X 50	-	141	99
F = 160S	100X100	X	199	185
F = 160L	X	100X100	212	176
F = 254S	140X 140	X	305	285
F = 254L	180X180	170X170	372	301
F = 330L	220X 200	210X210	480	397
F = 420L	285X285	-	576	507



AREX400 PULSED

HIGH PERFORMANCE AND RELIABILITY

- Ultra compact, high protection rate scanhead, IP64 for maximum performance even in aggressive environments
- Complete power range from 10 W to 50 W, long pulse, high energy fiber laser source
- Standard Datalogic I/O Interface
- Integrated Windows-based marking controller, no external PC needed
- Safe Laser Off (SLO) ready for ISO 13849-1 and ISO 11553-1 integrations
- LaserMarking Green Spot technology
- Low noise cooling system
- RS-232 Ethernet TCP/IP, EtherNet IP, Profinet IO native protocols

APPLICATION

- High contrast marking & engraving for branding & traceability on: Stainless steel, high-grade steel, steel, carbon steel, copper, iron, ferrous metals, magnesium, aluminum, brass, gold, silver, platinum, titanium
- "Aesthetic" plastic marking Polycarbonate (PC) Polysulfone (PSU), Polyphenylene sulfide (PPS)
- "High contrast" plastic marking for traceability Polystyrene (PC), Styrene acrylonitrile (SAN), Acrylonitrile Butadiene Styrene (ABS), Polyethylene terephthalate (PET) Polybutylene terephthalate (PBT)
- Additivated plastic marking Polyamide (PA), Polyoxymethylene (POM) Polypropylene (PP), Polyethylene (PE) and many other

INDUSTRIES

Automotive, industrial electronics, precision mechanics, surgical tools and implants



AREX400 MOPA

HIGH FLEXIBILITY AND MARKING REPEATABILITY

Additional features:

- Linear power range from 0.1 W to full power for precise marking even on sensitive materials
- Pulse-width adjustment from 4 ns to 250 ns for best process optimization and repeatability
- High repetition rate up to 500 kHz for faster marking and accurate texturing
- High peak power for extended process capability
- Accurate Energy control for maximum marking repeatability

APPLICATION

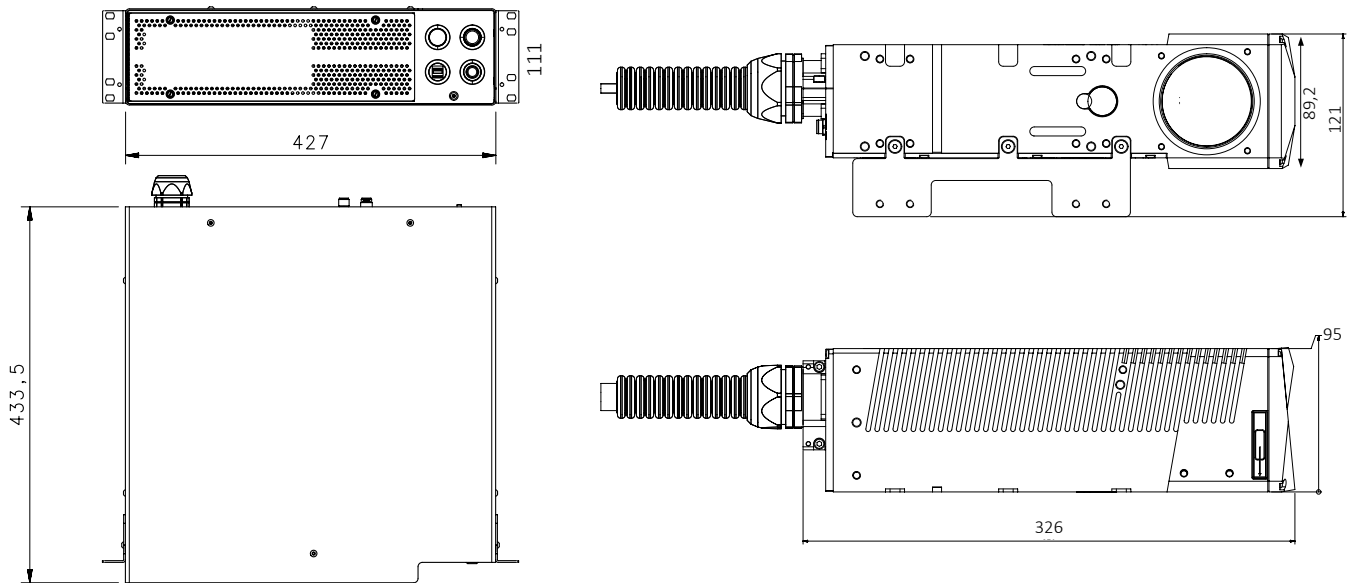
- High precision contrast marking and annealing for branding & traceability on: stainless steel, high-grade steel, steel, carbon steel, iron, ferrous metals, magnesium, aluminum, brass, gold, platinum, titanium ...
- "Aesthetic" plastic marking for branding and texturing Polycarbonate (PC) Polysulfone (PSU), Polyphenylene sulfide (PPS), Polyether ether ketone (PEEK)
- High contrast plastic marking for traceability Polystyrene (PS), Styrene acrylonitrile (SAN), Acrylonitrile Butadiene Styrene (ABS), Polyethylene terephthalate (PET), Polybutylene terephthalate (PBT) Polyoxymethylene (POM)
- Color enhanced plastic Polyamide (PA), Polypropylene (PP), Polyethylene (PE) and many other
- Coating removal/night & day application
- Color marking on metal

INDUSTRIES

Automotive, aerospace, industrial electronics, mobile & semicon electronics, precision mechanics, watch & jewelry, surgical tools & implants



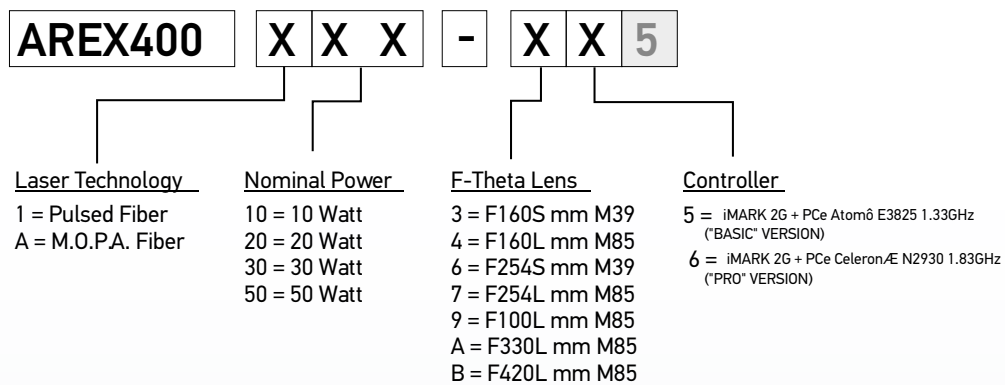
DIMENSIONS



MODEL SELECTION AND ORDER INFORMATION

ORDERING CODES	PRODUCT DESCRIPTION
985180073	AREX 110-965 Fiber Marker
985180074	AREX 110-365 Fiber Marker
985180075	AREX 110-665 Fiber Marker
985180076	AREX 110-355 Fiber Marker
985180077	AREX 110-655 Fiber Marker
985180078	AREX 120-965 Fiber Marker
985180079	AREX 120-365 Fiber Marker
985180080	AREX 120-665 Fiber Marker
985180081	AREX 120-A65 Fiber Marker
985180082	AREX 120-B65 Fiber Marker
985180083	AREX 120-765 Fiber Marker
985180084	AREX 120-355 Fiber Marker
985180085	AREX 120-655 Fiber Marker

ORDERING CODES	PRODUCT DESCRIPTION
985190005	AREX A20-965 Fiber Marker
985190006	AREX A20-365 Fiber Marker
985190007	AREX A20-665 Fiber Marker
985190008	AREX A20-A65 Fiber Marker
985190009	AREX A20-B65 Fiber Marker
985190010	AREX A20-765 Fiber Marker
985180086	AREX 130-465 Fiber Marker
985180087	AREX 130-765 Fiber Marker
985180088	AREX 130-A65 Fiber Marker
985180089	AREX 150-465 Fiber Marker
985180090	AREX 150-765 Fiber Marker
985180091	AREX 150-A65 Fiber Marker
985180092	AREX 150-B65 Fiber Marker



DATALOGIC PRODUCT OFFERING



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