

■ LP-400 series

■ HIGHLIGHTS:

SUNX conceived the LP-400 series Laser Markers especially for industries with particularly high demands on speed and functionality. LP-400 series Laser Markers are CO₂ laser marker systems with an output power of 10W, 20W or 30W that, due to an ultra fast galvano-scanning method (max. 12,000mm/s), can mark moving objects on-the-fly at a line speed of up to 240m/min.! The incorporation of an encoder interface permits optimization of marking and flying speed.

Due to their small laser beam diameter of just 110µm, LP-431U-C and LP-411U-C are especially well suited to mark difficult materials such as glass or PTFE. LP-400 series Laser Markers can also process more than 10 different codes, e.g. bar code, Data Matrix code, etc. Due to their somewhat shorter wavelength of 9.3µm, the LP-420S9U and LP-420S9TU Laser Markers are ideal for marking clear plastics such as PET or PC.

Three useful Windows programs are included with all SUNX Laser Markers: "FONT Maker" allows you to create your own individual characters. "LOGO CONVERTER" converts logos and images in JPEG, BMP, HPGL and DXF formats to the Laser Marker format VEC. The Laser Marker "NAVI" software allows you to conveniently operate all SUNX Laser Markers from your PC.



Highlights LP-400 series

Rotating head



The rotating head allows easy integration and stepless adjustment. Its position can be quickly modified on the production line.

High-speed galvanometer



The high-speed galvanometer enables sharp, clear marking at high speeds and is particularly effective for acceleration and deceleration phases. Marking edges poses no problem.

Tower type



The tower type was designed with straight beam output for integration in systems where the angle type does not fit.

High-speed production



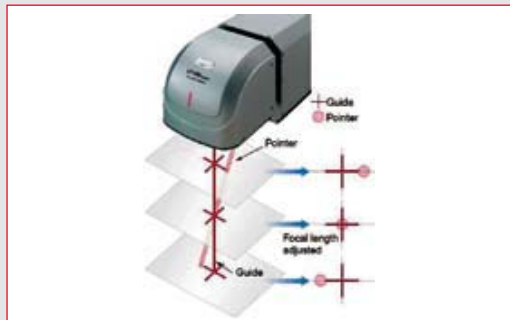
A line speed of up to 240m/min. is possible. Variations in speed, e.g. during the run-up phase of production, can be triggered automatically via an encoder signal input directly at the laser controller.

Configuration via USB



Our Windows "NAVI" software is free of charge and allows you to configure Laser Markers via USB. For easy, on-site adjustments, an internal controller software can be accessed via a touch screen.

Guide laser / dual pointer



This feature allows you to quickly and conveniently set the optimum working distance. Just focus the point in the crosshairs. Also marking field and marking characters can be indicated.

LP-400 series

■ SPECIFICATIONS

Model	General-purpose type			Small spot type			Type for large marking range		
	Standard	LP-430U-C	LP-420S9U-C	LP-410U-C	LP-431U-C	LP-421S9U-C	LP-411U-C	LP-425S9U-C	LP-435U-C
Item	Tower	LP-430TU-C	LP-420S9TU-C	LP-410TU-C	LP-431TU-C	LP-421S9TU-C	LP-411TU-C	LP-425S9TU-C	LP-435TU-C
Marking laser		CO ₂ laser, laser class 4							
Ave. output		30W	20W	10W	30W	20W	10W	20W	30W
Laser beam diameter		190μm	160μm	190μm	110μm	95μm	110μm	225μm	265μm
Wave length		10.6μm	9.3μm	10.6μm	10.6μm	9.3μm	10.6μm	9.3μm	10.6μm
Guide laser, pointer		Semiconductor λ = 655nm, laser class 2							
Output		1mW							
Marking range		110mm x 110mm			55 mmx 55mm			160mm x 160mm	
Work distance		185mm (+2mm)			111mm (+2mm)			262mm (+2mm)	
Scanning speed		Max. 12,000mm/s			Max. 6000mm/s			Max. 12,000mm/s	
Line speed, up to		240m/min		170m/min	120m/min		85m/min	240m/min	
Character size (height & width)		0.2 to 110mm (adjustable in increments of 0.001mm)			0.2 to 55mm (adjustable in increments of 0.001mm)			0.2 to 160mm (adjustable in increments of 0.001mm)	
Marking spacing (spacing & pitch)		0 to 110mm (adjustable in increments of 0.001mm) Fan-like: ± 180° (adjustable in increments of 0.001°)			0 to 55mm (adjustable in increments of 0.001mm) Fan-like: ± 180° (adjustable in increments of 0.001°)			0 to 160mm (adjustable in increments of 0.001mm) Fan-like: ± 180° (adjustable in increments of 0.001°)	
Array of character		Straight line, fan-like, proportional/typewriter fonts, tilted and fan-like							
Type of characters		Capital & small characters, figures, katakana, hiragana, kanji (JIS level 1 & level 2) symbols, symbols, user-defined characters (up to 50 types)							
Bar codes		CODE39, CODE128, ITF2/5, NW-7, JAN/UPC/EAN, RSS 14, RSS limited, RSS expanded (GS1 Databar)							
2D codes		QR, Micro QR, Data Matrix (ECC200)							
Composite codes		RSS 14CC-A, RSS 14 stacked CC-A, RSS limited CC-A							
Logo/shape		BMP / DXF / HPGL / JPEG							
Cooling method		Forced-aired cooling							
Supply voltage		100 to 120VAC ±10%, 200 to 240VAC ±10%, 50/60Hz							
Power consumption	100VAC	1000VA	670VA		1000VA	670VA		1000VA	
	200VAC	1200VA	700VA		1200VA	700VA		1200VA	
Input		Remote, trigger, encoder (A), encoder (B), shutter control, laser pumping, alarm reset, emergency stop, laser stop, number,...							
Output		Power supply (+12V), remote (RS232C, I/O), marking ready, marking, marking finished, laser pumping, warning, alarm, confirmation end, counter finish							
Marking condition		Stationary, on-the-fly (for moving objects)							
Functions		<ul style="list-style-type: none"> • Correction of intersection • font creation/editing • current date/time marking • expiry date • logos/pictures • counter marking • system offset • time delay • various processing functions • common setting • guide laser • laser pointer • bold marking • proportional marking • marking of moving objects • font select • marking image display • marking time measurement • work image display • multilayered marking • serial data processing & marking • step & repeat • power speed setting per line/logo file • error code display • backup • I/O monitor 							
Emergency stop switch		Provided on the controller							
Ambient temperature		0 to +40°C (no condensation or frost), storage: -10 to 60°C							
Ambient humidity		35 to 85%RH (no condensation or frost)							
Weight	Standard								
	Tower	20kg		16kg	20kg		16kg	20kg	
	Controller	12kg		11kg	12kg		11kg	12kg	
Lifetime		Marking time: 12,000 hours (minimum) (note)							



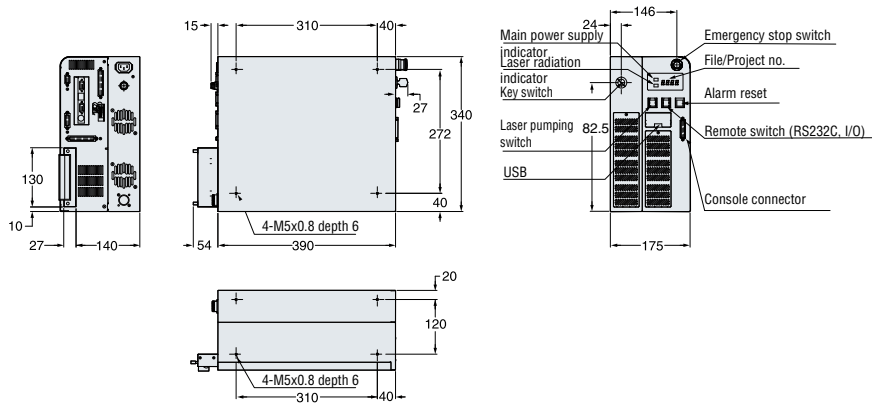
Note: Lifetime indicates operating hours expected under normal operating conditions. It is the period of time between starting to use the device and the beginning of the wear-out phase. For SUNX devices, only the real marking time and not the turn on time has to be considered. This is determined by the life expectancy of components used in assembly of the unit. The weakest component with the shortest life expectancy determines the life of the whole product

MTBF represents the statistical approximation of how long a number of units should operate before a failure can be expected. It does not represent how long the unit will last. Due to this non representative figures of MTBF, SUNX gives only lifetime indications. In certain cases a maximum power drop of 20% can happen after the lifetime period.

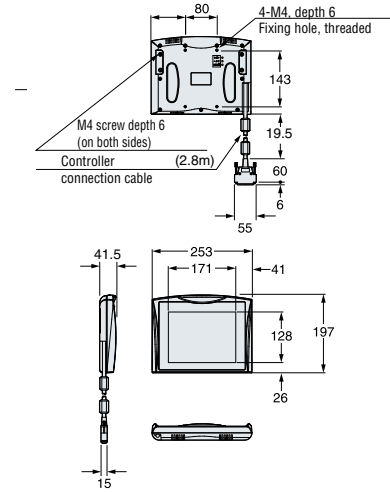


■ DIMENSIONS

■ CONTROLLER

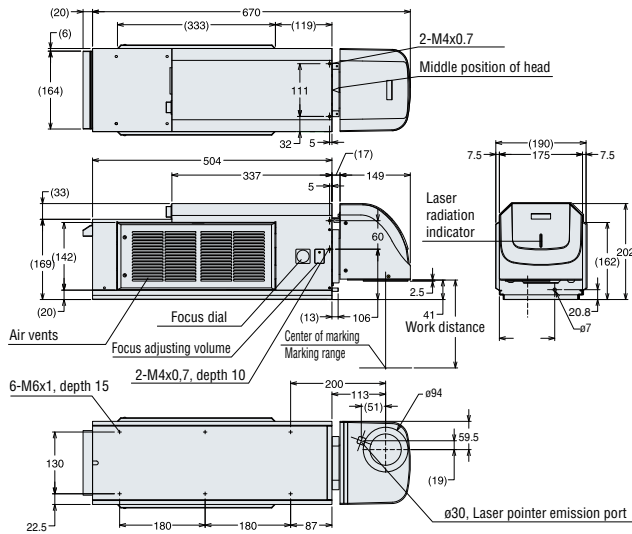


■ HANDHELD TOUCH SCREEN (OPTIONAL)

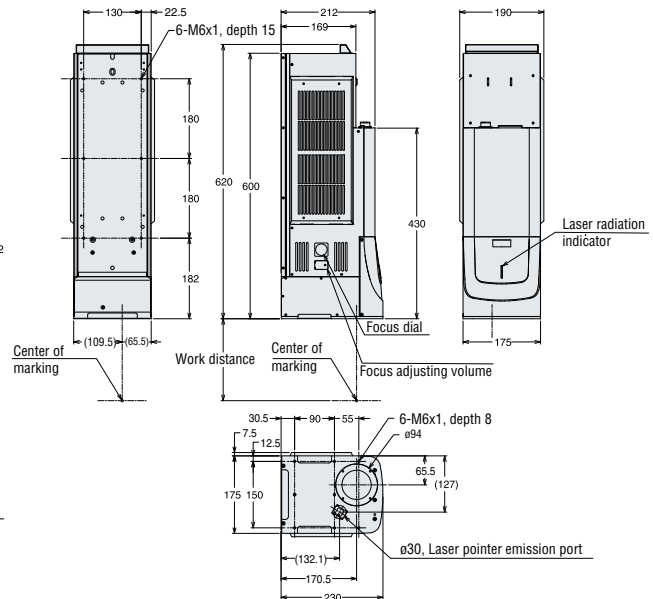


■ HEAD

LP-400 standard type



LP-400 tower type



All measurements in mm