

PM-1

Single Axis Motorized
Scanning Stage



Start Scanning
With Ease

Contents

Introduction	1
See the PM-1 in Action	2
Why buy the PM-1?	3
Ordering Options	4
Examples of Ordering Options	4
Ordering Info	5
Example Part String	6
Specifications	7
Dimensions	8
PM-1-L1	8
PM-1-BP1	9
PM-1-LJ	10
PM-1-LJ2	11
PM-1-CL	12
PM-1 Electrical Panel	13
Required Sensor Kit	14
Keyence LJ-X	14
Keyence CL	15

PM-1

Single Axis Scanning Platform



PM-1 Electrical Panel with LJ-X8002 Installed

Many Standard Options to Choose From

A variety of standard accessories are available to meet the needs of our customers.

- Base plate
- Adjustable arm
- Sensor adapter plates

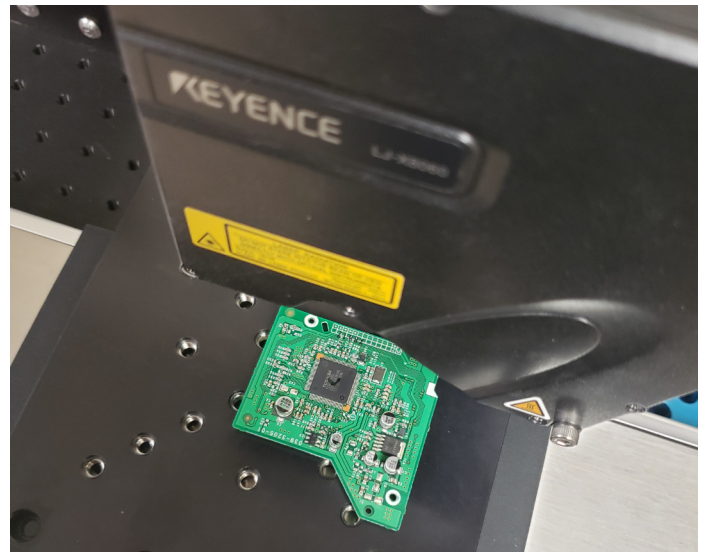
We make it easy to start scanning.

- Proven design
- Fast lead-times
- Customization is available if needed

How Does it Work?

Get scanning quickly with the PM-1 Scanning Platform!

- Pre-wired electrical panel
- Easy setup and operation
- Work completely within your sensor controller's software environment
- Stage motion will be perfectly coordinated with data capture



LJ-X8060 Scanning Circuit Board Mounted to Top Surface of the Scanning Stage

In Action

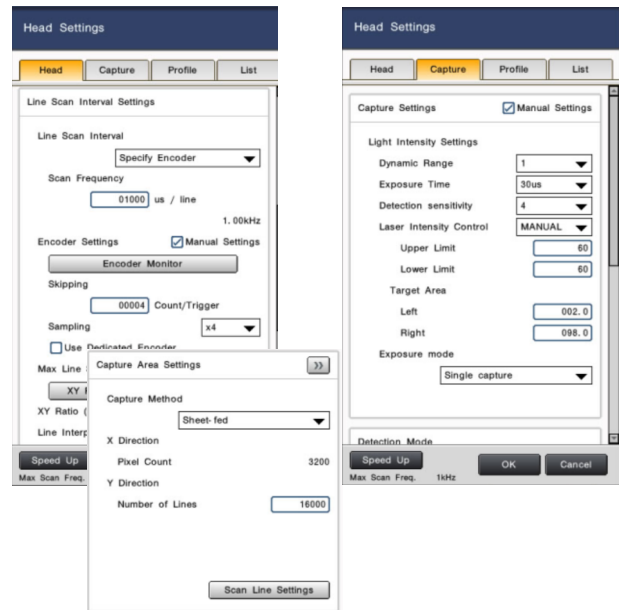
See it in Action!

Click [here](#) to visit the product page and see more photos and video of the product in use.

Setting Things Up

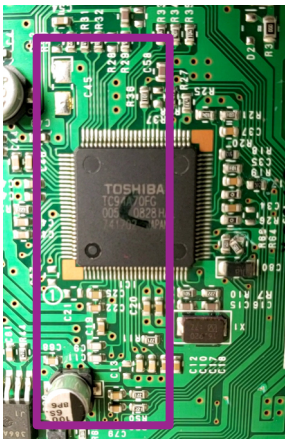
Start by applying desired sensor settings within the sensor's controlling software. Configure settings such as:

- Trigger spacing
- Sampling frequency/measuring range
- Exposure
- Sensitivity
- Filtering
- Dead-zone interpolation
- Tilt correction
- and many more...

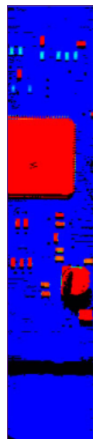


LJ-X8002 Controller Settings Shown

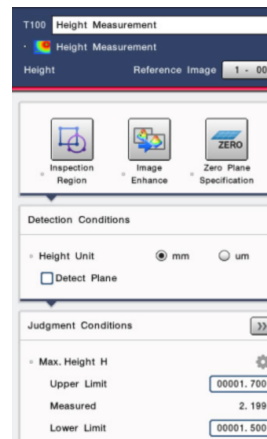
Scan and Measure



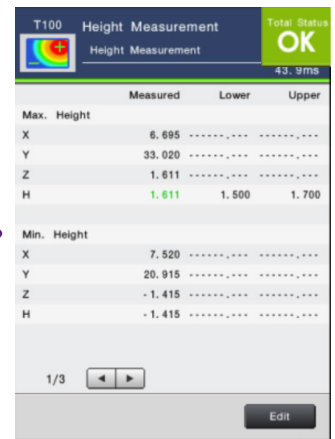
Place Part



Initial Scan



Configure Measurements and Tolerances



Repeat Scan for Results and Go/No-go

Why buy?



Out-of-the-Box Performance

Reduce the time it takes to get meaningful data from your sensor. With proven performance, the PM-1 eliminates design risk and provides everything you need to get scanning quickly.



Get it Fast

Fast lead-times available! With all components and accessories stocked, the PM-1 is ready to ship shortly after ordering.



No Compromises

The entire PM-1 platform is designed to maintain all sensor specifications. Don't settle for noisy or degraded data - purchase with confidence that your sensor will perform as advertised.



Easy to Use

Get "go/no-go" results with a literal push-of-a-button! It really is that easy - one button push triggers motion, data collection, data analysis, and resets stage position for the next scan.

Ordering

Articulating Sensor Arm

Position your sensor anywhere with our adjustable arm. Simply loosen one knob to freely articulate all joints for infinite sensor positioning. Whether you need to scan a different area of your part or quickly adjust the sensor height to accommodate parts of different thicknesses, we've got you covered. Once in position, tighten the knob and hit go!



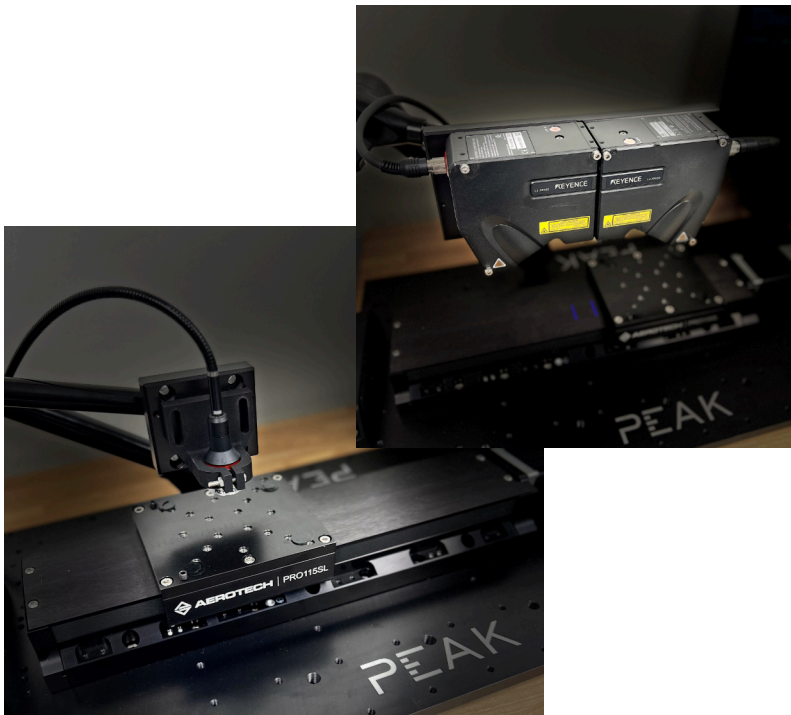
-LJ Plate shown on aluminum extrusion and -ARM



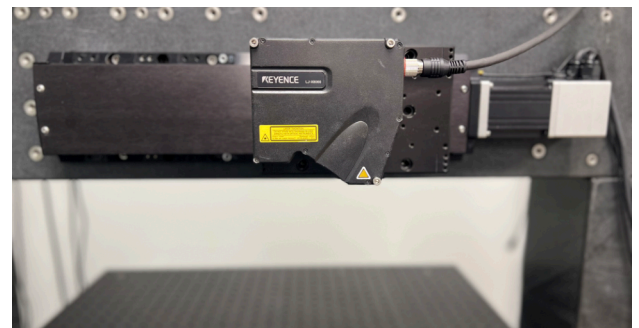
Adjustable Arm shown in multiple positions

Sensor Mounting Plates

Save yourself the design time and use our universal sensor mounting plates. Designed specifically for a family of sensor heads - these plates mount directly to our adjustable arm (-ARM), to the stage tabletop (for moving sensitive applications), or mount it anywhere you want (utilize the versatile English/Metric pattern provided)!



-LJ2 (Top) and -CL (Bottom) Plates shown on -ARM



-LJ Plate shown mounted to stage tabletop

Ordering

PM-1 Ordering Options

Stage Type (Required)

-L1 (Precision Ballscrew) 200 mm linear ballscrew stage

Base Plate (Optional)

-BP1 (Base Plate) Aluminum base plate, 350 x 680 mm, mounts stage and optional accessories

Adjustable Arm (Optional)

-ARM (Articulating Arm) Adjustable, locking arm for infinitely adjustable sensor positioning

Sensor Mounting Plate (Optional)

-LJ (LJ-X8000) Mounting plate for the LJ-X8020/8060/8080/8200 sensor heads

-LJ2 (LJ-X Dead Angle Cut) Mounting plate for (2) LJ-X8020/8060/8080 sensor heads in dead angle cut orientation

-CL (CL-3000) Mounting plate for the CL-(L/P)007/015/030/070/PT010 sensor heads

Line Cord (Required)

-LC0 (None) No line cord

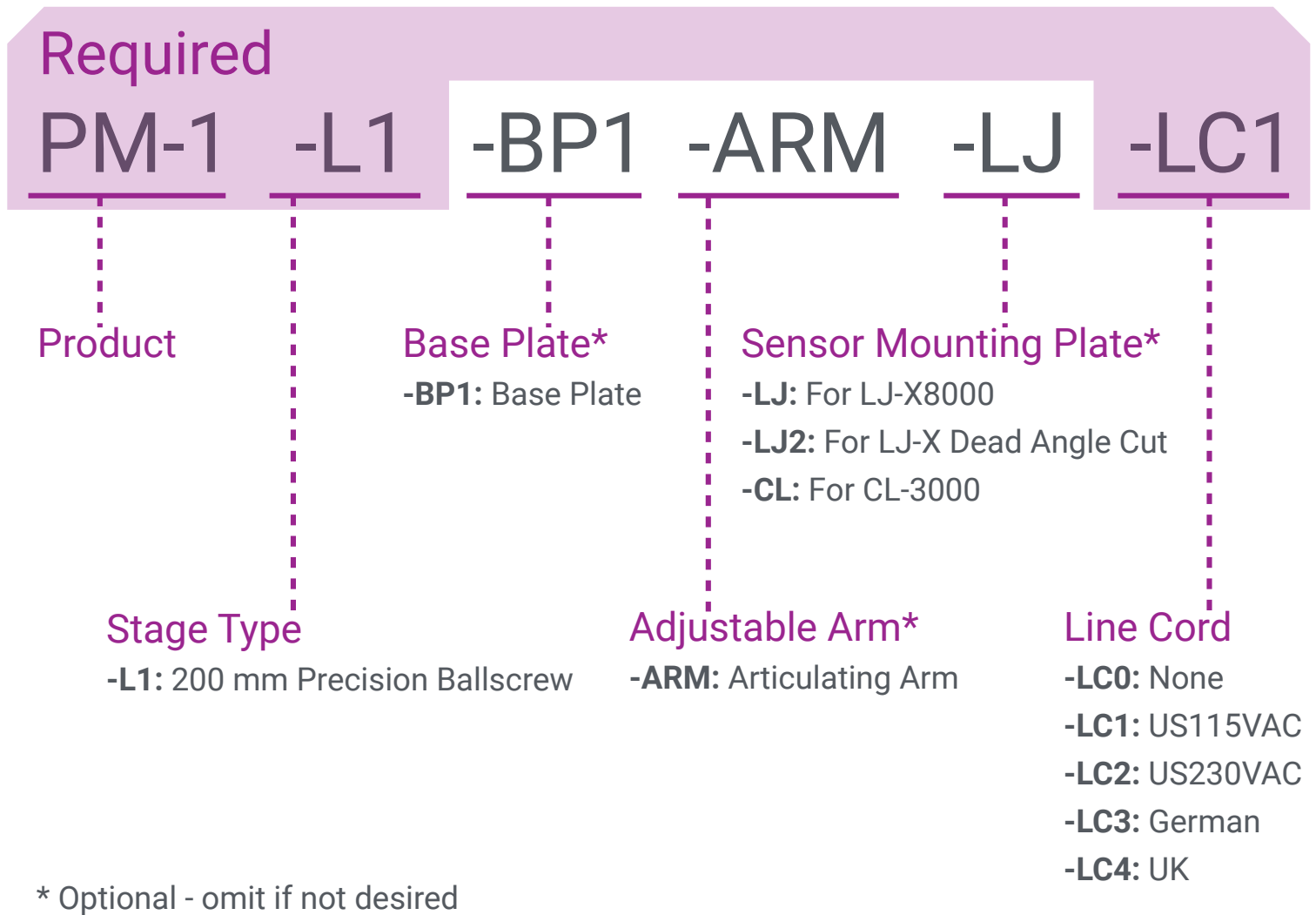
-LC1 (US115VAC) US (115VAC) compatible line cord

-LC2 (US230VAC) US (230VAC) compatible line cord

-LC3 (German) Germany compatible line cord

-LC4 (UK) UK compatible line cord

Ordering

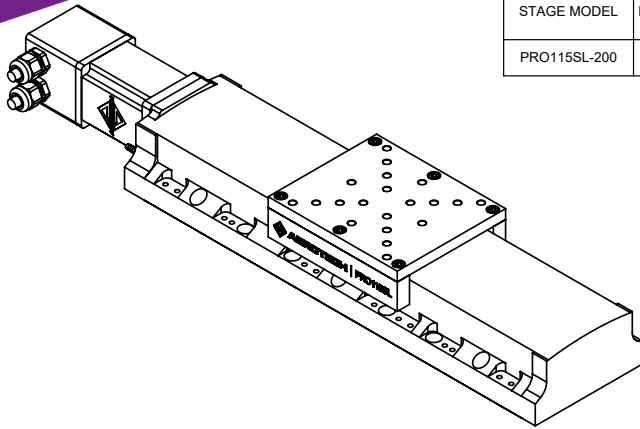


Specs

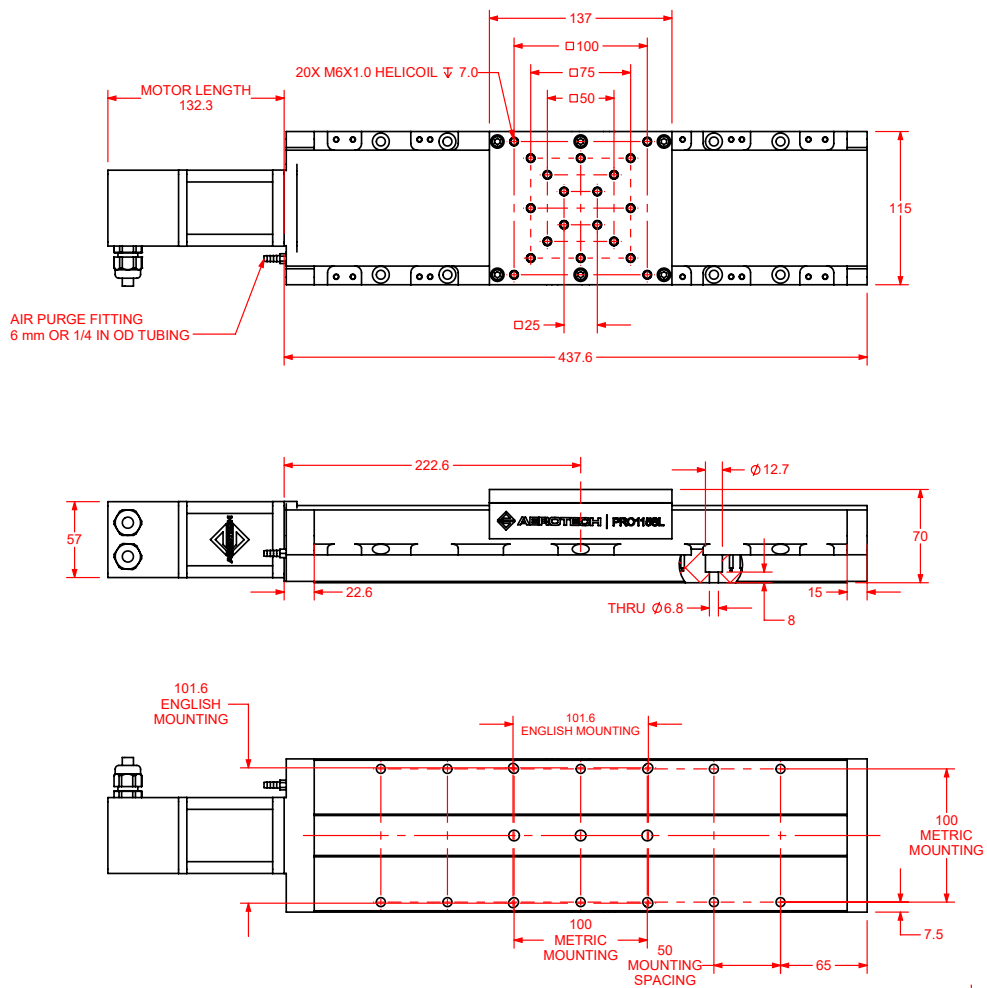
PM-1 Specifications

Stage Type	-L1
Travel	200 mm
Accuracy	$\pm 8 \mu\text{m}$
Repeatability	$\pm 1 \mu\text{m}$
Resolution (Min. Trigger Spacing)	$1.0 \mu\text{m}$
Payload Capacity	40 kg
Max Speed	100 mm/sec
Mass Information	
-L1	6 kg
-BP1 (Optional)	8.2 kg
-ARM (Optional)	3 kg
-LJ (Optional)	2 kg
-LJ2 (Optional)	3 kg
-CL (Optional)	1 kg
Mechanical Specifications	
MTBF (Mean Time Before Failure)	20,000 Hours

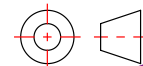
Dimensions



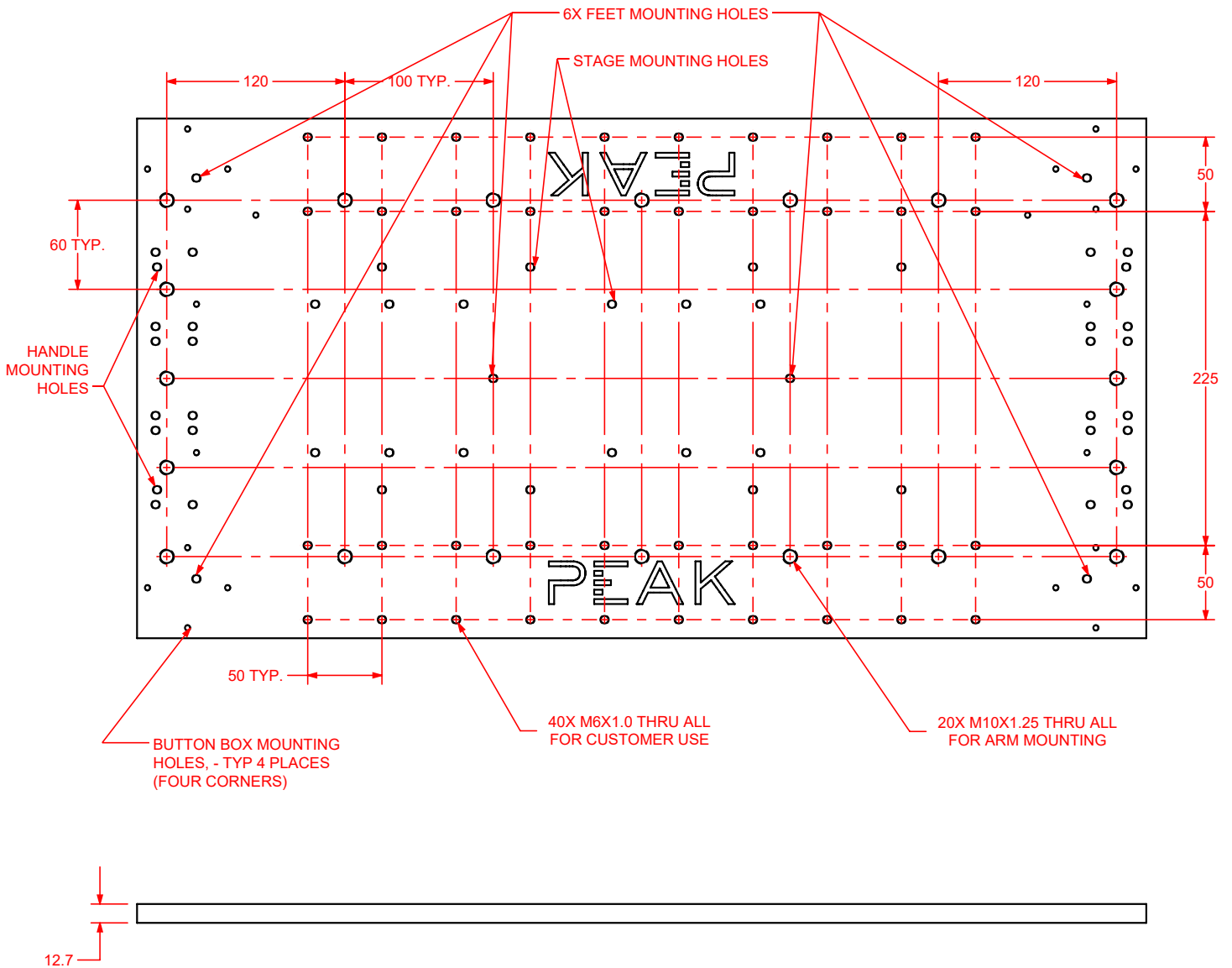
STAGE MODEL	NOMINAL TRAVEL	ELEC LIMIT TRAVEL	MECH LIMIT TRAVEL
PRO115SL-200	200	210.8-215.6	225



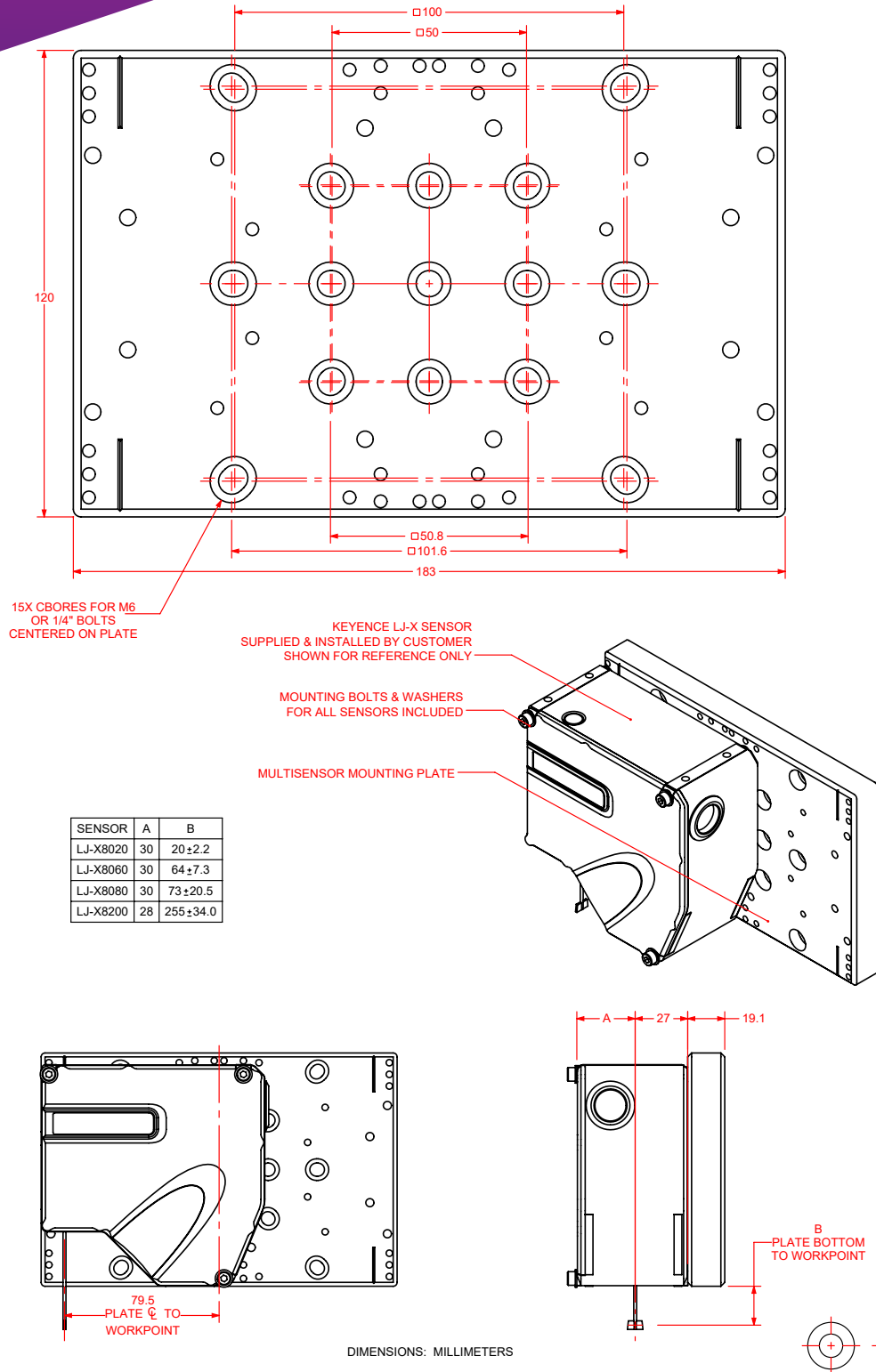
DIMENSIONS: MILLIMETERS



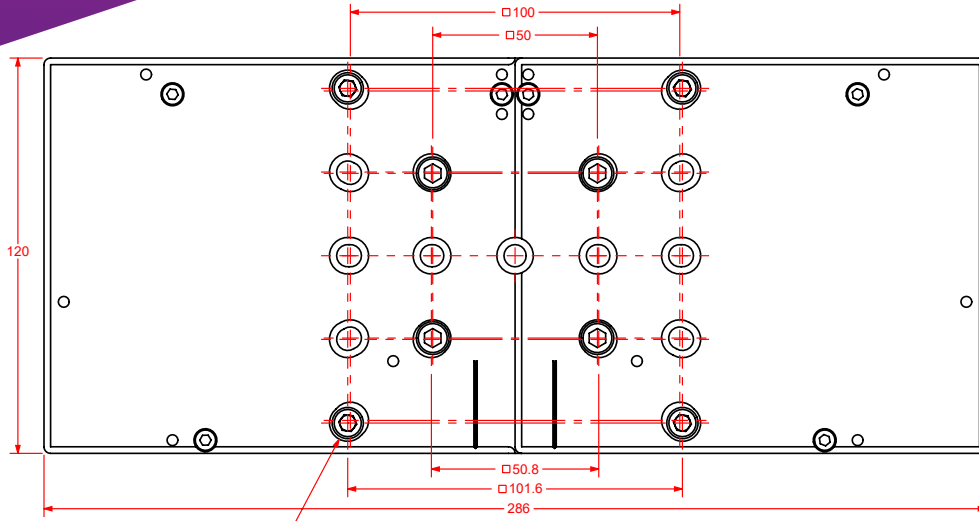
Dimensions



Dimensions



Dimensions

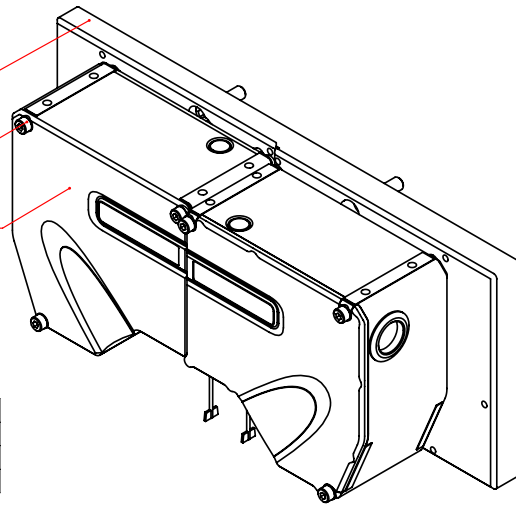


17X CBORES FOR M6 OR 1/4" BOLTS CENTERED ON PLATE

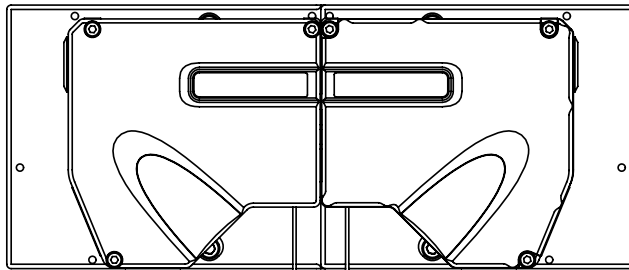
MULTISENSOR MOUNTING PLATE

MOUNTING BOLTS FOR ALL SENSORS INCLUDED

KEYENCE LJ-X SENSORS SUPPLIED & INSTALLED BY CUSTOMER SHOWN FOR REFERENCE ONLY

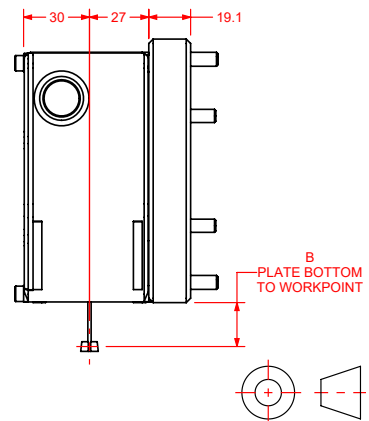


SENSOR	B
LJ-X8020	20 ± 2.2
LJ-X8060	64 ± 7.3
LJ-X8080	73 ± 20.5

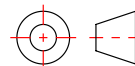


24 SENSOR \varnothing SPACING

DIMENSIONS: MILLIMETERS

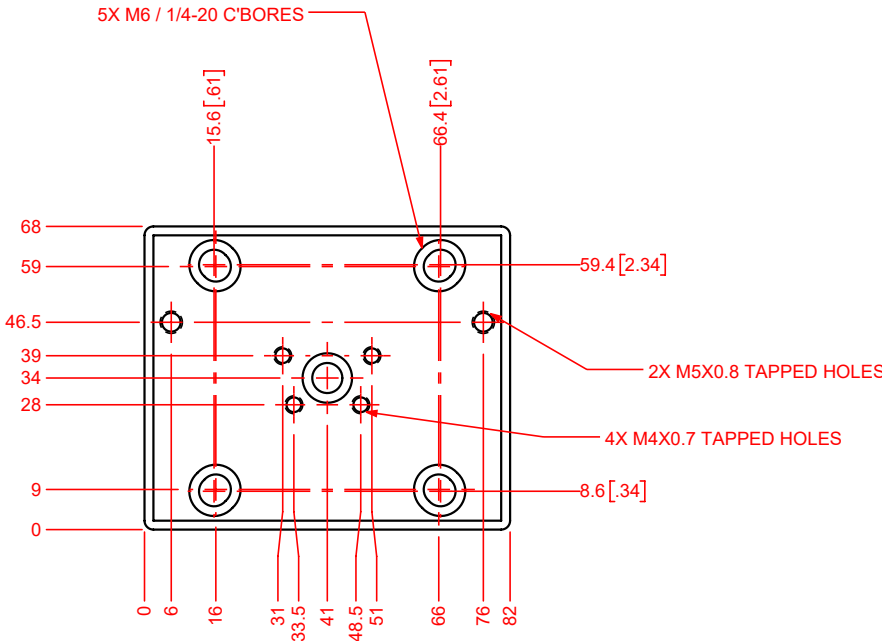


B PLATE BOTTOM TO WORKPOINT

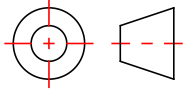


Dimensions

MOUNTS KEYENCE FIXTURES: OP-88283, OP-88289, OP-88354

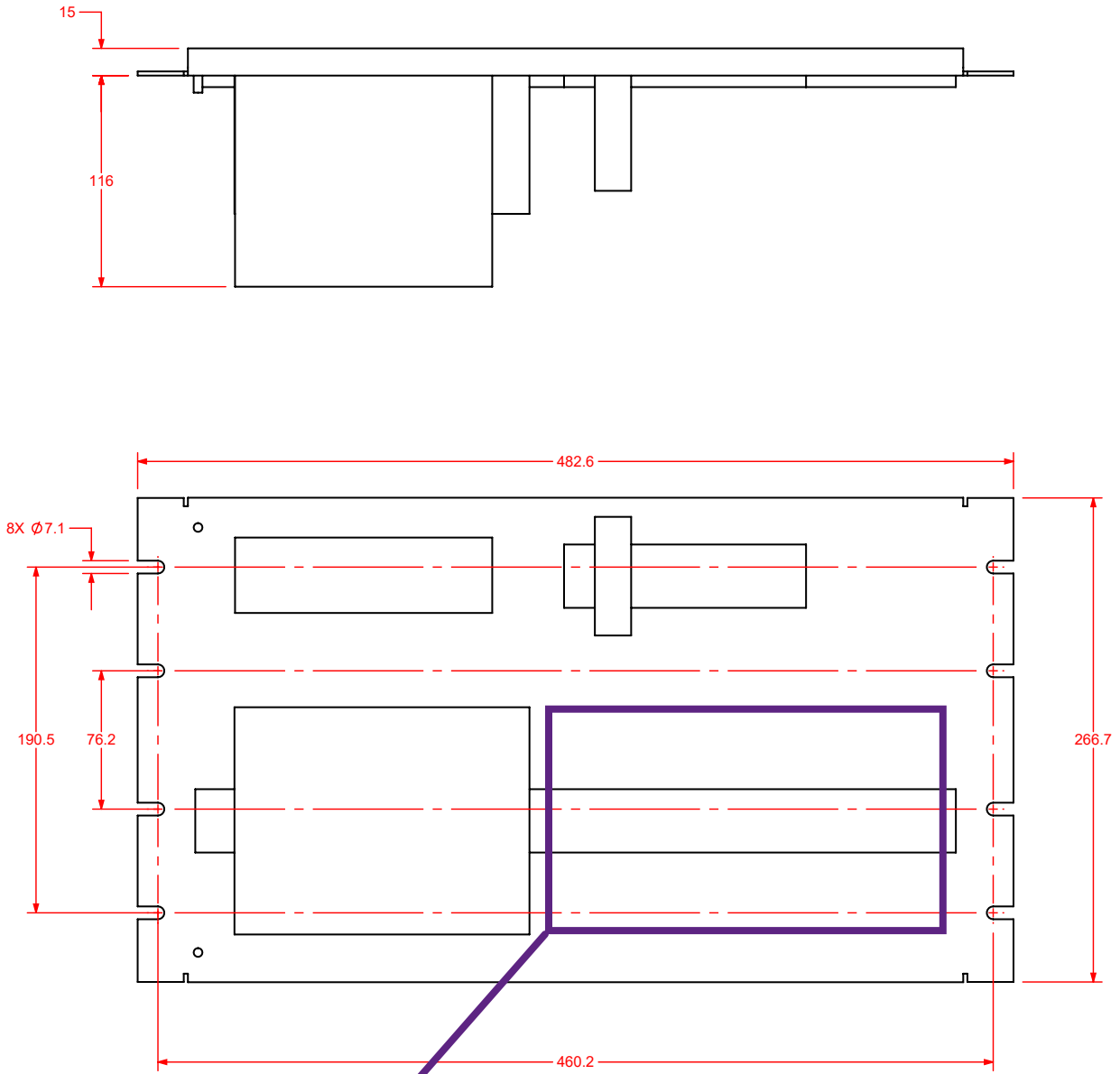


DIMENSIONS: MILLIMETERS [INCH]



Dimensions

NOTE: PANEL DESIGNED TO FIT STANDARD 19" RACK MOUNTS



DIN Rail Mounting
for Sensor Controller
(provided by customer)

Keyence LJ-X

Required Kit

The following components are required from Keyence to complete the PM-1 for use with a Keyence LJ-X Laser Profiler.

Sensor Controller

- LJ-X8002

Sensor Head

- LJ-X8020 or LJ-X8060 or LJ-X8080 or LJ-X8200
(order 2x heads and cables for dead angle cut applications)

Cables

- CB-B3 (3 m) or CB-B10 (10 m)
- OP-66844 (2 m USB Cable)

SD Card

- CA-SD1G (1 GB) or CA-SD4G (4 GB) or CA-SD16G (16GB)



Optional Kit

The following components can be optionally ordered from Keyence.

Monitor

- CA-MP120 (12 in LCD)

Monitor Cable

- OP-66842 (3 m)

Software

- LJ-X8000 Series Terminal Software

Keyence CL



Required Kit

The following components are required from Keyence to complete the PM-1 for use with a Keyence CL Confocal Displacement Sensor.

Sensor Controller and Optical Unit

- CL-3000 (with Optical Unit as needed per sensor selection)

Encoder Unit

- CL-E100

Sensor Head

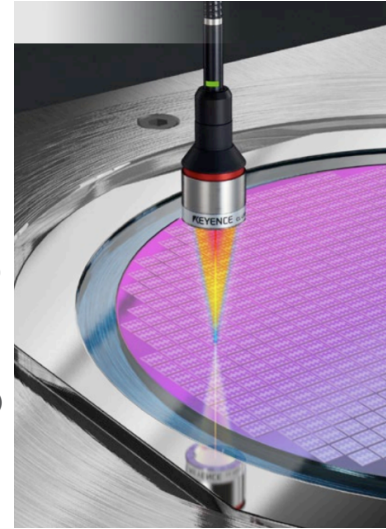
- CL-L(P)007 or CL-L(P)015 or CL-L(P)030 or CL-L(P)070 or CL-PT010

Head Fixture

- OP-88283 or OP-88289 or OP-88354 (as needed per sensor selection)

Cables

- OP-51580 (USB Cable)



Optional Kit

The following components can be optionally ordered from Keyence.

Display Panel and Cables

- CL-D500 and OP-88281 (3 m) or OP-88282 (10 m)

Sensor Extension Cable

- CL-C5 (5 m) or CL-C10 (10 m) or CL-C30 (30 m)

Software

- CL-NavigatorN Monitor/Setting Software

PEAKTM
METROLOGY

An AEROTECH Company