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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

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**FORM S-3  
REGISTRATION STATEMENT**  
*UNDER  
THE SECURITIES ACT OF 1933*

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**MKS INSTRUMENTS, INC.**

(Exact Name of Registrant as Specified in Its Charter)

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**Massachusetts**  
(State or Other Jurisdiction of  
Incorporation or Organization)

**04-2277512**  
(I.R.S. Employer  
Identification Number)

**2 Tech Drive, Suite 201  
Andover, Massachusetts 01810  
(978) 645-5500**

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

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**Kathleen F. Burke**  
**Senior Vice President, General Counsel and Secretary**  
**MKS Instruments, Inc.**  
**2 Tech Drive, Suite 201**  
**Andover, Massachusetts 01810**  
**(978) 645-5500**

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

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*Copy to:*

**Rosemary G. Reilly, Esq.**  
**Wilmer Cutler Pickering Hale and Dorr LLP**  
**60 State Street**  
**Boston, Massachusetts 02109**  
**Telephone: (617) 526-6000**  
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**Approximate date of commencement of proposed sale to the public:** From time to time after the effective date hereof.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer   
Non-accelerated filer

Accelerated filer   
Smaller reporting company   
Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

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PROSPECTUS

# MKS Instruments, Inc.

8,482,732 SHARES OF COMMON STOCK

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This prospectus relates to resales of shares of common stock previously issued by MKS Instruments, Inc. to certain former stockholders of Atotech Limited, a registered public company incorporated and existing under the laws of Jersey, in connection with our acquisition of that company.

We will not receive any proceeds from the sale of the shares.

The selling stockholders identified in this prospectus, or their pledgees, assignees, donees, transferees or other successors-in-interest, may offer the shares from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices.

Our common stock is traded on the Nasdaq Global Select Market under the symbol “MKSI.” On August 23, 2022, the closing sale price of the common stock on Nasdaq was \$105.94 per share. You are urged to obtain current market quotations for the common stock.

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**Investing in our common stock involves a high degree of risk. See “[Risk Factors](#)” beginning on page 5 and the risks discussed in the documents we file with the U.S. Securities and Exchange Commission and that are incorporated by reference herein.**

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**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.**

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**The date of this prospectus is August 24, 2022.**

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## ABOUT THIS PROSPECTUS

You should rely only on the information contained or incorporated by reference in this prospectus. We have not, and the selling stockholders have not, authorized anyone to provide you with information different from that contained or incorporated by reference in this prospectus. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give. The selling stockholders are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. You should assume that the information contained in this prospectus is accurate only as of the date on the front cover of this prospectus, regardless of the time of delivery of this prospectus or of any sale of common stock. Our business, financial condition, results of operations and prospects may have changed since such date.

Unless the context otherwise indicates, references in this prospectus to the “Registrant” refer to MKS Instruments, Inc. and references in this prospectus to “we,” “our” and “us” and “MKS” refer, collectively, to MKS Instruments, Inc., a Massachusetts corporation, and its subsidiaries.

We own or have rights to, or have applied for, trademarks, service marks and trade names that we use in connection with the operation of our business, including our corporate name, logos and website names. Other trademarks, service marks and trade names appearing in this prospectus are the property of their respective owners. Solely for convenience, some of the trademarks, service marks and trade names referred to in this prospectus are listed without the ® and ™ symbols, but we will assert, to the fullest extent under applicable law, our rights to our trademarks, service marks and trade names.

## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus includes and incorporates forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, regarding the future financial performance, business prospects and growth of MKS. These statements are only predictions based on current assumptions and expectations. Any statements that are not statements of historical fact (including statements containing the words “will,” “projects,” “intends,” “believes,” “plans,” “anticipates,” “expects,” “estimates,” “forecasts,” “continues” and similar expressions) should be considered to be forward-looking statements. Actual events or results may differ materially from those in the forward-looking statements included or incorporated herein.

Among the important factors that could cause actual events to differ materially from those in the forward-looking statements that we make are the need to generate sufficient cash flows to service and repay the substantial indebtedness MKS has incurred in connection with its acquisition of Atotech Limited, or Atotech, the terms of MKS’ existing term loans under which MKS incurred such debt, MKS’ entry into Atotech’s chemicals technology business, in which MKS does not have experience and which may expose it to significant additional liabilities, the risk of litigation relating to the Atotech acquisition, the risk that disruption from the Atotech acquisition materially and adversely affects the respective businesses and operations of MKS and Atotech, the ability of MKS to realize the anticipated synergies, cost savings and other benefits of the Atotech acquisition, competition from larger, more advanced or more established companies in MKS’ and Atotech’s respective markets, the ability of MKS to successfully grow its business and the businesses of Atotech, Photon Control Inc., which it acquired in July 2021, and Electro Scientific Industries, Inc., which it acquired in February 2019 and financial risks associated with those and potential future acquisitions, including goodwill and intangible asset impairments, potential adverse reactions or changes to business relationships resulting from the completion of the Atotech acquisition, manufacturing and sourcing risks, including those associated with limited and sole source suppliers and the impact and duration of supply chain disruptions and component shortages, and changes in global demand and the impact of the COVID-19 pandemic with respect to such disruptions, shortages and increases, conditions affecting the markets in which MKS and Atotech operate, including the fluctuations in capital spending in the semiconductor industry and other advanced manufacturing markets, and fluctuations in sales to MKS’ and Atotech’s major customers or disruptions or delays from third-party service providers upon which our operations may rely, the ability to anticipate and meet customer demand, the challenges, risks and costs involved with integrating or transitioning local and international operations of the companies we have acquired, risks associated with the attraction and retention of key personnel, risks associated with doing business internationally, including trade compliance, regulatory restrictions on our products or components and unfavorable currency exchange and tax rate fluctuations, which risks become more significant as we grow our business internationally and in China specifically, potential fluctuations in quarterly results, dependence on new product development, rapid technological and market change, acquisition strategy, volatility of stock price, risks associated with chemical manufacturing and environmental regulation compliance, risks related to our products resulting from defects, which would increase our costs and seriously harm our business, financial condition, operating results and customer relationships, financial and legal risk management, risks related to cybersecurity and data privacy threats and the challenges associated with intellectual property protection, and other important factors in the cautionary statements included or incorporated in this prospectus, particularly under the heading “Risk Factors.” Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make. Any such forward-looking statements represent management’s views as of the date of the document in which such forward-looking statement is contained. MKS is under no obligation to, and expressly disclaims any obligation to, update or alter these forward-looking statements, whether as a result of new information, future events or otherwise, even if subsequent events cause our views to change.

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A statement contained in a document incorporated by reference into this prospectus shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus, any prospectus supplement or in any other subsequently filed document which is also incorporated in this prospectus modifies or replaces such statement. Any statements so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

## PROSPECTUS SUMMARY

*This summary highlights important features of this offering and the information included or incorporated by reference in this prospectus. This summary does not contain all of the information that you should consider before investing in our common stock. You should read the entire prospectus carefully, especially the risks of investing in our common stock discussed under "Risk Factors."*

### ***MKS Instruments, Inc.***

MKS Instruments, Inc. enables technologies that transform our world. We deliver foundational technology solutions to leading edge semiconductor manufacturing, advanced electronics and specialty industrial applications. We apply our broad science and engineering capabilities to create instruments, subsystems, systems, process control solutions and specialty chemicals technology that improve process performance, optimize productivity and enable unique innovations for many of the world's leading technology and industrial companies. Our solutions are critical to addressing the challenges of miniaturization and complexity in advanced device manufacturing by enabling increased power, speed and feature enhancement for optimized connectivity. Our solutions are also critical to addressing ever-increasing performance requirements across a wide array of specialty industrial applications.

### ***Corporate Information***

MKS Instruments, Inc.'s principal executive offices are located at 2 Tech Drive, Suite 201, Andover, Massachusetts, 01810, our telephone number at that address is (978) 645-5500 and our website address is <http://www.mks.com>. Our website address is included in this prospectus only as an inactive textual reference.

### ***The Offering***

Common Stock offered by selling stockholders	8,482,732 shares
Use of proceeds	MKS Instruments, Inc. will not receive any proceeds from the sale of shares in this offering
Nasdaq Global Select Market symbol	"MKSI"

## **RISK FACTORS**

Investing in our common stock involves a high degree of risk. You should consider carefully the risks and uncertainties described under the section captioned “Risk Factors” contained in our most recent Annual Report on Form 10-K and in subsequent Quarterly Reports on Form 10-Q, and in other filings we make with the Securities and Exchange Commission, or the SEC, from time to time, including without limitation the Current Report on Form 8-K filed with the SEC on August 17, 2022, which are incorporated by reference herein in their entirety, together with other information in this prospectus and the information and documents incorporated by reference in this prospectus.

The risks described in our most recent Annual Report on Form 10-K and in any subsequent Quarterly Reports on Form 10-Q, and in other filings we make with the SEC incorporated by reference herein, including without limitation the Current Report on Form 8-K filed with the SEC on August 17, 2022, are not the only ones facing our Company. Additional risks and uncertainties may also impair our business operations. If any of the risks described in our most recent Annual Report on Form 10-K, our subsequent Quarterly Reports on Form 10-Q, and the other filings incorporated by reference herein, including without limitation the Current Report on Form 8-K filed with the SEC on August 17, 2022, occurs, our business, financial condition, results of operations, cash flows and future growth prospects could be harmed. In these circumstances, the market price of our common stock could decline, and you may lose all or part of your investment. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could suffer materially.



## USE OF PROCEEDS

All of the shares of our common stock being offered hereby are being sold by the selling stockholders identified in this prospectus. We are not selling any securities under this prospectus and we will not receive any proceeds from the sale of shares by the selling stockholders.

The selling stockholders will pay any underwriting discounts and commissions and expenses incurred by the selling stockholders for brokerage, accounting, tax or legal services or any other expenses incurred by the selling stockholders in disposing of the shares. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including, without limitation, all registration and filing fees, printing fees, Nasdaq listing fees and fees and expenses of our counsel and our accountants.

**SELLING STOCKHOLDERS**

We issued the shares of common stock covered by this prospectus in connection with the consummation of our acquisition of Atotech on August 17, 2022. The following table sets forth, to our knowledge, certain information about the selling stockholders as of August 23, 2022.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to shares. Unless otherwise indicated below, to our knowledge, all persons named in the table have sole voting and investment power with respect to their shares of common stock, except to the extent authority is shared by spouses under applicable law. The inclusion of any shares in this table does not constitute an admission of beneficial ownership for the person named below.

<u>Name of Selling Stockholder</u>	<u>Shares of Common Stock Beneficially Owned Prior to Offering</u>		<u>Number of Shares of Common Stock Being Offered</u>	<u>Shares of Common Stock to be Beneficially Owned After Offering(1)</u>	
	<u>Number</u>	<u>Percentage</u>		<u>Number</u>	<u>Percentage</u>
Carlyle Partners VI Cayman Holdings, L.P.(2)	5,180,030	7.8%	5,180,030	—	—
CEP IV Participations, S.à r.l. SICAR(2)	2,259,743	3.4%	2,259,743	—	—
Gamma Holding Company Limited(2)	1,042,959	1.6%	1,042,959	—	—

- (1) We do not know when or in what amounts the selling stockholders may offer shares for sale. The selling stockholders might not sell any or all of the shares offered by this prospectus. Because the selling stockholders may offer all or some of the shares pursuant to this offering, and because there are currently no agreements, arrangements or understandings with respect to the sale of any of the shares, we cannot estimate the number of the shares that will be held by the selling stockholders after completion of the offering. However, for purposes of this table, we have assumed that, after completion of the offering, none of the shares covered by this prospectus will be held by the selling stockholders.
- (2) The Carlyle Group Inc., which is a publicly traded entity listed on NASDAQ, is the sole member of Carlyle Holdings II GP L.L.C., which is the managing member of Carlyle Holdings II L.L.C., which, with respect to the securities reported herein, is the managing member of CG Subsidiary Holdings L.L.C., which is the general partner of TC Group Cayman Investment Holdings, L.P., which is the general partner of TC Group Cayman Investment Holdings Sub L.P., which is the sole shareholder TC Group VI Cayman, L.L.C., which is the general partner of TC Group VI Cayman, L.P., which is the general partner of Carlyle Partners VI Cayman Holdings, L.P.

TC Group Cayman Investment Holdings Sub L.P. is also the sole shareholder of CEP IV Managing GP Holdings, Ltd. and the sole member of CAP IV, L.L.C. CEP IV Managing GP Holdings, Ltd. is the general partner of CEP IV Managing GP, L.P., which is the managing general partner of Carlyle Europe Partners IV, L.P., which is the majority shareholder of CEP IV Participations, S.à r.l. SICAR. CAP IV, L.L.C. is the general partner of CAP IV General Partner, L.P., which is the general partner of Carlyle Asia Partners IV, L.P., which is the majority shareholder of Gamma Holding Company Limited.

Voting and investment determinations with respect to the shares held by Carlyle Partners VI Cayman Holdings, L.P. are made by an investment committee of TC Group VI Cayman, L.P., which is comprised of Peter Clare, William Conway, Jr., Daniel D’Aniello, David Rubenstein, Kevin Gasque, Allan Holt, Sandra Horbach, Brian Bernasek and Marco De Benedetti as a non-voting observer.

Voting and investment determinations with respect to the shares held by CEP IV Participations, S.à r.l. SICAR are made by the board of CEP IV Participations, S.à r.l. SICAR following recommendations by the investment committee of CEP IV Managing GP, L.P. The Board of the SICAR is comprised of Estelle Beyl-Vodouhé, William Cagney, Guy Harles, Andrew Howlett-Bolton and Richard Wallace. The investment committee of CEP IV Managing GP, L.P. is comprised of Daniel D’Aniello, William Conway, Jr., David Rubenstein, Peter Clare, and Kevin Gasque.

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Voting and investment determinations with respect to the shares held by Gamma Holding Company Limited are made by an investment committee of CAP IV General Partner, L.P. The investment committee of CAP IV General Partner, L.P. is comprised of Daniel D’Aniello, William Conway, Jr., David Rubenstein, Kevin Gasque, and Peter Clare.

Accordingly, each of the entities and individuals mentioned above may be deemed to share beneficial ownership of the securities held of record by Carlyle Partners VI Cayman Holdings, L.P., CEP IV Participations, S.à r.l. SICAR and Gamma Holding Company Limited. Each of them disclaims any such beneficial ownership.

The address for CEP IV Participations S.à r.l., SICAR is 2, avenue Charles de Gaulle, 4<sup>th</sup> floor, L-1653 Luxembourg, Grand Duchy of Luxembourg. The address for each of the other entities and individuals named in this footnote is c/o The Carlyle Group, 1001 Pennsylvania Ave. NW, Suite 220 South, Washington, D.C. 20004-2505.

Except as described below, none of the selling stockholders has held any position or office with, or has otherwise had a material relationship with, us or any of our predecessors or affiliates within the past three years.

On July 1, 2021, we entered into an implementation agreement to acquire Atotech, which was amended in October 2021 and further amended in April 2022 (as amended, the Implementation Agreement). Pursuant to the Implementation Agreement, we paid \$16.20 per share in cash and 0.0552 of a share of our common stock for each outstanding common share of Atotech, for total cash and stock consideration of \$4.4 billion. The Atotech acquisition closed on August 17, 2022.

Pursuant to the Implementation Agreement, on August 17, 2022, we entered into an Investor Rights Agreement with the selling stockholders to grant the selling stockholders certain registration rights with respect to the shares of MKS stock they received upon consummation of the acquisition. Under the Investor Rights Agreement, we granted to the selling stockholders the right to demand that we file a registration statement for all or a portion of their common stock. In addition, the selling stockholders are entitled to request that their shares be covered by a registration statement that we are otherwise filing with respect to our common stock. These registration rights are subject to conditions and limitations, including the right of the underwriters of an offering to limit the number of shares included in certain registrations. Under the Investor Rights Agreement, we have also agreed to indemnify the selling stockholders against certain liabilities relating to the selling of the common stock, including liabilities arising under the Securities Act, and to pay the costs and fees of registering the shares of common stock; however, the selling stockholders will pay any brokerage commissions, discounts or other expenses relating to the sale of shares of common stock.

In connection with the Implementation Agreement, the selling stockholders entered into a lock-up agreement, or the Lock-Up Agreement, with us, pursuant to which the selling stockholders have agreed not to sell, hypothecate, pledge or otherwise dispose of a percentage of the shares of MKS stock they received upon consummation of the acquisition for a phased period ending October 16, 2022. Pursuant to the terms of the Lock-Up Agreement, 80% of such shares will be subject to the lock-up until September 16, 2022 and 60% of such shares will be subject to the lock-up until October 16, 2022.

In connection with the entry into the Implementation Agreement, we received a deed of irrevocable undertaking, or the Irrevocable Undertaking, from the selling stockholders pursuant to which they agreed to vote or procure votes in favor of the scheme of arrangement contemplated by the Implementation Agreement at the court-approved shareholder meeting and the resolution to be proposed at the general meeting of Atotech. The general meeting of Atotech occurred on November 3, 2021 and the Atotech shareholders, including the selling stockholders, voted in favor of the scheme of arrangement.

## PLAN OF DISTRIBUTION

The shares covered by this prospectus may be offered and sold from time to time by the selling stockholders. The term “selling stockholders” includes donees, pledgees, assignees, distributees, transferees or other successors-in-interest selling shares received after the date of this prospectus from the selling stockholders as a gift, pledge, partnership distribution or other transfer. The selling stockholders will act independently of us in making decisions with respect to the timing, manner and size of each sale. Such sales may be made on one or more exchanges in any market or trading facility on which the shares are traded, or in the over-the-counter market or otherwise, at fixed prices, at prices and under terms then-prevailing or at prices related to the then-current market price, at varying prices determined at the time of sale or in negotiated transactions.

The selling stockholders may sell their shares by one or more of, or a combination of, the following methods:

- one or more underwritten offerings;
- purchases by a broker-dealer as principal and resale by such broker-dealer for its own account pursuant to this prospectus;
- ordinary brokerage transactions and transactions in which the broker solicits purchasers;
- block trades in which the broker-dealer so engaged will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- over-the-counter distributions in accordance with the rules of Nasdaq;
- in privately negotiated transactions;
- an exchange distribution in accordance with the rules of Nasdaq;
- distributions to their members, partners or shareholders;
- short sales effected after the date of the registration statement of which this prospectus is a part is declared effective by the SEC;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- in market transactions, including transactions on a national securities exchange or quotations service or over-the-counter market;
- directly to one or more purchasers;
- through agents;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share; and
- a combination of any such methods of sale.

The selling stockholders also may in the future resell a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act, provided that they meet the criteria and conform to the requirements of that rule, or pursuant to other available exemptions from the registration requirements of the Securities Act.

To the extent required, this prospectus may be amended or supplemented from time to time to describe a specific plan of distribution.

In connection with distributions of the shares or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions. In connection with such transactions, broker-

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dealers or other financial institutions may engage in short sales of the common stock in the course of hedging the positions they assume with selling stockholders. The selling stockholders may also sell the common stock short and redeliver the shares to close out such short positions, or loan or pledge shares to broker-dealers that in turn may sell such shares. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholders may also pledge or grant a security interest in shares to a broker-dealer, other financial institution or other person, and, upon a default, such pledgee or secured parties may effect sales of the pledged shares pursuant to this prospectus (as supplemented or amended to reflect such transaction). The selling stockholders also may transfer shares in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus (as supplemented or amended to reflect such transaction).

A selling stockholder that is an entity may elect to make an in-kind distribution of shares to its members, partners or shareholders pursuant to the registration statement of which this prospectus is a part by delivering a prospectus. To the extent that such members, partners or shareholders are not affiliates of ours, such members, partners or shareholders would thereby receive freely tradable shares pursuant to the distribution through a registration statement.

In effecting sales, broker-dealers or agents engaged by the selling stockholders may arrange for other broker-dealers to participate. Broker-dealers or agents may receive commissions, discounts or concessions from the selling stockholders in amounts to be negotiated immediately prior to the sale. The aggregate proceeds to the selling stockholders from the sale of shares offered by them will be the purchase price of such shares less discounts or commissions, if any. The selling stockholders reserve the right to accept and, together with their agents from time to time, reject, in whole or in part, any proposed purchase of shares to be made directly or through agents. We will not receive any of the proceeds from any offering by the selling stockholders.

In offering the shares covered by this prospectus, the selling stockholders and any broker-dealers who execute sales for the selling stockholders may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. Any profits realized by the selling stockholders and the compensation of any broker-dealer may be deemed to be underwriting discounts and commissions. If any selling stockholder is an “underwriter” within the meaning of Section 2(a)(11) of the Securities Act, then such selling stockholder will be subject to the prospectus delivery requirements of the Securities Act. Underwriters and their controlling persons, dealers and agents may be entitled, under agreements entered into with us and the selling stockholders, to indemnification against and contribution toward specific civil liabilities, including liabilities under the Securities Act. We may be entitled to indemnification against and contribution toward specific liabilities arising from (i) certain statements or omissions in this prospectus or any supplement to it by the selling stockholders, and (ii) the selling stockholders’ compliance with applicable laws in effecting the sale or disposition of the securities covered by this prospectus.

In order to comply with the securities laws of certain states, if applicable, the shares must be sold in such jurisdictions only through registered or licensed brokers or dealers. In addition, in certain states the shares may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

We have advised the selling stockholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. In addition, we will make copies of this prospectus available to the selling stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify

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any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

At the time a particular offer of shares is made, if required, a prospectus supplement will be distributed that will set forth the number of shares being offered and the terms of the offering, including the name of any underwriter, dealer or agent, the purchase price paid by any underwriter, any discount, commission and other item constituting compensation, any discount, commission or concession allowed or reallocated or paid to any dealer, and the proposed selling price to the public.

We have agreed to indemnify the selling stockholders against certain liabilities, including certain liabilities under the Securities Act.

We have agreed with the selling stockholders to keep the Registration Statement of which this prospectus constitutes a part effective until such time as all of the shares covered by this prospectus have been disposed of pursuant to and in accordance with the Registration Statement.

**LEGAL MATTERS**

The validity of the shares offered by this prospectus has been passed upon by Wilmer Cutler Pickering Hale and Dorr LLP.

## EXPERTS

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this prospectus by reference to the Annual Report on Form 10-K of MKS Instruments, Inc. for the year ended December 31, 2021 have been so incorporated in reliance on the report (which contains a paragraph relating to the effectiveness of internal control over financial reporting due to the exclusion of Photon Control Inc. because it was acquired by the Company in a purchase business combination during 2021) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

The consolidated financial statements of Atotech Limited as of December 31, 2021 and 2020, and for each of the years in the three-year period ended December 31, 2021, have been incorporated by reference herein in reliance on the report of KPMG AG Wirtschaftsprüfungsgesellschaft, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.



## WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. Copies of certain information filed by us with the SEC are also available on our website at <http://www.mks.com>. Our website is not a part of this prospectus and is not incorporated by reference in this prospectus.

This prospectus is part of a registration statement we filed with the SEC. This prospectus omits some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information and exhibits in the registration statement for further information about us and our consolidated subsidiaries and the securities we are offering. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.

## INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus incorporates by reference the documents listed below (File No. 000-23621) and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed) until the offering of the securities under the registration statement is terminated or completed:

- (1) Our Annual Report on [Form 10-K](#) for the year ended December 31, 2021, including the information specifically incorporated by reference into our Annual Report on Form 10-K from our [definitive proxy statement](#) for our 2022 Annual Meeting of Shareholders;
- (2) Our Quarterly Reports on Form 10-Q filed on [May 2, 2022](#) and [August 3, 2022](#);
- (3) Our Current Reports on Form 8-K filed on [February 11, 2022](#), [April 1, 2022](#) (solely with respect to Items 1.01, 1.02 and the portions of Item 9.01 and Exhibits 2.1 and 10.1 thereto related to Item 1.01), [May 11, 2022](#), [July 28, 2022](#) and [August 17, 2022](#) and our Current Reports on Form 8-K/A filed on [August 17, 2022](#) and [August 24, 2022](#);
- (4) The description of our common stock contained in our Registration Statement on [Form 8-A](#) filed on March 2, 1999, as the description therein has been updated and superseded by the description of our capital stock contained in [Exhibit 4.2](#) to our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, as filed with the SEC on February 28, 2020, including any amendments or reports filed for the purpose of updating such description.

A statement contained in a document incorporated by reference into this prospectus shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus, any prospectus supplement or in any other subsequently filed document which is also incorporated in this prospectus modifies or replaces such statement. Any statements so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You may request a copy of these documents, which will be provided to you at no cost, by writing or telephoning us using the following contact information:

MKS Instruments, Inc.  
2 Tech Drive, Suite 201  
Andover, Massachusetts 01810  
Attn: Investor Relations  
(978) 645-5500

**PART II****INFORMATION NOT REQUIRED IN PROSPECTUS****Item 14. Other Expenses of Issuance and Distribution.**

The following table sets forth the various expenses to be incurred in connection with the sale and distribution of the securities being registered hereby, all of which will be borne by MKS Instruments, Inc. (except any underwriting discounts and commissions and expenses incurred by the selling stockholders for brokerage, accounting, tax or legal services or any other expenses incurred by the selling stockholders in disposing of the shares). All amounts shown are estimates except the SEC registration fee.

SEC registration fee	\$ 82,362
Legal fees and expenses	\$ 50,000
Accounting fees and expenses	\$ 320,000
Miscellaneous expenses	\$ 8,000
Total expenses	<u>\$ 460,362</u>

**Item 15. Indemnification of Directors and Officers.**

Section 8.51 of the Massachusetts Business Corporation Act, or the MBCA, authorizes a Massachusetts corporation to indemnify a director of the corporation against liability in such capacity if the director (i) conducted himself in good faith, (ii) reasonably believed his conduct was in, or at least not opposed to, the best interests of the corporation, and (iii) in the case of a criminal proceeding, had no reasonable cause to believe his conduct was unlawful. Section 8.51 of the MBCA also allows for indemnification of a director if the liability in question was eliminated by the corporation's articles of organization pursuant to Section 2.02(b)(4) of the MBCA.

Section 8.52 of the MBCA requires that a Massachusetts corporation indemnify a director who was wholly successful, on the merits or otherwise, in the defense of any proceeding to which such director was a party because he was a director of the corporation.

Section 8.53 of the MBCA authorizes a Massachusetts corporation to pay for, in advance, a director's reasonable expenses in a proceeding if, among other things, the director delivers to the corporation (i) a written affirmation of his good faith belief that he has met the relevant standard of conduct for indemnification under Section 8.51 of the MBCA or the proceeding involves conduct for which liability has been eliminated under the corporation's articles of organization as permitted by Section 2.02(b)(4) of the MBCA, and (ii) a written undertaking to repay any funds advanced if he is not entitled to mandatory indemnification under Section 8.52 of the MBCA and it is ultimately determined, pursuant to procedures further laid out in the MBCA, that he has not met the standard of conduct for indemnification under Section 8.51 of the MBCA.

Section 8.56 of the MBCA authorizes a corporation to indemnify, and advance expenses to, an officer of the corporation to the same extent as a director, and if such officer is not a director of the corporation, or if such officer is also a director but the basis on which he is made a party to the proceeding is an act or omission solely as an officer, to such further extent as may be provided in the corporation's articles of organization, the corporation's bylaws, a resolution of the corporation's board of directors or a contract, provided that the officer may not be indemnified for acts or omissions not in good faith, intentional misconduct or knowing violation of law. Section 8.56 of the MBCA requires that a Massachusetts corporation indemnify an officer of the corporation who was wholly successful, on the merits or otherwise, in the defense of any proceeding to which such officer was a party because he was an officer of the corporation.

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In its Restated Articles of Organization, as amended, or the Articles of Organization, the Registrant has elected to commit to provide mandatory indemnification to its directors and officers in specified circumstances. Generally, Article 6B of the Registrant's Articles of Organization provides that the Registrant shall indemnify directors and officers of the Registrant against liabilities and expenses arising out of legal proceedings brought against them by reason of their status as directors or officers, by reason of their agreeing to serve, at the request of the Registrant, as a director or officer with another organization, or in any capacity with respect to any employee benefit plan. Under this provision, a director or officer of the Registrant shall be indemnified by the Registrant for all expenses (including attorneys' fees), judgments and fines, and amounts paid in settlement of such proceedings, even if he is not successful on the merits, unless finally adjudicated not to have acted in good faith in the reasonable belief that his action was in the best interests of the Registrant or, to the extent such matter relates to service with respect to an employee benefit plan, in the best interests of the participants or beneficiaries of such employee benefit plan. The Registrant shall not indemnify an officer or director who initiates the legal proceeding, unless the initiation was approved by the Registrant's Board of Directors. The Registrant shall not indemnify to the extent that directors or officers receive reimbursement from the proceeds of insurance. The Registrant's Board of Directors may authorize advancing litigation expenses to a director or officer at his request upon receipt of an undertaking by any such director or officer to repay such expenses if it is ultimately determined that he is not entitled to indemnification for such expenses. However, the director or officer must notify the Registrant of any suit, after which the Registrant is entitled to participate and/or assume the defense of the proceeding. If the Registrant does assume the defense of the proceeding, the director or officer shall not be entitled to indemnification of expenses.

Section 2.02(b)(4) of the MBCA provides that a Massachusetts corporation may, in its articles of organization, eliminate or limit the personal liability of a director to the corporation for monetary damages for breach of fiduciary duty notwithstanding any law to the contrary, except for liability for (i) any breach of the duty of loyalty to the corporation or to the shareholders, (ii) acts or omissions not in good faith, intentional misconduct or knowing violation of law, (iii) certain improper distributions or (iv) any transaction from which the director derived an improper personal benefit.

The Registrant has obtained directors' and officers' liability insurance for the benefit of its directors and certain of its officers.

The foregoing summaries are necessarily subject to the complete text of the statute, the Articles of Organization, the Registrant's bylaws and the agreements referred to above and are qualified in their entirety by reference thereto.

### **Item 16. Exhibits**

<u>EXHIBIT NUMBER</u>	<u>DESCRIPTION</u>
4.1(1)	<a href="#"><u>Restated Articles of Organization of the Registrant.</u></a>
4.2(2)	<a href="#"><u>Articles of Amendment, as filed with the Secretary of State of Massachusetts on May 18, 2001.</u></a>
4.3(3)	<a href="#"><u>Articles of Amendment, as filed with the Secretary of State of Massachusetts on May 16, 2002.</u></a>
4.4(4)	<a href="#"><u>Amended and Restated By-Laws of the Registrant.</u></a>
4.5(5)	<a href="#"><u>Investor Rights Agreement, dated August 17, 2022, by and among Registrant and the Carlyle Stockholders.</u></a>
5.1	<a href="#"><u>Opinion of Wilmer Cutler Pickering Hale and Dorr LLP.</u></a>
23.1	<a href="#"><u>Consent of PricewaterhouseCoopers LLP.</u></a>

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<u>EXHIBIT NUMBER</u>	<u>DESCRIPTION</u>
23.2	<a href="#">Consent of KPMG AG Wirtschaftsprüfungsgesellschaft.</a>
23.3	<a href="#">Consent of Wilmer Cutler Pickering Hale and Dorr LLP (included in Exhibit 5.1).</a>
24.1	<a href="#">Power of Attorney (included in the signature pages to this Registration Statement).</a>
107	<a href="#">Filing Fee Table</a>
(1)	Incorporated herein by reference to the Registrant's Registration Statement on Form S-4 (File No. 333-49738) filed with the Securities and Exchange Commission on November 13, 2000.
(2)	Incorporated herein by reference to the Registrant's Quarterly Report on Form 10-Q (File No. 000-23621) for the quarter ended June 30, 2001.
(3)	Incorporated herein by reference to the Registrant's Quarterly Report on Form 10-Q (File No. 000-23621) for the quarter ended June 30, 2002.
(4)	Incorporated herein by reference to the Registrant's Current Report on Form 8-K (File No. 000-23621) filed with the Securities and Exchange Commission on May 6, 2014.
(5)	Incorporated by reference to the Registrant's Current Report on Form 8-K (File No. 000-23621) filed with the Securities and Exchange Commission on August 17, 2022.

### **Item 17. Undertakings.**

*Item 512(a) of Regulation S-K.* The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933, as amended (the "Securities Act");

(ii) To reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement. Notwithstanding the foregoing, any increase or decrease in the volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement;

*provided, however,* that paragraphs (1)(i), (1)(ii) and (1)(iii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), that are incorporated by reference in this Registration Statement or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of this Registration Statement.

(2) That, for the purposes of determining any liability under the Securities Act, each post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at the time shall be deemed to be the initial *bona fide* offering thereof.

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(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser:

(i) Each prospectus filed by the Registrant pursuant to Rule 424(b)(3) shall be deemed to be part of this Registration Statement as of the date the filed prospectus was deemed part of and included in the Registration Statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act shall be deemed to be part of and included in this Registration Statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

*Item 512(b) of Regulation S-K.* The Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

*Item 512(h) of Regulation S-K.* Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the indemnification provisions described herein, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the town of Andover, Commonwealth of Massachusetts, on the 24<sup>th</sup> day of August, 2022.

**MKS INSTRUMENTS, INC.**

By: /S/ KATHLEEN F. BURKE

Kathleen F. Burke

Senior Vice President, General Counsel and Secretary

SIGNATURES AND POWER OF ATTORNEY

We, the undersigned officers and directors of MKS Instruments, Inc. hereby severally constitute and appoint Seth H. Bagshaw and Kathleen F. Burke, and each of them singly, our true and lawful attorneys with full power to any of them, and to each of them singly, to sign for us and in our names in the capacities indicated below the Registration Statement on Form S-3 filed herewith and any and all pre-effective and post-effective amendments to said Registration Statement and generally to do all such things in our name and behalf in our capacities as officers and directors to enable MKS Instruments, Inc. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to said Registration Statement and any and all amendments thereto.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

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<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Gerald G. Colella</u> Gerald G. Colella	Chairman of the Board of Directors	August 24, 2022
<u>/s/ John T.C. Lee</u> John T.C. Lee	President, Chief Executive Officer and Director (Principal Executive Officer)	August 24, 2022
<u>/s/ Seth H. Bagshaw</u> Seth H. Bagshaw	Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)	August 24, 2022
<u>/s/ Rajeev Batra</u> Rajeev Batra	Director	August 24, 2022
<u>/s/ Peter J. Cannone III</u> Peter J. Cannone III	Director	August 24, 2022
<u>/s/ Joseph B. Donahue</u> Joseph B. Donahue	Director	August 24, 2022
<u>/s/ Jacqueline F. Moloney</u> Jacqueline F. Moloney	Director	August 24, 2022
<u>/s/ Elizabeth A. Mora</u> Elizabeth A. Mora	Director	August 24, 2022
<u>/s/ Michelle M. Warner</u> Michelle M. Warner	Director	August 24, 2022
<u>Geoffrey Wild</u>	Director	



August 24, 2022  
MKS Instruments, Inc.  
2 Tech Drive, Suite 201  
Andover, Massachusetts 01810

Registration Statement on Form S-3

Ladies and Gentlemen:

This opinion is furnished to you in connection with a Registration Statement on Form S-3 (the "Registration Statement") filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), for the registration of an aggregate of 8,482,732 shares of Common Stock, no par value per share (the "Shares"), of MKS Instruments, Inc. a Massachusetts corporation (the "Company"). All of the Shares are being registered on behalf of certain stockholders of the Company (the "Selling Stockholders").

We are acting as counsel for the Company in connection with the registration for resale of the Shares. We have examined signed copies of the Registration Statement filed with the Commission. We have also examined and relied upon minutes of meetings of the stockholders and the Board of Directors of the Company as provided to us by the Company, stock record books of the Company as provided to us by the Company, the Certificate of Incorporation and By-Laws of the Company, each as restated and/or amended to date, and such other documents as we have deemed necessary for purposes of rendering the opinions hereinafter set forth.

In our examination of the foregoing documents, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as copies, the authenticity of the originals of such latter documents and the legal competence of all signatories to such documents.

Our opinion below, insofar as it relates to the Selling Stockholders' shares being fully paid, is based solely on an officer's certificate of the Company confirming the Company's receipt of the consideration called for by the applicable resolutions authorizing the issuance of such shares.

We assume that the appropriate action will be taken, prior to the offer and sale of the Shares, to register and qualify the Shares for sale under all applicable state securities or "blue sky" laws.

We express no opinion herein as to the laws of any state or jurisdiction other than the state laws of the Commonwealth of Massachusetts and the federal laws of the United States of America.

Based upon and subject to the foregoing, we are of the opinion that the Shares have been duly authorized and are validly issued, fully paid and nonassessable.

It is understood that this opinion is to be used only in connection with the offer and sale of the Shares while the Registration Statement is in effect.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.

Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109

Beijing Berlin Boston Brussels Denver Frankfurt London Los Angeles New York Oxford Palo Alto Waltham Washington

We hereby consent to the filing of this opinion with the Commission as an exhibit to the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act and to the use of our name therein and in the related prospectus under the caption "Legal Matters." In giving such consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission.

Very truly yours,

/s/ Wilmer Cutler Pickering Hale and Dorr LLP

WILMER CUTLER PICKERING HALE AND DORR LLP

Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109

Beijing Berlin Boston Brussels Denver Frankfurt London Los Angeles New York Oxford Palo Alto Waltham Washington

## CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of MKS Instruments, Inc. of our report dated February 28, 2022 relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in MKS Instruments, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2021. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP  
Boston, Massachusetts  
August 24, 2022

**Consent of Independent Registered Public Accounting Firm**

We consent to the use of our report dated April 8, 2022, with respect to the consolidated financial statements of Atotech Limited, incorporated herein by reference and to the reference to our firm under the heading “Experts” in the prospectus.

/s/ KPMG AG Wirtschaftsprüfungsgesellschaft

Berlin, Germany  
August 24, 2022

## Calculation of Filing Fee Tables

### Form S-3 (Form Type)

**MKS INSTRUMENTS, INC.**  
(Exact Name of Registrant as Specified in its Charter)

**Table 1—Newly Registered and Carry Forward Securities**

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial effective date	Filing Fee Previously Paid In Connection with Unsold Securities to be Carried Forward
<b>Newly Registered Securities</b>												
Fees to Be Paid	Equity	Common Stock, no par value per share	Other	8,482,732(1)	\$104.74(2)	\$888,481,350(2)	\$0.0000927	\$82,362.23				
Fees Previously Paid	—	—	—	—	—	—		—				
<b>Carry Forward Securities</b>												
Carry Forward Securities	—	—	—	—		—			—	—	—	—
	Total Offering Amounts					\$888,481,350(2)	—	\$82,362.23				
	Total Fees Previously Paid							—				
	Total Fee Offsets							—				
	Net Fee Due							\$82,362.23				

- (1) The shares of common stock will be offered for resale by the selling stockholders. Pursuant to Rule 416 under the Securities Act of 1933, as amended (the “Securities Act”), this registration statement also relates to an indeterminate number of additional shares of common stock to be issued as a result of stock splits, stock dividends or similar transactions.
- (2) Estimated solely for the purpose of calculating the registration fee required by Section 6(b) of the Securities Act and computed pursuant to Rule 457(c) under the Securities Act based on \$104.74, the average of the high and low price per share of the common stock, as reported on the Nasdaq Global Select Market on August 22, 2022.