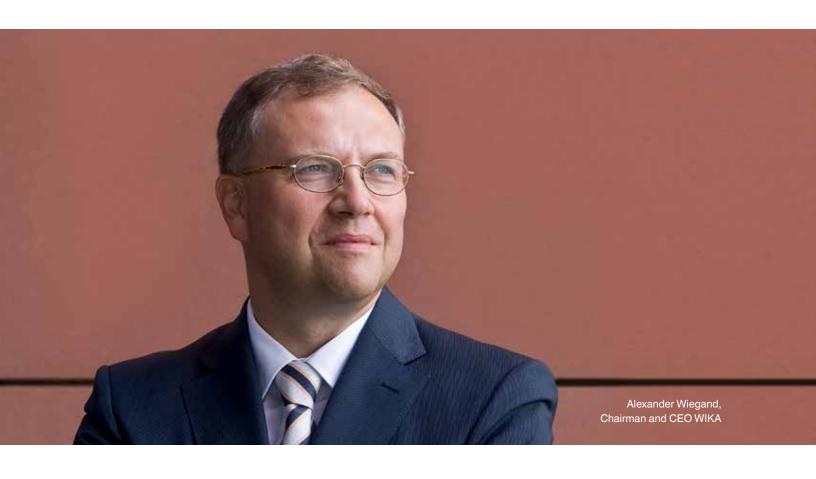
# Measurement solutions for Semiconductor, Solar, Light







# **About us**

As a family-run business acting globally, with over 9,300 highly qualified employees, the WIKA group of companies is a worldwide leader in pressure and temperature measurement. The company also sets the standard in the measurement of level and flow, and in calibration technology.

Founded in 1946, WIKA is today a strong and reliable partner for all the requirements of industrial measurement technology, thanks to a broad portfolio of high-precision instruments and comprehensive services.

With manufacturing locations around the globe, WIKA ensures flexibility and the highest delivery performance. Every year, over 50 million quality products, both standard and customer-specific solutions, are delivered in batches of 1 to over 10,000 units.

With numerous wholly owned subsidiaries and partners, WIKA competently and reliably supports its customers worldwide. Our experienced engineers and sales experts are your competent and dependable contacts locally.

# Content

WIKA know-how	
Design and materials	04
Testing, Packaging and Preservation	05
Certificates and approvals	06
Process gas management	
Gauges and switches	08
Diaphragm gauges	09
Ultra High Purity pressure transducers	10
Displays and Scales	11

Facilities support equipment	
Exhaust and abatement monitoring	12
Installation and testing	13
Process cooling water	14
CDA & Pneumatics & General purity gas sticks	15
WIKA worldwide	16

# WIKA – your partner for Semiconductor, Solar and Light Emitting Technologies

WIKA's UHP gauge and transducer product lines offer customers in the semiconductor, photovoltaic and flat panel display industries a comprehensive portfolio of pressure measurement solutions for gas delivery systems of the highest purity requirements.

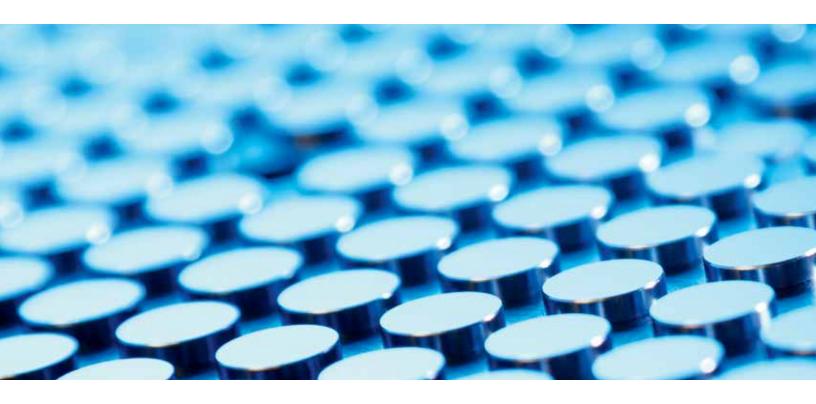
WIKA products are utilized in applications supporting gas tank farms, specialty gas cylinders, point of use panels to chip production tool chambers. With water-tight integrity to IP67 and NEMA4, products can be used in various application scenarios.

In keeping with the industry's most critical purity requirements, WIKA's UHP products are manufactured in certified clean room environments and are cleaned and packaged to SEMI standards – delivered ready for service in certified clean work floor areas.

A team of development engineers provide customized designs to meet customer-specific applications and requirements.

Comprehensive quality control and engineering efforts ensure that every WIKA instrument is built to last.

# **Design and materials**



WIKA's High Purity and Ultra High Purity products are designed to the rigorous standards and recommendations relevant to the semiconductor market and its governing agencies. UHP Bourdon tube pressure gauges have electro-polished internal surfaces and are the standard gauge of gas distribution systems installed in semiconductor FABs.

The Bourdon tube UHP gauge series is complemented by a diaphragm-based UHP gauge offering the smallest possible dead space and shortest purge cycle times.

WIKA'S UHP pressure transducers are electronic instruments of the smallest footprint meeting the most compact design of gas cabinets or valve manifold panels for installation in continuously shrinking space requirements found in modern chip FABs. A patented design provides the semiconductor industry with the only true vacuum-referenced, non-capacitance based UHP pressure transducer in the market serving advanced pressure measurement requirements for gas distribution and point of use on chip tools based on WIKA's proven monolithic thin-film pressure sensor technology.





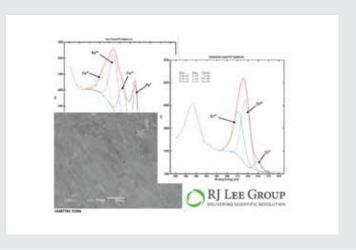


# **Testing, Packaging** and **Preservation**



In order to comply with the High Purity and Ultra High Purity (UHP) requirements of the semiconductor industry, WIKA UHP and HP products are cleaned, packaged and preserved in accordance with SEMI specifications. All UHP products are 100% helium leak tested to 1 x 10-9 scc/sec (inboard) in an ISO Class 6 cleanroom or better.

Ensuring continued SEMI conforming quality of UHP products and manufacturing processes, WIKA assigns periodic analytical assessments carried out by RJ Lee Group, Inc. using analytical methods corresponding to SEMI F72 and SEMATECH 91060573B (AES), SEMATECH 90120403B (XPS) and SEMA-TECH 90120401B and SEMI F73 (SEM).



# **Certificates and approvals**



























Given the increasing demands in terms of quality and product safety, WIKA offers a wide range of approvals and certificates to best meet customer expectations and regulatory compliances. For non-incendiary applications, WIKA offers a host of US, European and international approvals.





# Gauges and switches

Ultra High Purity Bourdon Tube Gauges

230.15, 230.25



The 230.15 is the right choice for specialty gas, Ultra High Purity, PV and SEMI applications in gas distribution systems using face-seal connections. The 230.25 is best suited for applications that insist on VIM/VAR wetted parts and face-seal connections. Both product types have electropolished media-wetted stainless steel surfaces, as well as electropolished stainless steel cases.

Nominal size: 2" (53 mm), 1½" (40 mm)

Scale range: Vacuum / compound and positive pressure ranges

Accuracy class: 2": Grade A per ASME B40.1,

11/2": Grade B per ASME B40.1

(other accuracy classes upon request)

Data sheet: PM 02.20

Indicating UHP Pressure Switch Gauge

230.15, 230.25 with 851.3(3)



WIKA also offers a dual switch option for monitoring two pressure levels (e.g. upper and lower). This product addresses applications such as dual containment tubing installation.

The 230.15 and 230.25 series are complemented by a Reed-switch option allowing for monitoring pressure levels by electrical alert output. The WIKA switch option offers normally open (NO) and normally close (NC) functionality in one single instrument.

Nominal size: 2" (53 mm), 1½" (40 mm)

Scale range: Vacuum / compound and positive pressure ranges

Accuracy class: 2": Grade A per ASME B40.1,

11/2": Grade B per ASME B40.1

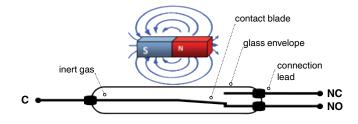
(other accuracy classes upon request)

Data sheet: PV 22.05

# **Functional diagram**

Reed contact SPDT (changeover) not actuated

C = common NC = normally closed NO = normally open



**High Purity Bourdon Tube Gauges** 

130.15



The 130.15 series is designed for specialty gas installations where High Purity gas distribution systems are assembled using NPT connections.

Nominal size: 2" (53 mm), 1½" (40 mm)

Scale range: Vacuum / compound and positive pressure ranges

Accuracy class: 2": Grade A per ASME B40.1,

11/2": Grade B per ASME B40.1

(other accuracy classes upon request)

Data sheet: PM 02.19

# Diaphragm gauges

Diaphragm gauges are the perfect mechanical pressure gauge for low pressure, point-of-use applications. The gauge's design reduces particle generation and decreases dry-down times.

UHP Flow-Through-Gauge

432.25



Sensitive installations, such as hook-up in chip fabs, require a specific focus on particle prevention. Using a flow-through gauge in a GDS eliminates any dead-space and shortens purge cycles after installation or maintenance.

Nominal size: 2" (53 mm), 1½" (40 mm), 11/8" (28 mm)

Scale range: -1 ... 4 bar / -30 inHg ... 60 psi,
-1 ... 9 bar / -30 inHg ... 130 psi

Accuracy class: Grade B per ASME B40.1,

(other accuracy classes upon request)

Data sheet: PM 04.12

**UHP Mini Diaphragm Gauge** 

432.15 1.3"



432.10 1"



Gas distribution systems on chip production tools combine the need for excellent Ultra High Purity class, as well as smallest space requirement. These applications are addressed by the mini diaphragm gauges (MDG)

Nominal size: 1.3" (33 mm)

Scale range: -1 ... 4 bar / -30 inHg ... 60 psi,

-1 ... 9 bar / -30 inHg ... 130 psi,

-30 inHg ... 160 psi,

0 ... 160 psi

Accuracy class: Grade B per ASME B40.1,

(other accuracy classes upon request)

Data sheet: PM 04.18

Nominal size: 1" (25.4 mm)



# **Ultra High Purity** pressure transducers

# True vacuum reference

# WU-20, WU-25, **WU-26**



The WU-2 series transducer combines state-of-the-art digital transducer concepts with analog-like output signals to provide the safest and most accurate pressure measurements necessary for today's demanding market requirements.

Accuracy class: ≤ 0.15 % RSS (≤ 0.3 % FS per IEC 61298-2)

Measuring range: 15 ... 5,000 psi / 1 ... 360 bar

(further pressure units available),

Vacuum, compound, absolute, gauge

4 ... 20 mA, DC 0 ... 5 V, DC 0 ... 10 V, Special feature:

> Vacuum reference, NEMA 4, IP67,

Manual zero point setting

Data sheet: PE 87.07









# Compact

# **WUC-10, WUC-15, WUC-16**



The most compact design of the WUC series transducer meets the smallest product footprint requirements. The space-saving design makes it the perfect fit for new, as well as retrofit projects.

Accuracy class: ≤ 0.20 % FS RSS (≤ 0.5 % FS per IEC 61298-2)

Measuring range: 15 ... 5,000 psi / 1 ... 360 bar

> (further pressure units available), Vacuum, compound, absolute, gauge

Special feature: 4 ... 20 mA, DC 0 ... 5 V, DC 0 ... 10 V,

> Vacuum reference. NEMA 4, IP67,

Manual zero point setting

PE 87.06 Data sheet:









# Integrated display & switches

# WUD-20, WUD-25, **WUD-26**



Optional alarm contacts are available for programming up to two user-defined switch points The WUD-2X incorporates a local, rotatable, and programmable display with the state-of-the-art electronics of the WU-2x. The WUD-2x transducer with integrated display provides a local reading of the process pressure measurement as well as the associated analogue output signal (current or voltage) from the transducer.

Nominal size: ≤ 0.20 % FS RSS (≤ 0.5 % FS per IEC 61298-2)

15 ... 5,000 psi / 1 ... 360 bar Scale range:

> (further pressure units available), Vacuum, compound, absolute, gauge

4 ... 20 mA, DC 0 ... 5 V, DC 0 ... 10 V, Accuracy class:

> Vacuum reference, NEMA 4, IP67,

Manual zero point setting,

Optional 2 switching outputs (NPN)

Data sheet: PE 87.08





# **Displays and Scales**

# Remote digital display

# **DI30**



Input: Standard signals

Alarm output: 2 relays

Special feature: Transmitter power supply,

Wall mounting (optional)

Power supply: AC 230 V oder AC 115 V

Data sheet: AC 80.05

**Gas Cylinder Scale** Specialty gas filling level control

# GCS-1



Cylinder Scales are engineered and designed for liquid delivery sources used in both indoor and outdoor hazardous and non-hazardous applications

Nominal size: ≤ 0.1 % FS

0 ... 60 lbs (0 ... 27.22 kg), Measuring range:

> 0 ... 100 lbs (0 ... 45.36 kg), 0 ... 300 lbs (0 ... 136.08 kg)

Special feature:  $4 \dots 20$  mA, DC 0  $\dots 5$  V, DC 0  $\dots 10$  V,

IP65

PE 87.19 Data sheet:







For wet chemistry supply in semiconductor production systems, please refer to our specialised products Hydra-Dry, Hydra-Gauge and Hydra-Sensor



# **Exhaust and** abatement monitoring

# Differential pressure sensor

# **A2G-50**



Output signal: 0 ... 10 V (3-wire),

4 ... 20 mA (3-wire)

100 ... 2,500 Pa Measuring range:

Accuracy class:  $\pm 1.5 \% + 1$  Pa of reading

Ingress protection: IP54

Data sheet: PE 88.02

EHE

# Pressure sensor for general industrial applications

# **A-10**



Non-linearity (± % of span): ≤ 0.25 or 0.5 BFSL

Measuring range:

0 ... 0.05 to 0 ... 1,000 bar, 0 ... 0.1 to 0 ... 25 bar abs., -0.025 ... +0.025 to -1 ... +24 bar

Compact design,

Special feature:

Free test certificate

Data sheet:

PE 81.60

(A) [H[ (II)

# Superior pressure sensor for general industrial applications

# **S-20**



Non-linearity (± % of span): ≤ 0.125 or 0.5 BFSL

Measuring range:

0 ... 0.4 to 0 ... 1,600 bar, 0 ... 0.4 to 0 ... 40 bar abs.,

-1 ... 0 to -1 ... +59 bar

Special feature:

Extreme operating conditions, Customer-specific variants,

Free test certificate

Data sheet:

PE 81.61





# Installation and testing

**UHP High Accuracy Test Gauges** 

332.54-UHP



The 332.54-UHP is a high-accuracy "Inspector's Test Gauge" used to qualify equipment installations serving UHP upstream source and point-of-use applications within semiconductor fabrication facilities.

Nominal size: 4" (100 mm)

Scale range: -1 ... 1 bar / -30 inHg ... 15 psi,

-1 ... 360 bar / -30 inHg ... 5,000 psi

■ Accuracy class: -30 inHg ... 600 psi: ±0.25 % FS (ASME B40.1 Grade 3A),

600 ... 2,000 psi:  $\pm 0.5$  % of span (ASME B40.1 Grade 2A), 2,000 ... 5,000 psi:  $\pm 0.25$  % of span (ASME B40.1 Grade 3A)

Data sheet: 332.54-UHP

# Pneumatic hand pump

# CPP7-H



Pressure range: -0,8 ... +7 bar

-11,6 ... 101,5 psi

Medium: Ambient air

Special feature: Pressure and vacuum generation switchable,

Low weight,

Compact dimensions

Data sheet: CT 91.02



# **Process cooling water**

# **Bimetal thermomanometer**

100.02.063



Nominal size: 63, 80 mm

Scale range: Pressure: 0 ... 1 to 0 ... 16 bar,

Temperature: 0 ... 100 to 0 ... 150 °C

Accuracy class: Pressure: 2.5 (EN 837-1),

Temperature: 2.5 °C

Data sheet: PM 01.23

# Process cooling water gauge

232.53



Nominal size: 2" (53 mm), 2½" (63 mm), 4" (100 mm)

Scale range: -1 ... 16 bar / -30 inHg ... 200 psi,

 $0 \dots 1,000 \, \text{bar} \, / \, 0 \dots 15,000 \, \text{psi}$ 

Accuracy class: 2" & 2½": Grade A per ASME B40.1,

4": Grade 1A per ASME B40.1

Data sheet: 23X.53



# CDA & pneumatics & General purity gas sticks

# Welding gauge

# 111.11



- Nominal size: 1½" (40 mm), 2" (50 mm), 2½" (63 mm)
- Scale range: 0 ... 0.6 to 0 ... 400 bar
- Accuracy class: 2.5
- Data sheet: PM 01.03



# Pressure gauge, stainless steel

# 131.11



- Nominal size: 1½" (40 mm), 2" (50 mm), 2½" (63 mm)
- Scale range: NS 40 and 50: 0 ... 1 to 0... 600 bar,
  - NS 63: 0 ... 1 to 0 ... 1,000 bar
- Accuracy class: 2.5
- Data sheet: PM 01.05

EHE ©

# Utility Gauge, lower mount and center back mount

111.10, 111.12



- Nominal size: 1½" (40 mm), 2" (50 mm), 2½" (63 mm), 4" (100 mm)
- Scale range: 0 ... 400 bar
- Accuracy class: 2.5
- Data sheet: PM 01.01



# **WIKA** worldwide

Austria WIKA Messgerätevertrieb Ursula Wiegand GmbH & Co. KG Perfektastr. 73 1230 Vienna Tel. +43 1 8691631 Fax: +43 1 8691634

# www.wika.at Belarus

WIKA Belrus UI. Zaharova 50B, Office 3H 220088 Minsk +375 17 224 41 64 Fax: +375 17 263 57 11

info@wika.by www.wika.by

WIKA Benelux Industrial estate De Berk Newtonwea 12 6101 WX Echt Tel. +31 475 535500 Fax: +31 475 535446 www.wika.nl

### Bulgaria

WIKA Bulgaria EOOD Akad.lvan Geshov Blvd. 2E Business Center Serdika, office 3/104 1330 Sofia Tel. +359 2 82138-10 Fax: +359 2 82138-13

info@wika.bg www.wika.bg

## Croatia

WIKA Croatia d.o.o. Hrastovicka 19 10250 Zagreb-Lucko Tel. +385 1 6531-034 Fax: +385 1 6531-357 info@wika.hr www.wika.hr

# Finland

WIKA Finland Ov 00210 Helsinki +358 9 682492-0 +358 9 682492-70 info@wika fi

France WIKA Instruments s.a.r.l. Immeuble Le Trident 38 avenue du Gros Chêne 95220 Herblay Tel. +33 1 787049-46 Fax: +33 1 787049-59 info@wika.fr

WIKA Alexander Wiegand SE & Co. KG Alexander-Wiegand-Str. 30 63911 Klingenberg Tel. +49 9372 132-0 Fax: +49 9372 132-406 info@wika.de www.wika.de

Italy WIKA Italia S.r.l. & C. S.a.s. Via G. Marconi 8 20020 Arese (Milano) Tel. +39 02 93861-1 Fax: +39 02 93861-74

WIKA Polska spółka z ograniczoną odpowiedzialnością sp. k. UI. Legska 29/35 87-800 Wloclawek +48 54 230110-0 +48 54 230110-1 info@wikapolska.pl www.wikapolska.pl

## Romania

WIKA Instruments Romania S.R.L. 050897 Bucuresti Calea Rahovei Nr. 266-268 Corp 61, Etaj 1 Tel. +40 21 4048327 Fax: +40 21 4563137 info@wika.ro www.wika.ro

### Russia

AO WIKA MERA Wjatskaya Str. 27, Building 17 Office 205/206 Tel. +7 495-648018-0 Fax: +7 495-648018-1 info@wika.ru www.wika.ru

### Serbia

WIKA Merna Tehnika d.o.o. Sime Solaie 15 11060 Beograd Tel. +381 11 2763722 Fax: +381 11 753674 info@wika.rs www.wika.rs

## Spain

Instrumentos WIKA S A I I C/Josep Carner, 11-17 08205 Sabadell Barcelona +34 933 9386-30 +34 933 9386-66 info@wika.es

## Switzerland MANOMETER AG

Industriestrasse 11 6285 Hitzkirch +41 41 91972-72 Fax: +41 41 91972-73 info@manometer.ch www.manometer.ch

Turkey WIKA Instruments Istanbul Basinc ve Sicaklik Ölcme Cihazlari Ith. Ihr. ve Tic. Ltd. Sti. Bayraktar Bulvari No. 17 34775 Yukari Dudullu - Istanbul Tel. +90 216 41590-66 Fax: +90 216 41590-97 info@wika.com.tr www.wika.com.tr

# Ukraine

TOV WIKA Prylad M. Raskovoy Str. 11, A PO 200 02660 Kyiv Tel. +38 044 4968380 Fax: +38 044 4968380 info@wika.ua www wika na

# **United Kingdom**

WIKA Instruments Ltd Merstham, Redhill RH13LG Tel. +44 1737 644-008 +44 1737 644-403 info@wika.co.uk

## North America

WIKA Instruments Ltd. Head Office 3103 Parsons Road Edmonton, Alberta, T6N 1C8 Tel. +1 780 4637035 Fax: +1 780 4620017 info@wika.ca www.wika.ca

## USA

WIKA Instrument, LP 1000 Wiegand Boulevard Lawrenceville, GA 30043 Fax: +1 770 3385118 info@wika.com www.wika.com

Gayesco-WIKA USA, LP 229 Beltway Green Boulevard Pasadena, TX 77503 Tel. +1 713 47500-22 Fax: +1 713 47500-11 info@wikahouston.com

Mensor Corporation 201 Barnes Drive San Marcos, TX 78666 Tel. +1 512 396-4200 Fax: +1 512 396-1820 sales@mensor.com www.mensor.com

## Latin America

# WIKA Argentina S.A.

Gral. Lavalle 3568 (B1603AUH) Villa Martelli Buenos Aires Tel. +54 11 47301800 Fax: +54 11 47610050 info@wika.com.ar www.wika.com.ar

WIKA do Brasil Ind. e Com. Ltda. Av. Úrsula Wiegand, 03 18560-000 Iperó - SP +55 15 3459-9700 +55 15 3266-1196 vendas@wika.com.br www.wika.com.br

Chile WIKA Chile S.p.A. Av. Coronel Pereira 72 Oficina 101 Las Condes - Santiago de Chile Tel. +56 2 2209-2195 info@wika.cl www.wika.cl

# Colombia

Instrumentos WIKA Colombia S.A.S. Avenida Carrera 63 # 98 - 25 Bogotá – Colombia Tel. +57 1 624 0564 info@wika.co www.wika.co

Instrumentos WIKA Mexico S.A. de C.V. Viena 20 Ofna 301 Col. Juarez, Del. Cuauthemoc 06600 Mexico D.F. Tel. +52 55 50205300 Fax: +52 55 50205300 ventas@wika.com www.wika.mx

# Azerbaijan WIKA Azerbaijan LLC Caspian Business Center 9th floor 40 J.Jabbarli str. AZ1065 Baku

Tel. +994 12 49704-61 Fax: +994 12 49704-62 info@wika.az www.wika.az

### China

WIKA Instrumentation Suzhou Co., Ltd. 81, Ta Yuan Road, SND Suzhou 215011 Tel. +86 512 6878 8000 Fax: +86 512 6809 2321 info@wika.cn www.wika.com.cn

WIKA Instruments India Pvt. Ltd. Village Kesnand, Wagholi Pune - 412 207 Tel. +91 20 66293-200 Fax: +91 20 66293-325 sales@wika.co.in

WIKA Instrumentation Pars Kish (KFZ) Ltd. Apt. 307, 3rd Floor 8-12 Vanak St., Vanak Sq., Tehran Tel. +98 21 88206-596 Fax: +98 21 88206-623 info@wika.ir www.wika.ir

WIKA Japan K. K. MG Shibaura Bldg. 6F 1-8-4, Shibaura, Minato-ku Tokyo 105-0023 Tel. +81 3 5439-6673 Fax: +81 3 5439-6674 info@wika.co.jp www.wika.co.ip

# Kazakhstan

TOO WIKA Kazakhstan Microdistrict 1, 50/2 050036 Almaty Tel. +7 727 225-94-44 Fax: +7 727 225-97-77 info@wika kz

Korea WIKA Korea Ltd. 39 Gajangsaneopseo-ro Osan-si Gyeonggi-do 447-210 Tel. +82 2 86905-05 Fax: +82 2 86905-25 info@wika.co.kr www.wika.co.kr

# Malavsia

WIKA Instrumentation (M) Sdn. Bhd. No. 23, Jalan Jurukur U1/19 Hicom Glenmarie Industrial Park 40150 Shah Alam, Selangor +60 3 5590 6666 info@wika.my

# **Philippines**

WIKA Instruments Philippines Inc. Ground Floor, Suite A Rose Industries Building #11 Pioneer St., Pasig City Philippines 1600 Tel. +63 2 234-1270 Fax: +63 2 654-9662 info@wika.ph www.wika.ph

Singapore WIKA Instrumentation Pte. Ltd. 13 Kian Teck Crescent 628878 Singapore Tel. +65 6844 5506 Fax: +65 6844 5507 info@wika.sq www.wika.sg

WIKA Instrumentation Taiwan Ltd. Min-Tsu Road, Pinjen 32451 Taoyuan Tel. +886 3 420 6052 Fax: +886 3 490 0080 info@wika.tw

## Thailand

WIKA Instrumentation Corporation (Thailand) Co., Ltd. 850/7 Ladkrabang Road, Ladkrabang Bangkok 10520 Tel. +66 2 32668-73 Fax: +66 2 32668-74 info@wika.co.th www.wika.co.th

## Africa / Middle East

Egypt WIKA Near East Ltd. Villa No. 6. Mohamed Fahmy Elmohdar St. - of Eltayaran St. 1st District - Nasr City - Cairo Tel. +20 2 240 13130 Fax: +20 2 240 13113 info@wika.com.eg www.wika.com.eg

Namibia WIKA Instruments Namibia Pty Ltd. P.O. Box 31263 Pionierspark Windhoek Tel. +26 4 61238811 Fax: +26 4 61233403 info@wika.com.na www.wika.com.na

# South Africa

WIKA Instruments Ptv. Ltd. Chilvers Street, Denve Johannesburg, 2094 Tel. +27 11 62100-00 Fax: +27 11 62100-59 sales@wika.co.za

# United Arab Emirates WIKA Middle East FZE

Warehouse No. BB08.IB02 Jebel Ali, Dubai Tel. +971 4 883-9090 Fax: +971 4 883-9198 info@wika ae www.wika.ae

# Australia

# Australia

WIKA Australia Pty. Ltd. Unit K, 10-16 South Street Rydalmere, NSW 2116 +61 2 88455222 +61 2 96844767 sales@wika.com.au www.wika.com.au

# New Zealand

WIKA Instruments Limited Unit 7 / 49 Sainsbury Road St Lukes - Auckland 1025 Tel. +64 9 8479020 Fax: +64 9 8465964 info@wika.co.nz www.wika.co.nz



Alexander-Wiegand-Straße 30 · 63911 Klingenberg · Germany Tel. +49 9372 132-0 · Fax +49 9372 132-406 info@wika.de · www.wika.de



