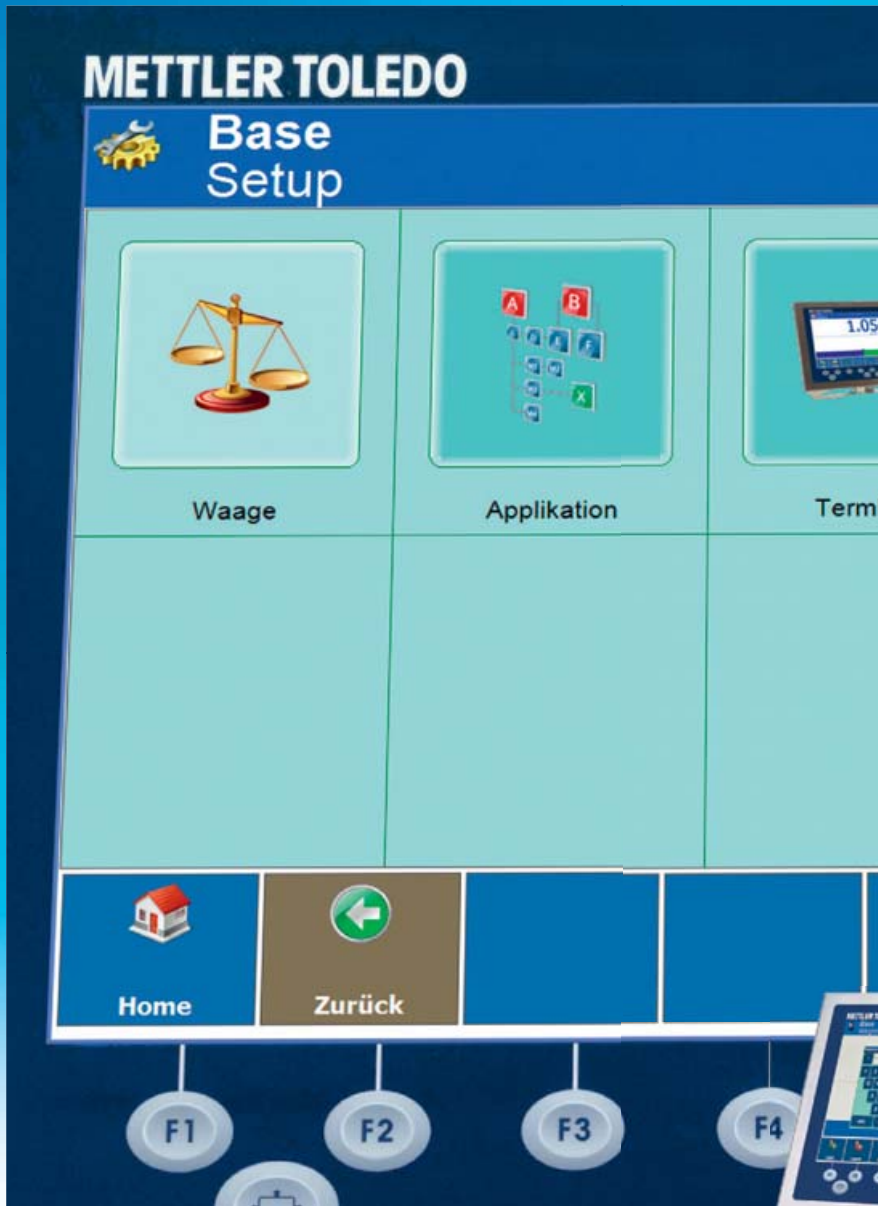


PC Weighing Terminal



Weighing PC IND890

Ergonomic Weighing

Increased Efficiency

Greatest Possible Flexibility

Intuitive Operation



A Happy Combination:
The «Personal Weighing Computer»

METTLER TOLEDO

Weighing PC with «Mouse-free» Zone: Clear – Efficient – Universal

The answer's easy: "touch it!" With the standard touchscreen, the operation of the IND890 is simple and reliable even in the harshest environments. The application terminal also sets new standards in highly complex weighing processes. It provides the perfect connection between PC and scale with powerful and reliable industrial quality – the elegant industrial weighing solution for all sectors.



The IND890 is designed to be ergonomic and extremely user-friendly. It offers the following advantages:

- Uncomplicated, fast operation:
 - Touchscreen
 - Self-explanatory and visually appealing icons
 - Optimized, simple operator guidance
 - Only relevant information is displayed
- Flexible use:
 - User-dependent, intuitive software structure
 - Customer-specific adaptations through free programmability
 - Freely configurable softkeys
 - Country and language-specific screen layouts
- Perfect readability:
 - Especially large display option for weight values
 - Simultaneous display of 4 scales plus sum scale possible
 - Different status messages can be viewed concurrently

One for All!

The IND890 can be used everywhere. In modern industrial systems, instruments are designed in such a way that they optimally fulfill their intended purpose. If processes change, weighing equipment must also be adapted. The IND890 offers the necessary flexibility in weighing station arrangement in just one version. Combined with a range of stands and fastening elements, the IND890 can be mounted on a table or on the wall, can stand freely on the floor or can be installed in a switch cabinet.



► www.mt.com/IND890

► www.mt.com/PC-based-Terminals



A New World of Weighing:

- Different user profiles with user dependent softkey layout
- Up to 4 scales plus sum scale are served simultaneously
- Variable adaptability through settings for display, region (time zone), user, language, softkeys
- Wide range of configuration options (e.g. interfaces)
- Numerous weighing and standard functions:
 - 3 different types of DeltaTrac®
 - Tare Deduction
 - Setpoints
 - Identcodes
 - Dynamic Weighing (animal weighing)
 - Sum scale
 - Second unit
 - MinWeigh
 - Alibi memory
 - Variable digital In- and Outputs (I/O's)
 - 6 Identcode keys
 - FTP server and client
 - eMail alerts
 - Remote control (FTP and VNC)
- Versatile options for evaluating the saved data (alibi file, tare, messages, target values, interfaces)
- Maintenance functions with diagnosis routines
- Simple software updates

Sharper, More Attractive, Better!

The large displays using widescreen technology with 10", 15" or 19" screen diagonals and a resolution of 1024 x 600 up to 1280 x 800 and 1366 x 768 pixels ensure better and easier readability from virtually any viewing angle.

100% Hygiene in Harsh Conditions

The IND890 stainless steel terminal with its design which is free of dirty edges was developed for use in even the harshest of industrial environments. With the all-round IP66 and IP69k protection, it can be cleaned conveniently and in a time-saving manner using a high-pressure cleaner.

The cleanability is also supported by:

- Easy to disconnect cable connections: quick and easy separation of connections
- Avoidance of dirty edges: the surfaces and screw connections permit virtually no contamination
- The stainless steel surface has a roughness of $Ra < 0.8 \mu m$
- Power supply unit integrated in housing
- Resistant to most cleaning agents and disinfectants

IP66 IP69k



Flexible and Ergonomic – Quick and Easy!

The IND890-15 and the IND890-19 (the large versions of the IND890) consists of a slimline flat screen and a separate Elo-Box¹. Both components are connected with a single cable. This ensures extremely flexible and ergonomic workplace layout. Furthermore, the convenient IND890-10 compact version offers an all-in-one solution: small, compact and supplies real-time data thanks to Windows CE.



IND890-19-HMI

IND890-Elo-Box2



IND890-15-HMI

IND890-Elo-Box

A Completely New Weighing PC

The Elo-Box¹ contains the entire weighing and PC technology: the PC and the weighing technology thus form a single unit, which, with its rapid internal communication, performs impressively even in challenging applications.

The IND890-HMI (Human Machine Interface) can generally be smoothly adapted to a wide variety of conditions. This ensures individual workplace arrangement as well as convenient operation and reliable reading: quick and easy!

The Right Version for Every Application

Whether as a real-time-capable compact terminal with Windows CE, or as a high-performance application with a large display – the IND890 product family has different versions with different configuration levels:

- IND890-10: Compact version with 10" touchscreen display and Windows CE
- IND890-15-HMI and IND890-19-HMI: Human Machine Interface with 15.4" or 18.5" touchscreen display
- Additional function keys for IND890-15-HMI
- IND890 ELO box: Electronics unit for connection with the IND890-15-HMI or IND890-19-HMI



IND890-10 Compact version

¹ ELO box: The electronics box, or ELO box for short, contains the entire PC hardware including interfaces.



Operator Guidance

- Intuitive work with the IND890: working with the IND890 is very easy thanks to the self-explanatory icons, which are also supported by text instructions
- Settings can be made quickly and effectively: no matter whether you have to adapt data from the connected scales or the interfaces used. Everything can be found in the respective submenu with a few touches of the screen
- Every user is shown only the elements required for the task in hand
- DeltaTrac® uses the bar color to indicate quickly and easily whether or not the target weight has yet been reached, or exceeded. This simplifies and accelerates processes.

► www.mt.com/IND890

Key information at a glance

Depending on the configuration, all weighing data and weight values from up to 4 scales plus the sum scale are displayed simultaneously in the large, clear, certified weight value window. Here, the weight data can be displayed in parallel with other application data. This means all information about all data is available at a glance. The scales can be quickly activated and switched via the softkeys and smartkeys. Values are input via the country-specific touchscreen keyboard.



Determining the Minimum Weight – MinWeigh®

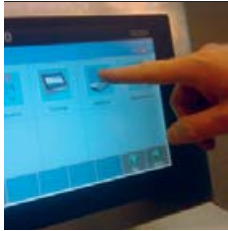
The advantageous MinWeigh® technology ensures reliability. Because the accuracy of a measuring device is quantified by the measurement uncertainty. Every weighing system has a minimum weight at which the measurement uncertainty does not exceed the stipulated weighing tolerance. With the MinWeigh® technology, the minimum weight is determined and certified, in order to ensure that the necessary weighing tolerances are complied with. If the weight falls below the minimum weight, this can be indicated via an icon or a weight value which changes color.

► www.mt.com/minweigh



Healthy outlook ...

- ... clear and unmistakable:
- Advantageous display options
 - Progressive design



Touch it ...

- ... direct input:
- Touchscreens in every IND890 as standard



Naturally intuitive ...

- ... credible, simple and new:
- Unique software design – self-explanatory icons combined with an attractive, logical software structure



Impressively ...

- ... clear:
- Optimized navigation and input for operation via touchscreen
 - Menu path display for improved navigation



A window to the world ...

- Windows CE in IND890-10
- Windows 7 or XP in IND890-15 and IND890-19 with ELO box

Pin-sharp ...

- ... outstanding display even at an unfavorable viewing angle
- Displays with 1A resolution
 - 1024 x 600 with IND890-10
 - 1280 x 800 with IND890-15
 - 1366 x 768 with IND890-19





Hygienic ...

... easy to clean:

- Protection rating IP69k: Cleaning with high-pressure cleaner
- Surface roughness of RA < 0.8 µm
- Avoidance of dirty edges thanks to easy-to-clean design



Whatever you want ...

... Individually adaptable thanks to the free programmability of the IND890.



How much can it do?

Numerous applications possible:

- Up to 4 scales at the same time
- Certifiable
- Sum scale
- Analog or digital



Best connections ...

... easy connection and disconnection of cables thanks to simple plug connections – IP protection remains.



Top condition ...

... top performance:
Ideal performance combination of processor, RAM and mass storage.



Any location ...

... is suitable for use:
VESA² Mount 100 x 100 for using standard mounting systems.



Universal ...

... with VGA interface as standard:

- Connection of a standard PC to the HMI box
- Connection of a standard monitor to the ELO box¹

¹ ELO box: Electronics box

² VESA: Video Electronics Standards Association

Innovative – Simple – Intuitive: Modern Weight Data Recording

The IND890 weighing software has been specially developed for use on a touchscreen. With its icons, it offers a completely new type of weight data recording, not previously available in weighing terminals.



InSite™ – the Global, PC-based Configuration Tool

Configuring the IND890 could not be simpler: either connected in online mode or for preparation as off-line configuration. This has proven to be particularly time-saving if the configuration also has to be transferred to further IND890 terminals. The functions for the composition and archiving as well as the saving and retrieval of documents are also particularly useful.

► www.mt.com/insite

Today's Sophisticated Solutions – Simple Implementation

If a standard application solution is no longer appropriate, special applications can also be implemented. The integrated Microsoft VisualStudio.Net® technology offers software developers an ideal tool for fast and efficient implementation of customized solutions.

Irrespective of the development environment, there is simple drag-and-drop access to a wide range of system and weighing functions.

Globally Connected

The use of the Windows operating systems allows remote configuration and maintenance of your application on the IND890. Software updates and e-mail services take place via the internet, VNC¹ or InSite®.



Real-time Weight Values for Time-critical Control Processes

The IND890 can autonomously control weight-dependent processes. A connected dosing system also shuts down correctly if the operating system is executing a different task at this precise moment. This is particularly advantageous in fast or automated processes, where reliability is the top priority. In some cases, this function may mean that it is not necessary to have the connection to a PLC².

IND890-Base – Standard Application Included

The multilingual IND890-Base software is a universally applicable weighing and service program for basic weighing tasks. It is a comprehensive weighing solution for customers, but also provides support for calibration officers and METTLER TOLEDO service technicians.

¹ VNC: Virtual Network Computing

² PLC: Programmable logic controller

A New Standard: IND890 and FreeWeigh.Net or FormWeigh.Net

The use of FreeWeigh.Net for statistical quality control and FormWeigh.Net for professional formulation processing has proven to be a particularly successful combination. These profitable tools can be used with the IND890 directly in production.

FreeWeigh.Net®

The quality of industrial filling processes ranges from stable and easy to control through to highly dispersive and difficult to control.

Irrespective of the requirements for the filling process, the use of FreeWeigh.Net enables systematic monitoring and control of filling processes, ensures conformity and helps control losses arising from overfilling.

As the fill quantities of liquid, pasty, powdery or solid products are checked by taking random samples immediately after filling, precise system settings are ensured – either

manually by operator guidance or by a regulation intervention from a dynamic checkweigher. Unnecessary material losses are thus avoided and statutory fill quantities and net weight specifications are complied with. The software conforms to internal as well as external, international standards such as ISO and GMP. In combination with the IND890 for immediate data recording, analysis and process control, FreeWeigh.Net supplies the necessary statistical data for assessing, documenting and controlling the cost-effectiveness of a filling process.

► www.mt.com/freeweighnet



FormWeigh.Net®

The FormWeigh.Net® dosing and formulation system simplifies formulation processes. The intuitive operator guidance throughout the whole formulation process ensures uniform batch quality. At the same time, material use and process speed are optimized and the amount of manual work is reduced.

Whether you are in the food, pharmaceutical, chemical, cosmetic or manufacturing industry – FormWeigh.Net® has many advantages and can bring great benefit to your company:

- Increased productivity
- Complete batch documentation
- Guaranteed consistently high product quality
- Reliability and stability of processes
- More efficient batch production



► www.mt.com/formweighnet

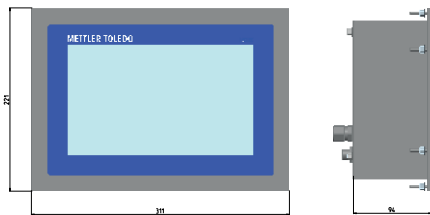
Tests and Diagnosis

The status of the IND890 terminal is analyzed using the integrated test and diagnosis functions. If necessary, direct measures for optimizing the system are taken.

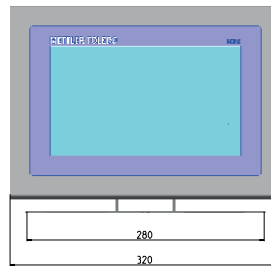
Communication with connected devices and scales can thus be tested very easily at any time, in order to avoid possible downtime, before a malfunction occurs.



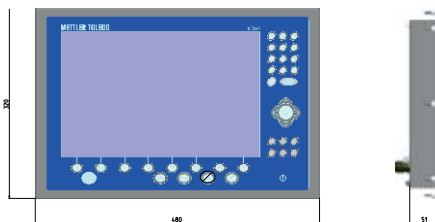
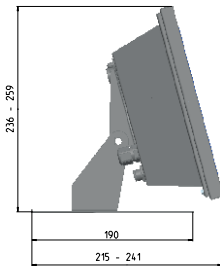
Dimensions



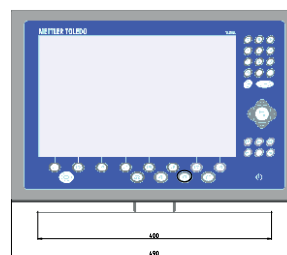
IND890-10 Panel



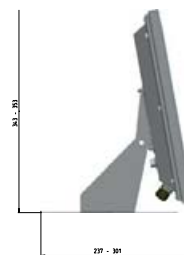
IND890-10 Desk



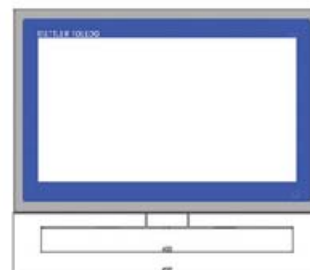
IND890-15-HMI Panel



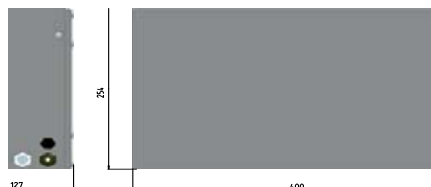
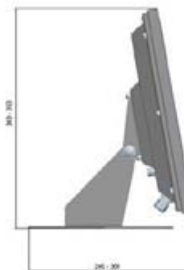
IND890-15-HMI Desk



IND890-19-HMI Panel



IND890-19-HMI Desk



IND890-Elo-Box1 and Elo-Box2

Technical Data

Housing dimensions (maximum: H x W x D)

IND890-10:	Desk: 259x320x241 mm, Panel 221 x311 x94 mm
IND890-15-HMI:	Desk: 353x490x301 mm, Panel: 320x480x51 mm
IND890-19-HMI:	Desk: 353x490x301 mm, Panel: 320x480x68 mm
IND890-Elo-Box1 + IND890-Elo-Box2:	254 x 132 x 400 mm

Operating environment

-10°C to 40°C (14°F to 104°F), at 10% to 85% relative humidity, non-condensing

Display

IND890-10	10,2" Widescreen TFT Touchscreen display, resolution 1024x600
IND890-15, IND890-19	15,4" Widescreen TFT Touchscreen display, resolution 1280x800 18.5" Widescreen TFT Touchscreen display, resolution 1366x768

Processor types

IND890-10	AMD Geode LX800 Processor
IND890-Elo-Box1	Intel Atom Processor 1.6 GHz, i3 dual quad core 2.2 GHz
IND890-Elo-Box2	Intel i7 quad core 2.1 GHz

RAM memory

256 MB for IND890-10, 1 and 2 GB for IND890-Elo-Box1 and 4 GB for IND890-Elo-Box2

Power supply unit

Wide-range power supply unit 100–240 V AC, 50/60 Hz, 250 mA with country-specific power line

Data interfaces

Ethernet (standard), RS232, RS422, RS485, USB, 4I/O, WLAN, PC-COM ports RS232 (only for Elo-Box)

Weighing interfaces

IDNet, analog, SICS

Gross dispatch weight (including packaging)

IND890-10	Desk: 5.5 kg	Panel: 4.5 kg
IND890-15-HMI	Desk: 11.4 kg	Panel: 8.5 kg
IND890-19-HMI	Desk: 11.6 kg	Panel: 8.7 kg
IND890-Elo-Box1 and Elo-Box2	6.4 kg	

Approvals

EC Conformity CE marking with declaration of conformity – admission for certification or pattern approval EC Directive 2009/23/EEC; EN 45 501; OIML R76; NTEP compliant – Electrical Safety EC Directive 2006/95/EEC; EN 61010-1, UL, CSA approved Electromagnetic compatibility EC Directive 2004/108/EEC; EN 61000-6-2, EN 61000-6-3

Order numbers

IND890-10 110/230 V	Desk: 22019982	Panel: 22019983
IND890-15-HMI 110/230 V	Desk: 22019984	Panel: 22019985
IND890-19-HMI 110/230 V	Desk: 22019993	Panel: 22019994
IND890-Elo-Box1 110/230 V	Desk: 22019986	
IND890-Elo-Box2 110/230V	Desk: 22019997	

Data interfaces

Ethernet standard	RS232: 22020258	RS422/485: 22020259 4I/O: 22023371, WLAN: 22020262 PC-Com ports RS232 (set of 3): 22020326 (only Elo-Box)
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Scale interfaces

Analog: 22020254	IDNet: 22020253
SICS-RS232: 22020255	SICS-RS422: 22020256

Lifelong Constant Performance through Precision Service

The first step is selecting the right scale. Whether the desired results can be achieved is then dependent on factors such as precise installation, set-up, calibration, maintenance, product and service, which ensure the performance, reliability and durability of the scale.

Through efficient maintenance and the adaptation of our service to your process and operating requirements, we can help you achieve accurate, reliable and comprehensible weighing results as well as the desired increase in productivity.

Service	Advantages
Installation & Set-up	<ul style="list-style-type: none">• Precise, reproducible results through correct installation• Tried and tested data exchange with peripheral devices and systems• Predetermined operating sequences improve user productivity• Integration in work and maintenance processes• Fast and efficient process start-up
Instrument qualification	<ul style="list-style-type: none">• Documented performance in line with process requirements• Regular inspections when used in production processes• Risk of infringing regulations is minimized
Calibration	<ul style="list-style-type: none">• Accuracy check over entire weighing range• Accuracy check at different points on weighing platform• Brief and compliant calibration certificate• Use of industry-specific and statutory tolerance standards• Reduction in product loss and/or overfilling• Reduction in liability risk due to products which do not comply with specifications
Preventive maintenance	<ul style="list-style-type: none">• Inspection of critical components to identify potential faults• Inspection of audit and error logs to prevent unexpected downtime• Test operation for determining weighing and application performance• Reliable operation, avoidance of unexpected costs• Increased service life and yield return of scales

Our global service organization offers the following significant advantages:

- Properly maintained devices which ensure productivity and optimize process performance.
- Problem-free compliance with industry-specific standards and regulations
- Clear and precise documentation to minimize the risk of infringements

www.mt.com/ind890

For more information

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Subject to technical changes
© 09/2012 Mettler-Toledo AG
Printed in Switzerland
MarCom Industrial

MTSI 44098080

