Application Software

IND690sys

IND690xx-sys / ID7sx-sys

Application Software –

the optimal basis for

customer specific solutions

Special Requirements?

We solve your technical weighing problems.

METTLER TOLEDO

Optimal operational steps,
perfect system integration.

We work with you to develop the solution that fits your needs precisely.

User interface

No other weighing terminal displays information as flexibly as the IND690sys. You can take advantage of the flexibility of the system to develop an operating process that's as simple and secure as possible, reduce operating errors and increase productivity.

- Single or multi-line display on the IND690 selectively shows all relevant data or only the data that is absolutely necessary. Define the information shown, when and how.

- Data is collected through operator input, through data selection using list windows, and through bar code or RFID scans. How many entries and displays do you need? Which displays and entries should your users acknowledge: all or as few as possible?

- You can use the cursor keys of the IND690sys to navigate intuitively when entering data into the database and changing the configuration.

- When an operator makes an entry, you can determine whether the IND690sys recommends a default value, show the most recently entered value, or deletes the value.

- Should bar code or RFID scans be checked for validity?

- If required the most important IND690sys control bars can be attached to external momentary-contact switches to protect them against vandalism.

Transferring data and PC programs

A variety of protocols and processes for transferring process and database data have been implemented in the IND690sys. All data transfers from and to the IND690sys weighing terminal via Ethernet, WLAN, Bluetooth, Profibus and serial interfaces are secure: The IND690sys detects and displays transfer errors, ensuring the safety of your data and the traceability of your weighing results.

- Standard protocols such as XML, METTLER TOLEDO protocols (SICS, MMR) or a customer's in-house protocol are used in the real-time transfer of process data, allowing you to access current weighing data on your computer at any time.
- Select real-time access to the IND690sys on your existing SQL database system (ORACLE, MS-SQL, AS400, MS-ACCESS, and many more) and use our PC software MTUnibase whenever you need access to the current master data on the IND690sys and the current weighing results on your computer.

- Do you need upload and download functions for transferring large amounts of data from and to the weighing terminal? Simply load all data into the IND690sys at the beginning of the shift, and then continue to work with the balance offline. In this way, you can separate your production environment from your IT environment.
- With the MTDBR2, we provide universal PC software that you can use to comfortably manage the data of the IND690sys. Use it for processing, browsing and organising the display of the IND690sys database and device settings.

Quality assurance packet

The IND690sys quality assurance packet contains a wealth of functions that permanently safeguard the quality of your weighing results.

- User management stores the name, password and role of each user. Auto logout and the expiration of passwords can be activated. Separate login and logout functions are available.
- The MinWeigh® function monitors the minimum weight, thereby ensuring the quality of your weighing results.
- For connected weighing platforms, test functions that allow the components to be checked easily are available.

- Test functions are available for all initialised interfaces, which allow fast checking of the function of the interface. Most interfaces also have diagnostic functions.
- The results and error memory maps all errors, messages and results with date, time and user name. The time of the balance check can also be logged automatically, as can the modification of process-relevant parameters.
- Error texts and messages are shown several times and in the national language on the IND690sys display. The times of unclear error messages are also given.
- The active BIG WEIGHT® display offers optimal and secure readability under any conditions.
- Maintenance intervals can be defined for each of the four weighing platforms and for one peripheral device. When maintenance is due, the IND690sys displays a message daily that prompts you to perform the maintenance.

* BIG WEIGHT® is a registered trademark of Mettler-Toledo (Albstadt) GmbH. German patent 197 32 659. European patent 0 895 071.
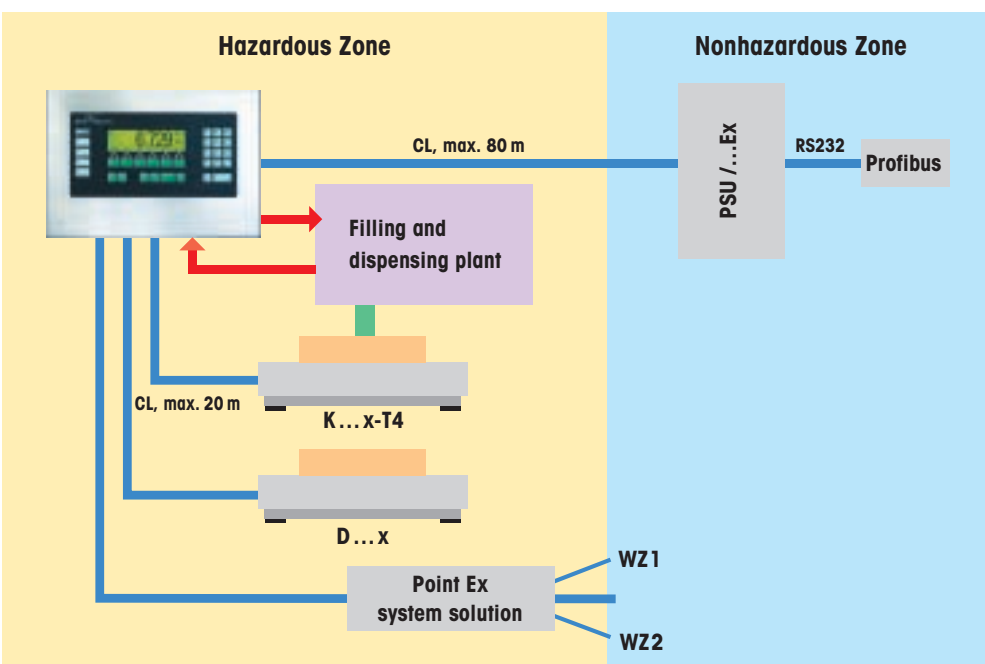
Record additional process data, connect external devices

- Do you need the IND690sys to record additional process data, such as temperature, oxygen content, speed, flow, conductivity or pressure?
- Would you like to control external devices, such as dosing valves, screw drives, mixers, conveyor belts and other speed-regulated drives?
- Want to connect label or record printers to the IND690sys? Layouts that conform to standards, or just simple printouts?
- Do you want to use additional display devices (second display, remote display unit) to further optimise the process?

Software modules

To create your IND690sys we rely on powerful and well-known software modules.

All software modules have optimised operator processes and powerful functions that interface with existing systems. We can build and adapt the modules to your specific requirements. Non essential parts of the program are removed, along with unnecessary configuration parameters, and label and record printouts are designed based on configuration parameters. The result is an optimal solution customised to your process.

- Piece count module – piece counting and piece filling
- Registration module – register weighing items, e.g. in the incoming goods department
- Formulation module – formulation system for manual weighing
- Formula module – formulation system for automatic and manual multi-component filling
- Control module – control weighing items
- Dispensing module – automatic 1-component dispensing
- Filling module – automatic 1-component filling with control of a valve column

Supporting hazardous zone hardware

Software of the IND690sys can also be supplied for the IND690xx (hazardous zone 2/22) and ID7sx (hazardous zone 1/21).

IND690xx-Sys:
- Maximum of 3 balances (+1 SICS balance) connectable

ID7sx-Sys:
- Maximum of 3 balances connectable (of these, a maximum of 2 analogue)
- Maximum of 3 serial, intrinsically safe data interfaces RS232 or CL
- 8 digital, intrinsically safe inputs/outputs
- Maximum data transfer rates of 9600 baud
- RS232, CL20mA or Profibus DP via PSU/..-Ex in the nonhazardous area

Software Aspects

System structure and functionality

High-level language C	The application program is created and tested exclusively in ANSI-C-compatible programming language, using professional standard development tools. It ensures both the transfer of existing applications (ID7-Sys) and adaptation to future generations of devices.
Multi-tasking, events	Maintain user information, even during active process control or background processing of data communication.
Database	Max. 16 tables with a max. 8000 data records and up to 32 fields, each with max. 64 kB, total max. memory of 512 kB. Complete customer-specific adaptability, sharable and remote access possible (MTUnibase, SQL)
User management	User name, password and authorization for max. 50 users
Incident and error memory	Stores all errors, messages and incidents with date, time and active user
Multilingual	Text entry and display in up to 14 languages, Western European (Latin 1) and Cyrillic character sets
Menu system	Conforms to IND690 standard applications, customer-specific adaptability
Hardware detection	Automatic interface detection and allocation

Device drivers

The following device drivers are currently available for the corresponding IND690 interface module:

Balances	Up to 4 balances + totalizing scale parallel, types IDNet/Analog/SICS
Com	Simple serial communication, synchronous or asynchronous, via RS232, CL20mA, RS485/422, printer TLP2844, printer S600, etc.
SICS, MMR	METTLER-TOLEDO SICS and MMR protocols
TCP/IP	Network connection with secured opening/closing of the connection by IND690sys or an external device. Max. 3 parallel connections possible.
WLAN	Wireless network connection with secured opening/closing of the connection by IND690sys or an external device.
Bluetooth	Wireless transfer to printer, scanner, second display, reference balance
FTP client	Secured file transfer from Ethernet 690 to/from FTP server.
Profibus	Up to 8 data words, 1-word data consistency
XML	Send and receive process and database data with XML protocol
BIU	Up to 64 digital inputs/outputs via relay box 8-690
IO4	Up to 8 digital inputs/outputs via 4I/O-690 or relay box 4-690
WAGO-I/O	Up to 16 digital inputs/outputs, as well as analog output via RS232-690 + WAGO module
DisplayLocal	IND690 display, including BIG WEIGHT® and IND690 keypad
Second display	IND4xx and AD14 x second display, customized displays on request
Analog output	Analog output 14 bit, 0−10 V/0−20 mA/4−20 mA
GA46 printer	Printouts on GA46 printers
AlibiMemory	Certifiable AlibiMemory with up to 675 500 entries
MFII/PS2 keypad	External keypad with country-specific layout (UK, USA/International, Germany, France, Netherlands, Italy, Spain, Finland).

Metrological notes

The IND690sys can be operated on certifiable balances, and this is approved by the PTB. Various internal measures prevent the application programmer from manipulating the displayed and printed weight values.

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