

Powerful ID7 Technology also for Hazardous Areas

Identification data

Quantity/length	4 alphanumeric identifiers, 18 characters
Entry	On membrane keypad, external MFII keyboard or interface (e.g. barcode reader)
Naming	Keys A–D with variable text field
Preset text	999-place memory for frequently used text and identification data, each 20 characters
Application Pacs	see Accessories

Data interfaces

RS232 (COM1)

General features 7/8 bit/char., 1/2 stop bits, even/odd/mark/ space/no parity, 150–19200 baud Handshake DTR/DSR, CL, X-ON/X-OFF

Modes Dialog mode, print mode, auto SIR/DIR, Toledo Continuous, SICS

Dialog mode For devices with dialog capability, extensive instruction set for exchanging data with the scale

Print mode Free formatting for external strip printers (GA46) and form printers

Barcode Receptacle for barcode reader, power supply present

Up/download Able to transmit software and data, e.g. for updating software or saving data

Connector 8-pin socket, IP68

Other interfaces

COM2–COM6 Expandable to max. 6 interfaces (Accessories)

Keyboard port (category G3)

MFII connection 5-pin receptacle to connect a MFII PC keyboard (Accessories)

General data

Power supply

Voltage 100–240 V, +10/–15%, 50/60 Hz

Power input 70 VA approx.

Power cable Length approx. 2.5 m, without plug

Approvals and standards

EC conformity CE mark and conformity declaration

Certification EC directive 90/384/EEC, 93/68/EEC, EN 45 501, OIML R76

Elec. safety EC directive 73/23/EEC, 93/68/EEC, EN 60 950

EMC EC directive 89/336/EEC, 92/31/EEC, 93/68/EEC, EN 50 081-1, EN 50 082-2

Explosion protection EU Directive 94/9/EC EN 50 021, EN 50 281

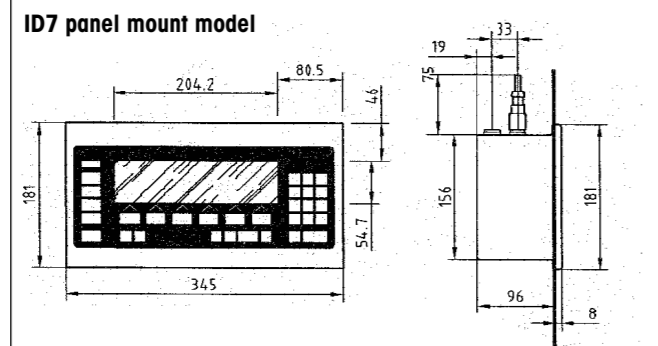
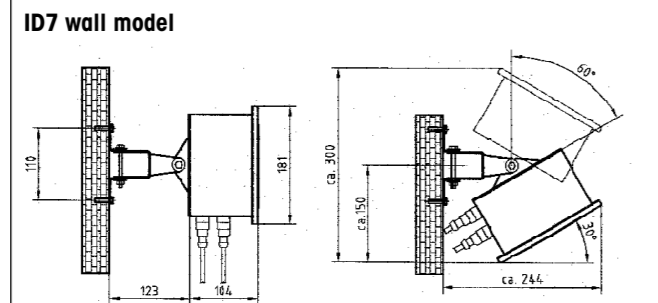
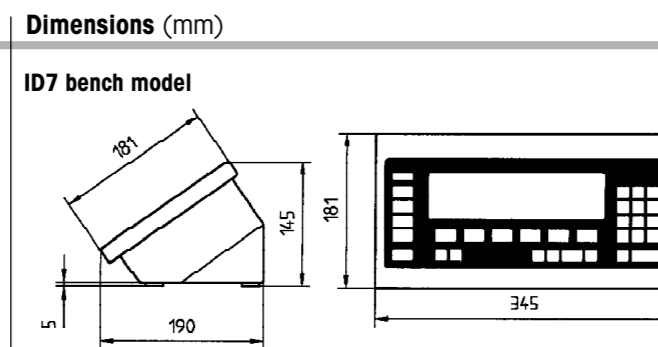
Ordering information

Model	Order No.
ID7xx bench model (with Base ²⁰⁰⁰ -ID7)	22 000 379
ID7xx wall model (with Base ²⁰⁰⁰ -ID7)	22 000 380
ID7xx panel mount model (with Base ²⁰⁰⁰ -ID7)	22 000 381
Packaging	Carton, approx. 310 x 420 x 260 mm
Weight	Gross approx. 5 kg, net approx. 3.5 kg
Documentation	Full installation and operating instructions

Electrical accessories

Application Pacs
A selection of high performance Pacs are available for special weighing tasks:

Pac designation	Function	Order No.
Count²⁰⁰⁰-ID7	Counting, totaling	22 004 092
Form²⁰⁰⁰-ID7	Formulating, totaling	22 004 093
Data²⁰⁰⁰-ID7	Computer dialog mode	22 004 094
Sum²⁰⁰⁰-ID7	Totaling on 3 levels	22 004 095
Dos²⁰⁰⁰-ID7	Dispensing	22 004 096
Dos²⁰⁰⁰-R-ID7	Multi-component dispensing	22 004 097
Control²⁰⁰⁰-ID7	Verifying, classifying	22 004 098
Sys²⁰⁰⁰-ID7	Freely programmable	22 005 340
FormXP-ID7	Convenient formulating with PC connection	22 005 899



Scale connections		Order No.
IDNet-ID7	Add-on connection for IDNet scales	22 001 082
Analog Scale ID7	Connection for analog weighing platforms	22 001 083
Alibi Memory ID7	Memory for 580 000 data sets relating to certification Replaces the alibi printer in certifiable applications	22 001 663
Serial interfaces		
CL20m-ID7	CL20mA interface 7-pin receptacle CL cable, 3 m Adapter 7-pin	22 001 084 00 503 749 00 503 745
RS232-ID7	RS232 interface, 8-pin receptacle RS232 cable/DTE, 3 m RS232 cable/DCE, 3 m RS232 cable/PC, 3 m RS232 cable/9p, 3 m SICS scale/ID7 connection cable, 3m, for connection to SICS scales via RS232 data interface Adapter 8-pin	22 001 085 00 503 754 00 503 755 00 504 374 00 504 376 22 006 795 00 503 756 22 003 031
RS422-ID7	RS422 interface, 6-pole female connector, galvanic separation	22 001 086
RS485-ID7	RS485 interface 6-pin receptacle, isolated RS422/485 cable, open end, 3 m Extension cable for RS422/485, 10 m Adapter 6-pin	00 204 933 00 204 847 00 204 866
Network interfaces		
Ethernet-ID7	Ethernet-10/100 Base T – twisted pair, 8-pole fem. conn. Twisted pair cable, 8-pin, RJ45, 5 m Twisted pair cable, 8-pin, RJ45, 20 m	22 003 694 00 205 247 00 208 152
Profibus-DP-ID7	2x PG11 cable gland for direct internal connection	22 004 940

Sales and Service:

Digital I/O interfaces		Order No.
4 I/O-ID7	4 in / 4 out interface, 19-pin receptacle	22 001 087
Digital I/O interfaces outside hazardous areas		
The relay boxes 4-ID7 and 8-ID7 are not designed for use in hazardous areas. They may only be used in non-hazardous areas, or in hazardous areas if additional safety measures are taken.		
Relay box 4-ID7	Relay box with 4 inputs / 4 outputs, for connecting to 4 I/O-ID7	22 001 088
	Cable, 10 m, for connecting 4 I/O-ID7 to relay box	00 504 458
	Adapter 19-pin	00 504 461
Relay box 8-ID7	Relay box with 8 inputs / 8 outputs, for connecting to RS485-ID7	22 001 089
	RS422/485 cable, open end, 3 m, for connecting RS485-ID7 to relay box 8-ID7	00 204 933
	24 VDC power unit for relay box 8-ID7	00 505 544
Analog output		
Analog Output ID7	Analog output 0–10 V, 0–20 mA, 4–20 mA, 5-pin receptacle	22 001 090
	Cable for Analog Output, open end, 3 m	00 204 930
	Adapter D/A, 5-pin	00 205 538
Alphanumeric keypad (category 3G only)		
Must not be used in Zone 22 areas with dust explosion hazard. Only authorized for use in Zone 2.		
AK-MFII	Compact alphanumeric keyboard, casing all chrome nickel steel, protection class IP65, 5-pin MFII round connector, spiral cable 1 m approx.	00 505 490
Second display		
ID7xx	with BIG WEIGHT® Display	22 000 379 22 000 380 22 000 381
	Cable for CL20mA-ID7, 10 m	00 504 511
Mechanical accessories		
Wall bracket	for bench model, black for bench model, st. steel	00 504 129 00 504 130
Floor stand	for bench model, black for bench model, st. steel	00 504 131 00 504 132
Stand base	black st. steel	00 503 700 00 503 701
Keyboard terminal adapter, for AK-MFII, for ID7 bench model, st. steel		00 208 047



Complies with ATEX Directive 94/9/EC

The ID7xx terminal is certified according to ATEX Directive 94/9/EC. Built to meet the requirements for Category 3 instruments, it can be used in hazardous areas of Zones 2 and 22.

The comprehensive extension possibilities of the ID7 can also be used with the ID7xx:

- 7 Application Pacs (software modules) for totaling, dispensing, filling, etc.
- Alibi memory
- Profibus interface
- Ethernet connection
- 3 housing styles
- Up to 6 serial interfaces



METTLER TOLEDO

Tough but sensitive – even in hazardous areas

- Complies with ATEX Directive 94/9/EC for potentially explosive atmospheres
- Protection class IP68/IPX 9K – a match for the toughest working conditions
- BIG WEIGHT® display–bright, with graphics capability, even in poorly lit areas
- Top performance right from the start – with software Pacs to go still higher
- Easily integrated, easily added to, all ready for your application



Relationship between categories and zones

In the chemical and pharmaceutical industries, hazardous areas are frequently subdivided into different zones according to the degree of hazard. Depending on the zone, different categories of electrical equipment must be used.

Category	Specified type of hazardous atmosphere	Permitted for use in zone	Also permitted for use in zone	ID7xx permitted for use
1	Gas/air mixture or vapor/air mixture or mist	0	1 and 2	—
1	Dust/air mixture	20	21 and 22	—
2	Gas/air mixture or vapor/air mixture or mist	1	2	—
2	Dust/air mixture	21	22	—
3	Gas/air mixture or vapor/air mixture or mist	2	—	•
3	Dust/air mixture	22	—	•

EN 1127-1:1997



Since 1998 METTLER TOLEDO has operated an approved quality assurance system according to ATEX Directive 94/9/EC for the production of instruments intended for use in hazardous areas.

The frequency of occurrence of an explosive mixture

How frequently is an explosive atmosphere expected? The answer to this question is used to define separate zones in a factory or plant:

Hazardous explosive atmospheres are present*

	Permanently, for extended periods, or frequently	Occasionally	Rarely and briefly
Due to gases, vapours, mists	Zone 0	Zone 1	Zone 2
Due to dusts	Zone 20	Zone 21	Zone 22

*Definitions according to EX-RL, June 1998

The more frequently an explosion hazard is expected to occur, the higher the safety requirements for instruments used. The ATEX Directive 94/9/EC defines categories for the various different safety levels.

Safety level of instrument	Category	For use in zones
Very high level of safety	1	0, 1, 2, 20, 21, 22
High level of safety	2	1, 2, 21, 22
Normal level of safety	3	2, 22

Tailor-made scale connectivity

Bench and stand scales

Weighing ranges from 3 kg/0.1 g to 300 kg/20 g. Certifiable Class II and III with resolution up to 32,000 verification scale intervals or 3 x 3000e multi-interval.



Pallet scales

Weighing ranges from 600 kg/100 g to 3000 kg/500 g. Certifiable Class III with resolution of 6000 verification scale intervals.



Low profile scales

Weighing ranges from 300 kg/50 g to 1500 kg/500 g. Certifiable Class III with resolution of 6000 verification scale intervals. Height of guides 35 mm



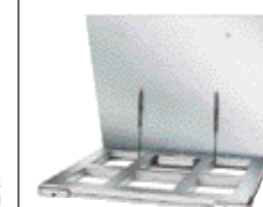
Floor scales

Weighing ranges from 300 kg/20 g to 12 t/2 kg. Certifiable Class II and III with resolution up to 7500 verification scale intervals or 3 x 3000e multi-interval.



Floor scales with folding load plate

Weighing ranges from 1500 kg/200 g to 3000 kg/500 g. Certifiable Class III with max. resolution of 7500 verification scale intervals or 3 x 3000e multi-interval.



Technical Data Application Terminal ID7xx

Housings/Ambient conditions

Bench model	
Housing	Angled desktop
Dimensions	see diagrams
Wall model	
Housing	Compact housing design with tilt/swing wall adapter
Variable mounting	Front panel can be turned 180°
Panel mount model	
Housing	Compact casing for flush mounting
Variable mounting	Front panel can be turned 180°
Material	All chrome-nickel steel DIN X5 CrNi1810
Protection	<ul style="list-style-type: none"> IP68 (IEC529): dust and watertight IPX9K (DIN 40050): resistant to high-pressure/steam-jet cleaning
Ambient temperature	–10 to +40 °C for accuracy class III 0 to 40 °C for accuracy class II
For dimensions for all of ID7xx housing, please refer to the dimensional diagrams	

Display and data entry

Display	
Screen size	195 x 46 mm
Type	Active, high-luminance VFD dot matrix display, graphics capability, green
Displayed data	Weighing data, identification data, clear-text information (user guidance, error messages), graphic information, designation of function keys F1–F6
BIG WEIGHT® display	Patented, large display, showing weight or other data, characters are up to 35 mm high
Display cover	Scratch-proof, toughened safety glass
Keypad	
Type	Three-point membrane keypad with sensed key action, acoustic acknowledgement
Surface	Closed, smooth surface of heavy duty polyester, raised, embossed buttons
Markings/key design	Scratch-proof, 3-color text/symbol markings, important keys enlarged
Key functions	<ul style="list-style-type: none"> 4 keys A–D for identification data 6 function keys F1–F6, with function-change and info key 4 weighing-function keys Numeric entry pad
Durability	> 1 million keystrokes
Alphanumeric entry	<ul style="list-style-type: none"> With keys F1–F6, guided selection Port for MFI keyboard, standard

Explosion protection

Instrument	Type of protection
ID7xx application terminal	G: II3G EEx nAL [L] IIC T4 D: II3D T70°C
D line weighing platforms	G: II3G EEx nA II T4 D: II3D T+50°C IP67
K line weighing platforms	G: II3G EEx nR T6 D: II3D T+45°C IP67
M line weighing platforms	G: II3G EEx nA IIC T6 D: II3D T+50°C IP67

Standard functions

Weighing functions	
Taring	Key-operated, by subtraction
Auto tare	Automatic taring, on/off select
Tare preset	<ul style="list-style-type: none"> Through keypad Through interface, e.g. from PC or barcode reader 999 tare-setpoint memory for frequently used tare values
Taring functions	Tare addition, tare multiplication, provisional tare
Gross select	Gross displayed on pressing key
Zero set	Automatic or manual
Unit select	Key-operated selection of the following weight units: kg, g, lb, oz, ozt, dwt
Dynamic weighing	For weighing unsettled objects, e.g. animals Selectable cycle time and automatic printout
Stability detection	Adjustable in 4 stages, with movement indicator
Weighing process adapter	Adapts scale to weighing operation, choice of 3 levels
Vibration adapter	Damps the influence of vibration, choice of 3 levels
Test key	<ul style="list-style-type: none"> Displays identity code (certification seal) On K weighing platforms, to verify measuring accuracy (internal auto-calibration)
Check mode	Displays measured weight at higher resolution
Switching points	4 independent freely definable switching points for Base-, Form-, Count-, Sum- and Data ²⁰⁰⁰ -ID7

Scale ports

Standard	1 IDNet connection and 1 RS232 connection
Expansion	Expandable to max. 3 scale ports (Accessories), of which 2 are analog
IDNet port	<ul style="list-style-type: none"> For MMR weighing platforms D/K/M/N Analog scales with system solution Point
RS232 connection (SICS)	<ul style="list-style-type: none"> Precision scales with RS232 serial interface Viper industrial scales Spider industrial weighing system

Analog port

Connection method	Terminals inside																
Connectable analog scales	METTLER TOLEDO scales type D...T, N...T, Spider, weighing cells RWM																
Other connectable scales	Number: 1–4 (350 cells) Weighing cells: 1–8 (1000 cells) Sensitivity: 0.4–3 mV/V																
A/D converter	<table border="1"> <tbody> <tr> <td>Max. resolution (certifiable)</td> <td>7500 e</td> </tr> <tr> <td>Max. resolution (not certifiable)</td> <td>450 000 d</td> </tr> <tr> <td>DMS supply voltage</td> <td>8.75 V</td> </tr> <tr> <td>Min. numeral step (calibr.-ability)</td> <td>0.58 µV/e</td> </tr> <tr> <td>Min. numeral step (no calibr.-ability)</td> <td>0.058 µV/e</td> </tr> <tr> <td>Max. length of line</td> <td>100 m</td> </tr> <tr> <td>Stabilization time</td> <td>typ. > = 0.6 s</td> </tr> <tr> <td>Reading change-rate, adjustable</td> <td>max. 20/s</td> </tr> </tbody> </table>	Max. resolution (certifiable)	7500 e	Max. resolution (not certifiable)	450 000 d	DMS supply voltage	8.75 V	Min. numeral step (calibr.-ability)	0.58 µV/e	Min. numeral step (no calibr.-ability)	0.058 µV/e	Max. length of line	100 m	Stabilization time	typ. > = 0.6 s	Reading change-rate, adjustable	max. 20/s
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Display functions

Startup text	Text up to 20 characters, displayed briefly on startup, configured to choice
Tare indicator	NET appears when tare weight is stored
DeltaTrac	Analog display of dynamic readings, with markers for target value and plus/minus tolerances Applications: dispensing, classifying, checking 999-value DeltaTrac setpoint memory
Date/time	Quartz-accurate, 12 or 24 hour clock, automatic calendar, Europe or USA format
Info functions	Recall capability for all current weighing data, stored data and identification data
Language	For all displayed and data output data, choice of English, German, French, Spanish, Italian, Dutch or Polish. Other languages to order



To see and be seen – with the patented BIG WEIGHT®-Display. Bright, fast and unmistakably clear, this active dot matrix display shows the result of the weighing operation. Readable from a distance, the amply sized **BIG WEIGHT®** display for the professional user is new from METTLER TOLEDO. Protected behind scratch-proof safety glass, so the display will not dim with the years.

PESADA DINAMICA
DYNAMISCH WEGEN
ДИНАМИЧЕСКОЕ ВЗВЕШИВАНИЕ
DYNAMISCHES WAGEN
PESADA DINAMICA
WAZENIE DYNAMICZNE
PESEE DYNAMIQUE
ДИНАМИКУС МЕРЭС
DYNAMIC WEIGHING

ID7 displays say it loud and clear. In many languages, to guide the user easily and reliably.

Form follows function—1 terminal, 3 models

One is sure to be just right for your purpose. All three are protected to class IP68 (IPX 9K) and made of stainless steel, so they are truly rugged. Or do you have special needs for reading comfort or cable routing? The wall unit is designed to be tilted and / or turned, cables may be attached to the wall. The panel-mounted terminals may be plug-connected from above or below.

Interfaces for connectivity

The basic version is ready to go with a RS232 data interface (e.g. to connect a printer) and a socket for the AK-MFI alphanumeric keyboard. Up to 5 more interfaces can be added easily and inexpensively for still greater modularity and flexibility.

Sealed against everything, yet open to anything. Data and signals for other devices that will last for years.