METTLER TOLEDO

Data Brief

Weighing terminals: IND429 - IND439 - IND449 - IND439check - IND449check+

Professional weighing technology for challenging environments

Picture: IND449

Precise weighing in harsh environment thanks to:
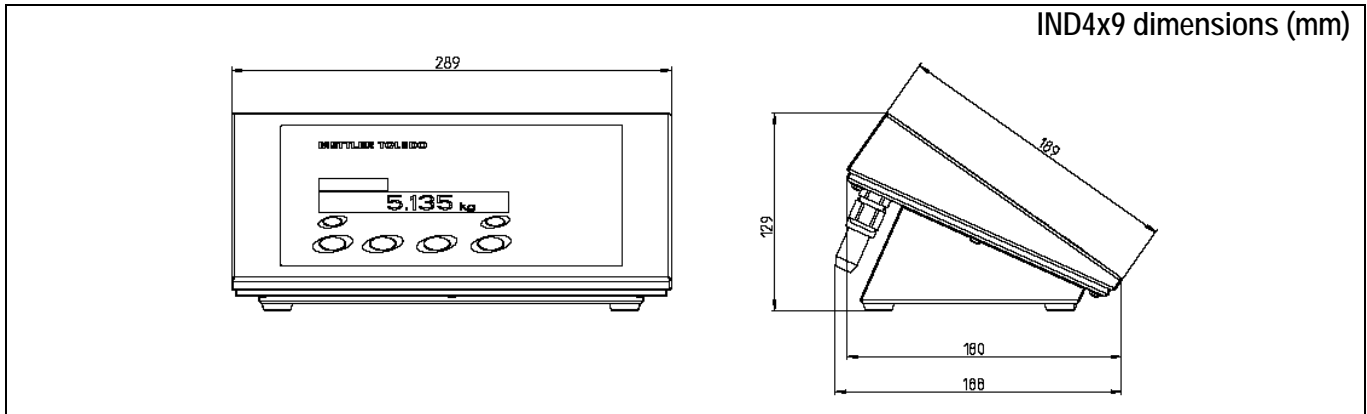
- Stainless steel enclosure
- IP69K protection
- EHEDG and NSF assessment
- GMP certification
- Weights and measures approved for Class II and III

Technical Data

Enclosure / Environment

Material	Chrome-nickel-steel (AISI 304, 1.4301)
Ambient temperature	-10° to +40°C for Class III 0° to +40°C for Class II
Humidity	Up to 80% rel., not condensating
Level	Up to 2000m above sea level, indoors
Terminal weight (net)	With AC power supply: approx. 2.2 kg With battery: approx. 2.8 kg

Display

Backlit, 7-digit, 7-segment LC-Display

Character height	16mm (IND429), 21mm (IND439, IND439check, IND449, IND449check+)

Approvals / Assessments

Metrology	NTEP, OIML
Hygiene	NSF, EHEDG
Pharma industry	GMP
Electrical Safety	CSA – C US, CE, PSE (pending)
IP Protection	IP69K (DIN 40050)

Power supply

Standard AC power supply	100 to 240 V AC, 47 to 63 Hz, 300 mA Power cord: apprx. 2.3 m long
Optional 12 to 24 VDC connection, 1.0A	
Optional battery operation	
Charger	100 to 240 V AC, 47 to 63 Hz, 300 mA Power cord: apprx. 2.3 m long
Operation time	9h typ. (continuous operation) 90h typ. ("power off mode" 1 min)
Charging time	6h typ.
Life time	1000 charge-/ discharge cycles typ.

Built-in options and peripherals reduce operation time!

Keyboard

Material	Polyester (PE)
Number of keys (keys with tactile feedback)	IND429: 6 IND439 / IND439check : 10 IND449 / IND449check+ : 25

Functionality

	IND429	IND439	IND449	IND439check	IND449check+
Zero setting	●	●	●	●	●
Tare	●	●	●	●	●
Dynamic weighing	●	●	●	-	-
Unit switching	●	●	●	●	●
Printing / data transfer	●	●	●	●	●
MinWeigh	●	●	●	●	●
Counting	-	●	●	-	●
Checkweighing	-	-	●	●	●
Classifying (5 classes)	-	-	-	-	●
Totalising	-	-	●	-	-
TakeAway Mode	-	-	-	-	●
100 memories for tare values, targets and average piece weights	-	-	●	-	-
99 memories for target weights and tolerances	-	-	-	●	●
99 memories for class parameters	-	-	-	-	●
2 scales operation	-	●	●	-	-
Identification (2 IDs)	-	-	●	-	●
Recall gross, tare and height resolution weight	-	●	●	-	●
Graphic indication of weighing range utilisation	-	●	●	●	●
Multi color display (colorWeight®)	-	-	-	●	●
Numeric keypad	-	-	●	-	●
Date / time	-	-	●	-	●
Beeper	-	-	●	-	●

Interfaces

Standard	1 x RS232
Optional <u>one</u> more interface:	- RS232 - RS422 / RS485 - Ethernet - USB (Slave) - WLAN - Digital I/O (4 In / 4 Out) - second scale connection (only IND439 and IND449)

The interfaces are accessible via IP69K protected receptacles at the rear side of the terminal.

IND4x9 dimensions (mm)

Weighing technology

Number of connectable platforms	IND429, IND439check, IND449check+: 1 IND439, IND449: 2 (optional)
Standard scale connection	Analog or IDNet
IDNet compatibility	IDNet platforms manufactured as from 2003 can be connected
Possible 2-scales solution	Analogue terminal: Extension with second analogue scale possible IDNet terminal : Extension with second IDNet scale possible
Remark: IND439 / IND449 allow the connection of a second scale also via RS232/SICS-protocol.	

Technical Data analogue scale connection

Impedence	min. 80 Ohm
Excitation	8.2 V
Sensitivity	2 to 3 mV/V
Max. resolution	10000d (NTEP) 7500e (OIML) 300000d – non-approvable
Min. verification interval	0.5 µV / e (approvable)

Digital I/O

4 digital In — galvanically isolated via opto coupler
- external: 1 mA (min. 5 V DC)
- 8 mA (max. 30 V DC)
- internal: 3 mA (at 12 V DC)

	IND429	IND439	IND449	IND439check	IND449check+
On / Off	●	●	●	●	●
Zero setting	●	●	●	●	●
Taring	●	●	●	●	●
Printing / transfer	●	●	●	●	●
Clearing (Clear key)	●	-	●	●	●
Unit switching	●	●	●	●	●
Reference 10 / variable	-	●	●	-	●
Info key	-	-	●	-	●
ID1, ID2/REF key	-	-	-	-	●
Target key	-	-	-	●	●
Recall key	-	-	-	●	●
Save key	-	-	-	●	●
Arrow right	-	-	-	●	-
Arrow up	-	-	-	●	-
Arrow down	-	-	-	●	-
TakeAway key	-	-	-	-	●
Change scale	-	●	●	-	-
Totalising / Subtracting	-	-	-	-	-

4 digital Out — Galvanically isolated via relay contacts
- external: 500 mA (max. 30 V DC) per out
- internal: 400 mA (bei 12 V DC) total outs 1…4

	IND429	IND439	IND449	IND439check	IND449check+
Stable weight	●	●	●	●	●
< / ≥ MinWeigh	●	●	●	●	●
Overload / underload	●	●	●	●	●
Star display	●	●	●	●	●
< tolerance -	-	-	●	●	●
Inside tolerance	-	-	●	●	●
Target weight	-	-	-	●	●
≥ tolerance +	-	-	●	●	●
< Max n	-	-	●	-	-
Max n reached	-	-	●	-	-
< Setpoint 1 (2)	●	●	●	-	-
≥ Setpoint 1 (2)	●	●	●	-	-
Class 1…5	-	-	-	-	●

Accessories for IND429, IND439, IND449

GA46-thermal printer, stainless steel, RS232 interface, 2.5m cable incl.	00505471
GA46- thermal printer, stainless steel, RS232 interface, 0.4m cable incl.	00507229
GA46-W-thermal printer, stainless steel, RS232 interface, 2.5m cable incl., IP65, protective cover, winder.	00505799
GA46-W-thermal printer, stainless steel, RS232 interface, 0.4m cable incl., IP65, protective cover, winder.	00507230
ADI419 auxiliary display, stainless steel (IP69K, RS232, 3m cable incl., display without backlit)	22013962
ADI419 auxiliary display, stainless steel (IP69K, RS232, 3m cable incl., display with backlit)	22014022
RS232 – cable SICS second scale (3m, 8pin <-> 9pin Sub D plug)	22006795
RS232 - cable for PC (3m, 8pin <-> 9pin Sub D female connector)	00504376
RS232 counter plug, 8 pin	00503756
RS422/RS485 - cable (3m, 6pin <-> open ends)	00204933
RS485 counter plug, 6 pin	00204866
Ethernet 10/100 Base T twisted pair cable (5m -> 8pin RJ45)	00205247
Ethernet 10/100 Base T twisted pair cable (20m -> 8pin RJ45)	00208152
USB adapter cable (0.2m -> USB series A female connector)	22006268
USB adapter cable (3m -> USB series A female connector)	22007713
USB cable (3m -> USB series A female connector)	22015326
Relay box for digital I/O option (as for IND690)	22011967
Cable digital I/O option and relay box (10m)	00504458
Power supply for Relay box (110-230 V AC)	00505544
Digital I/O counter plug, 19 pin	00504461
Protective cover for terminals IND4x9 (Set with 3 pieces)	22013963
Stand, stainless steel, for IND4x9 and PBA430, height 330mm	22013964
Stand, stainless steel, for IND4x9 and PBA430, height 660mm	22013965
Stand, stainless steel, for IND4x9 and KA-, KB, MA-, MB- and DB-platforms	22014836
Pillar support, stainless steel, for IND4x9, for bench 00503632 and 00504854	22014835
Bench (PBA430-B), stainless steel, height: apprx. 560 mm	00503632
Bench (PBA430-CC), stainless steel, height: apprx. 560 mm	00504854
Floor stand, stainless steel, for IND4x9	22014834
Base for floor stand	22011982
Wall adapter, stainless steel, for IND4x9, tiltable	22013966
Wall mount, stainless steel, for IND4x9, turnable and tiltable	22014833
GA46 mounting adapter, stainless steel, for pillar support, floor stand and wall mount (as for IND690)	22011985
External battery, stainless steel, IP69K (without charger)	22013988
Charger for external battery	22014056
SICS reference manual 4 Series	22011459