

XDK851 Weighing-Terminal: the new benchmark DK850 vs XDK851 Compatibility

MESOMATIC

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This document describes the key points regarding the compatibility of the new DK850 with the XDK851.

DK800 / DK850

V1.04 Rev.28 (IN)



replaced by **XDK851**

SP00423-V1.2.6 (Industrial)



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1. ABSTRAKT

ATTENTION "this is not yet translated!"



2. KONKRETE VORTEILE XDK851

The XDK851 is a complete new development in terms of hardware and software! Fully developed by the MESOMATIC team and produced in Germany!

Based on the experience gained from the DK850, the successful XDK911 series, and the XMV standalone measuring amplifier, the XDK851 was created!

No battery required for data storage → unlimited data retention

Lower power consumption, wider supply voltage range

Reduced installation depth

Higher front-side sealing as standard

Intuitive operation touch control with softkeys

Large font and color scheme, daylight readable

Customization: insert label, service contact screen with QR code possible

Programming and parameterization via USB-C

Software update possible (XDK8-toolbox.exe)

Modularity: function modules are standardized, various combinations

Developed by MESOMATIC: special versions and customizations possible

XDK851 available without digital outputs (Option DK850/2A)

3. ALLGEMEINE EIGENSCHAFTEN

Property	DK850	XDK851
Powersupply	22 .. 25V DC	✓ 12 .. 24V DC
Power consumption	< 10W	✓ < 5W
Fusing	Fine fuse 5x20mm 1.0A T Inrush current approx. 3.5A	✓ Electronic fuse 2A Inrush current max. 1A (soft start)
Data storage	Battery (< 1 year)	✓ Flash (>100 years)
Display	Dot matrix 17mm	✓ 4.3" color display
Operation	5 buttons	✓ Touch operation, resistive
User language	Symbols DE / EN	✓ DE / EN
Programming	DK config cable	✓ USB-C
Customization	Insert strip	✓ Insert label scale designation service contact screen
Software update	not possible	✓ possible

4. INSTALLATION

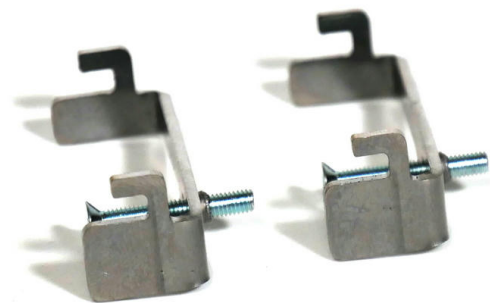
Property	DK850	XDK851
External dimensions	144 x 72 mm	150 x 91 mm, 6 mm wider, 19 mm higher!
Front panel cutout	Rectangle with cutout 137.5 x 66 mm	Rectangle 136 x 66 mm (+2 mm) ✓ fits DK850 cutout
Installation depth	150 mm	only 81 mm ✓ less
Protection class	IP54, optional dust cover	IP65 ✓ better
Mounting		Panel clip ✓ fits
Front	small protrusion	significant protrusion with gasket ✓ covers DK850 cutout

4.1. MOUNTING

Mounting clips DK850



Mounting clips XDK851



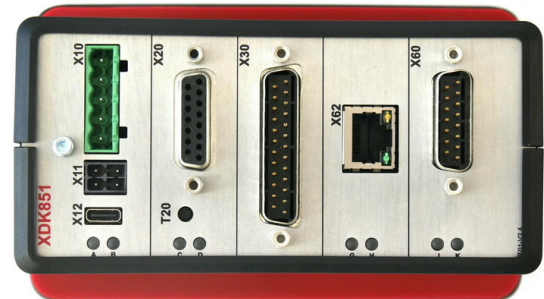
5. WIRING

5.1. CONNECTORS

Backview DK850



Backview XDK851



→ All connectors are compatible ✓

→ Connectors are rotated by 90°

Property	DK850	XDK851
Supply voltage	X1: 5-pin green	X10: ✓ compatible
Analog output	X1: 5-pin green	X10: ✓ compatible
Programming connector	X2: Mini-DIN 5-pin, interface converter required	X12: USB-C ✓ easier
Load cell	X5: DSUB15	X20: ✓ compatible
Digital IO	X3: DSUB25	X30: ✓ compatible
RS232	X4: DSUB15	X60: ✓ compatible
RS485	X4: DSUB15	X60: ✓ compatible
ProfiBus	DSUB9	✓ compatible
Ethernet	RJ45	✓ compatible
ProfiNet	DualPort RJ45	✓ compatible

5.2. LOAD CELL / MEASURING AMPLIFIER

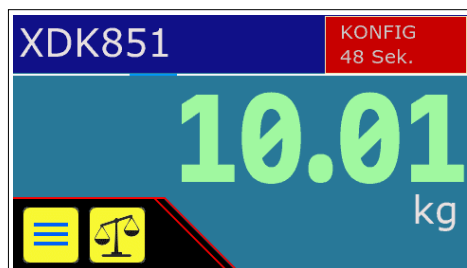
→ The XDK851 uses new technology for highly accurate measurement of the load cell. The measuring method is compatible!

Property	DK850	XDK851
Excitation voltage	10V DC	5V DC
Measuring method	Absolute measurement	Ratiometric measurement
Sensor feedback	.. not	Sense + and - must be connected
Measuring range	via jumper	via software
Filter	via jumper 0.1Hz / 4 Hz	via software, multi-stage
max. number of load cells	4 load cells 350 Ω	8 load cells 350 Ω
Potentiometer	Potentiometer connectable	Input not usable for potentiometer
Zener barriers	Special version DK850/.../EX	Directly connectable as standard
Potentiometer connection	with measuring range 10V	not supported at load cell input

6. DISPLAY AND OPERATION

The display and operation are provided via a bright, viewing-angle-independent 4.3" display. Operation is context-dependent using softkeys.

The touch technology used requires mechanical pressure on the panel (resistive panel) This makes it (unlike current smart-phones) resistant to moisture and dirt!



7. INTERFACES

All interfaces available on the DK850 (and more) are available on the XDK851:

RS232	The ASCII protocol of the DK850 is available ¹
RS485	The ASCII protocol of the DK850 is available ¹
ProfiBus	ProfiBus can be used directly. The GSD file of the DK850 can be used with the XDK851! Version 1 and Version 2. ¹
ProfiNet	ProfiNet can be used directly. The GSDML file of the DK850 can be used with the XDK851!

→ No adaptation to the PLC is necessary!¹

8. PARAMETERS

Adjustment values from the DK850 can be converted with XDK8Toolbox.exe → No re-adjustment necessary when replacing!

Simple and fast input of the scale configuration

Dosing parameters can be transferred 1:1

9. DKCONFIG VERSUS XDK8TOOLBOX

In preparation: Import dkconfig files

Generate insert label directly from XDK8toolbox, save templates, print, and archive as PDF

¹Compatibility has been implemented as far as possible. However, it cannot be ruled out that some functions may differ in operation or availability.

10. ABOUT MESOMATIC

MESOMATIC Automation and Measurement

Specialized in sophisticated electronic devices for measurement, data collecting, presenting to user, working in realtime with data, storing and publishing. Main targets are weighing-technology, IoT, Communication, OEM.

Located in Schorndorf, 30 km eastern from Stuttgart in south-Germany, we're doing great work with a great team.

Enabling great customers to be one step ahead.



- Developed in Schorndorf
 - Production in Schorndorf (and local suppliers)
 - Service and repair of devices in Schorndorf
-

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Automation und Messtechnik