Sartorius Combics
Four indicators –
one ideal level of
convenience

Sartorius Combics – intelligent indicators

With the four new Sartorius Combics indicators, we have fulfilled all requests we received from the food, pharmaceutical, chemical, electrical, electronics, and metal-working and -processing industries.

All four indicator versions of the new generation of Sartorius Combics industrial scales have large, 20-mm high digits and amber backlighting. Moreover, the indicators are designed for easy reading even from wide angles. The large keys with positive click action and high-contrast soft key IDs enable you to work with much more confidence, helping to maximize operating reliability. Just one special function key is all it takes to perform 3 important toggle functions as easy as 1-2-3: toggle between gross | net values, to the 10-times higher resolution and between weight units. In addition, you can save customized printout configurations – even those acceptable in legal metrology. The RS-232C data interface is a standard feature on the Combics indicator – you can easily retrofit additional interfaces as your needs grow.

You have a choice of protected stainless steel housing: either IP44 in the standard version or IP65 in the optional version (both with a D-SUB female connector) or IP67 with a cable gland. In any case, the front plate that gets handled the most is made of high-grade, durable stainless steel. Each indicator has an integrated power supply. Our Speed-up Technology ensures superfast, stable weight readouts. The indicators' internal computing resolution of 4 million digits provides the ultimate in convenience – a feature you're bound to appreciate especially for the counting application.

To configure all your application programs, just enter the menu settings directly on the Combics indicator. For even more convenience while inputting settings, we offer you a software solution based on the familiar Windows® interface. Of course, Combics offers you an extensive range of practical accessories. We also provide you with the optional service of preconfiguring your individual equipment combination. This will save you time and money in setting up your equipment.

Besides the external Alibi memory module for verifiable storage of weight values for legal metrology, we will be offering an integratable Alibi memory in the near future. We also supply a powerful A/D converter for connecting Sartorius weighing platforms of the Combics, IF and IU series and load cells. Your choices don't stop here. Depending on the scale you use, you can configure the scale operating settings on the Combics indicator for resolutions of 3,000 e or 2 × 3,000 e (two weighing ranges) if your accuracy class Ⓜ scale is verified for legal metrology in the EU, or for resolutions of 15,000 d or 30,000 d for standard applications.

Familiar with all industrial requirements

Sartorius Combics 1 indicator.
The basic component of advanced
industrial quality assurance.
Even the basic Combics 1 unit has all the
product features just described. If you're
looking for even more features, you'll find
them in Combics 1 plus, 2 and 3 indicators.

Sartorius Combics 1 plus indicator.
This model has all the features found in the
Combics 1, plus the option of data input
through a numerical keypad, for entering
ID codes and tare values.

Sartorius Combics 2 indicator.
Perfect for getting great connections.
This indicator also has all the features of
Combics 1 and then some. The menu for
operator guidance is so easy to navigate that
you can rely on your intuition to select the
correct settings for the application programs.
These include counting, checkweighing,
classification (into three or five classes),
totalizing, net-total formulation, animal
weighing, neutral measurement, weighing in
percent, and filling. Just select an application
and the menu will guide you reliably right
to results you want.

The Sartorius Combics 2 indicator features
LEDs for fast and reliable display of check-
weighing or classification results. However,
you can also connect an external "traffic-light"
display to this indicator just as well.
We even equipped the Combics 2 with an
additional port for connecting a second scale
as a reference unit. Moreover, the Combics 2
displays a bar graph to help you get "con-
nected" with your target while weighing-in.
Plus, you can connect a bar code scanner.
As you can tell, the Sartorius Combics 2
indicator gives you just the right connections
you're looking for.

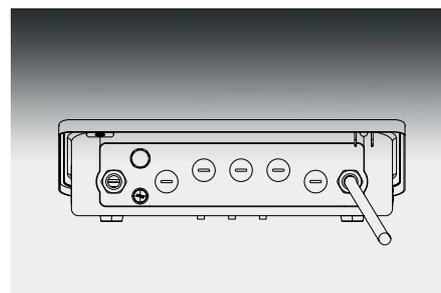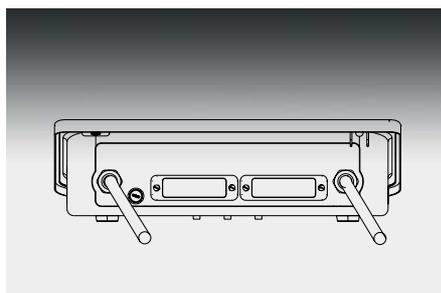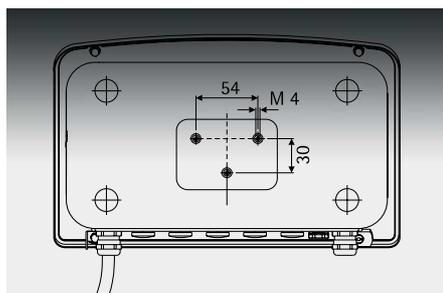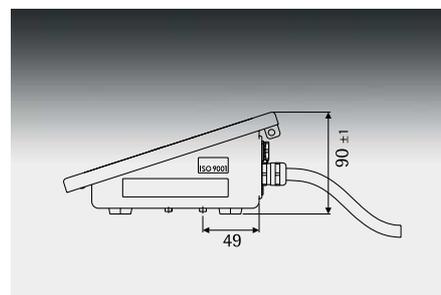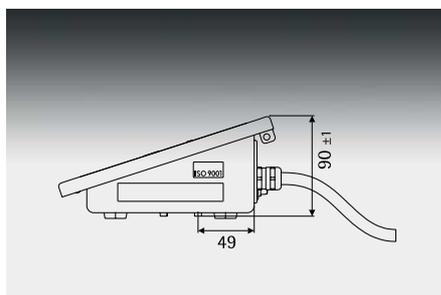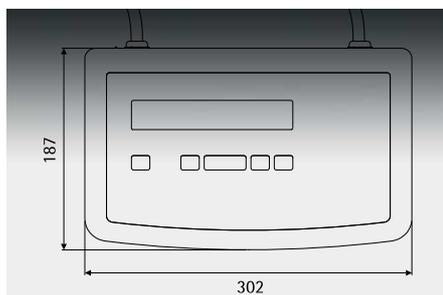**Sartorius Combics 3 indicator.**
Customized inputs.
The Sartorius Combics 3 also has all the
functions of the Sartorius Combics 1 and 2
indicators. But we designed this indicator
version to give advanced users a broad basis
for customizing the settings to meet their
special requests and requirements.

Combics 3 features alphanumeric keys and
an ABC multifunction key, just like the ones
you're used to on your mobile or cell phone.
The large, fully graphical, dot-matrix display
gives you access to the individual display
mode settings. As a result, you can choose to
have numbers and letters shown as oversized
characters or optimize specific applications
to suit your particular work sequence.
Inputs are activated via context-sensitive
soft keys that are displayed.

By introducing the Combics 3, we're offering
an indicator that provides the basis for easy
upgrades and customized options in the
near future. Combics 3 clearly shows that
its custom-tailored capabilities will continue
to give you a growing number of options
to implement. You can take our word for it:
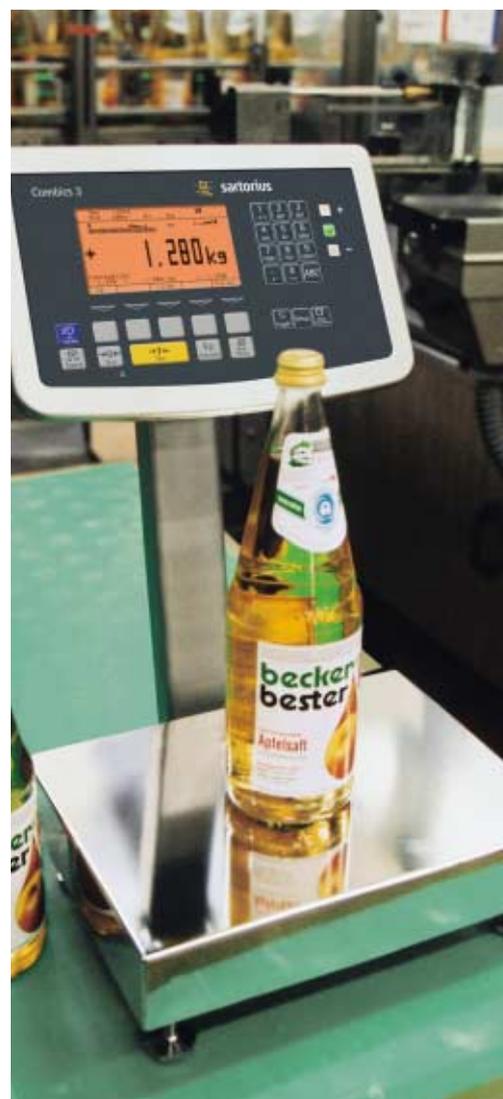Combics 3 is a safe investment for the future.

Specifications

Technical specifications

Maximum readability	31,250 digits
Accuracy classes	(III) (IIII)
Number of verification scale intervals (configured for the single, multiple range or multi-interval mode)	<=3,000 e, 2× 3,000 e according to EN 45501
Load cell connection Input voltage Available sensor technology	9 V 4 or 6-wire technology
Bridge impedance	83 ohms to 2,000 ohms
Measuring signal	0.45 mV to 36 mV
Measuring signal for dead load	0.45 mV to 6.3 mV
Measuring signal variation	4.5 mV to 29.7 mV
Measuring signal/ Verification scale interval	0.72 µV/e1 to 4.75 µV/e1
Sensitivity	4 million digits max. (internal resolution)
Digital, protected interface	According to EN45501
Data interface	Bidirectional RS-232C with control outputs, built-in as a standard feature; Combics 3: second bidirectional RS-232C, RS422 or RS485 built-in as a standard feature
Additional interface port	Optional
Display	20 mm LCD, 7-segment, plus ID symbols, backlit; Combics 3: 108 × 58 mm graphical display, backlit
Housing Material Type of protection acc. to EN60529	AISI 304 stainless steel CISL 1/2/3: IP 44 (IP 65 optional); CIS1/2/3: IP67
Temperature range:	−10°C to +40°C
Power supply DC power supply AC power supply Battery operation	100–240 VAC (−15/+10%), 50–60 Hz, 17 W/23 VA max. Optional 15.5–24 VDC (±10%), 12 W max. Optional 13–17 VAC (±10%), 50–60 Hz, 12 W max. Optional via YRB10Z external rechargeable battery pack
Limitation of emissions	Acc. to EN61326+A1 Class B (IEC 61326+A1)
Defined immunity to interference	Acc. to EN61326+A1, industrial environments (IEC 61326+A1)
Electrical safety	Acc. to EN61010-1 (IEC 1010-1), EN60950 (IEC 950)

Combics indicators and accessories

Combics 1 scale indicator, stainless steel housing, IP44	CISL1
Combics 1 plus scale indicator, stainless steel housing, IP44	CISL1N
Combics 2 scale indicator, stainless steel housing, IP44	CISL2
Combics 3 scale indicator, stainless steel housing, IP44	CISL3
Combics 1 scale indicator, stainless steel housing, IP67	CIS1
Combics 1 plus scale indicator, stainless steel housing, IP67	CIS1N
Combics 2 scale indicator, stainless steel housing, IP67	CIS2
Combics 3 scale indicator, stainless steel housing, IP67	CIS3

Optional interfaces (UniCOM)

Interface module (RS-232C)	YDO01C-232
Interface module (RS-485/422)	YDO01C-485
Analog current output, 0–20 mA, 4–20 mA, 0–5 V, 16-bit	YDA01C-20MA
Profibus module	VDO01C-DP
Bluetooth module (only for CIS models)	YDO01C-BT

Printers and printer accessories

Verifiable printer with functions for date, time and statistical evaluations	YDP03-0CE
Printer paper (5 rolls; length per roll: 50 m)	6906937
Replacement ink ribbon cartridge for printer	6906918
Verifiable strip and label printer with "thermo-direct" print head, paper width up to 108 mm, with 100–240 V external power supply (EU and US) and power cord. Adapter cable YCC01-01CISLM3 required for Combics CISL indicator; adapter cables YCC02-R12F6 and 69Y03142 required for Combics CIS indicator; only for use with flexible printout configuration (see "Software," next column)	YDP12IS-0CEUV
Printer paper (1 roll) for YDP12IS-0CE printer, 101mm × 75 m, thermal sensitive paper	69Y03196
Labels for YDP12IS-0CE printer, extra large, 101 mm × 127 m, 305 labels	69Y03195
Verifiable strip and label printer with "thermo-direct" print head, paper width up to 60 mm, with 100–240 V external power supply (EU and US) and power cord. Adapter cable YCC01-01CISLM3 required for Combics CISL indicator; adapter cables YCC02-R12F6 and 69Y03142 required for Combics CIS indicator (see "Software," next column)	YDP04IS-0CEUV
Printer paper (3 rolls) for YDP12/04IS-0CE, 60 mm × 75 m, thermal sensitive paper	69Y03090
Labels for YDP12/04IS-0CE printer, small, 58 mm × 30 mm, 1000 labels	69Y03092
Labels for YDP12/04IS-0CE printer, medium, 58 mm × 76 mm, 500 labels	69Y03093
Labels for YDP12/04IS-0CE printer, large, 58 mm × 100 mm, 350 labels	69Y03094
Cable for direct connection of YDP12IS/YDP04IS-0CE printer to Combics CISL indicators	YCC01-01CISLM3

Electrical accessories

External red/green/red display for Combics CISL indicators	YRD11Z
External red/green/red display for CIS indicators (12-pin round connector); connecting cable YCC02-R12F6 or Option M6 required	YRD14Z
Profibus connector for CISL... and CW...P... indicators (D-SUB 25-/9-pin)	IE10092
Second display for Combics CISL indicators	YRD02Z
Remote display, 7-segment, up to 45 mm characters	Information available on request
Bar code scanner, with cable for connection to Combics CISL scale indicator adapter cable, 120 mm scanning width	YBR02CISL
Bar code scanner for the Combics CIS model, with connecting cable, for connection with YCC02-R12F6	YBR02FC
Foot switch, incl. T-connector, D-SUB 25-pin	YFS01
Hand switch, incl. T-connector, D-SUB 25-pin	YHS02
External Alibi memory for electronic storage of weighing data	YAM01IS
Scanner for loading weighing data from YAM13IS Alibi memory cards to a PC	YAM02IS
Power supply for YAM01IS or YAM02IS Alibi memory	YAM11IS
Memory card for YAM01IS Alibi memory	YAM13IS
Cable for connecting Combics indicator to YAM01IS Alibi memory 25-pin D-SUB to 9-pin D-SUB	YCC01-10CIM3
Cable (D-SUB 9-pin, 2 m) for connecting YAM01IS Alibi memory to a PC	69EM0012
Flow rate controller for pumps with analog or digital pulse interface	YFC02Z-V2

Mechanical accessories

Installation kit for pit frame installation (disconnectable plug-in cable for indicator)	YAS99I
Wall-mounting bracket, stainless steel	YDH01CIS
Wall-mounting bracket, stainless steel, tiltable	YDH02CIS
Floor-mounted column	YDH03CIP
Floor-mounted column, stainless steel	YDH03CIS
Base for installing floor-mounted column, stainless steel	YBP03CIS
Retainer for bar code scanner, for attachment to floor-mounted column, bench column or complete scale column	YBH01CWS
Plate for attaching printer to floor-mounted column or bench column	YPP01CWS

Software

Flexible printout configuration (e.g., bar codes, variable font sizes, embedding graphics, and similar) – Just ask your sales consultant	
Sartorius WinScale driver software for Windows 95/98/2000/NT with current display of the weights and verifiable PC data memory, RS-232C, connecting cable 7357314 required	YSW03
SartoConnect PC program set for transferring weights to a PC running Windows® 95/98/NT and for direct further processing using Excel, ACCESS, etc.; incl. connecting cable for CISL and CW1/2/3P	YSC01L
SartoConnect PC program set for transferring weight values to a PC running Windows® 95/98/NT and for direct further processing using Excel, ACCESS, etc.; incl. connecting cable for CISL and CW1/2/3S, connecting cable YCC02-R12F6 or Option M6 required	YSC01I

Power supplies

24-V industrial power supply module	YAS02CI
External rechargeable battery pack, operates up to 40 hours, incl. battery charger	YRB10Z
External rechargeable battery pack, operates up to 40 hours, battery charger not included	YRB10Z-R
Connecting cable (25-pin, D-SUB) for YRB10Z rechargeable battery pack, 2 m	YCC02-RB01
Connecting cable with cable gland for YRB10Z rechargeable battery pack, 2 m	YCC02-RB02
Connecting cable with cable gland, for car battery, 2 m*	YCC02-CB02

Connecting cables

with cable gland for YBR02FC bar code scanner*	YCC02-BR02
with cable gland for D09F6 printer, 9-pin D-SUB male connector, 6 m*	YCC02-D09M6
with cable gland for accessories, 9-contact D-SUB female connector, 6 m*	YCC02-D09F6
with cable gland for Sartorius scale, 25-contact D-SUB female connector, 1.5 m*	YCC02-D25F6
with cable gland for Sartorius scale, 25-pin D-SUB male connector, 6 m	YCC02-D25M6
with cable gland for accessories or IS platform, 12-pin round male connector, 6 m*	YCC02-R12M6
with cable gland, 12-contact round female connector, 1.5 m*	YCC02-R12F6
Cable for YDA01C-20MA power interface, with open cable ends e.g., 5 × = 5 m	6906926
Cable for connecting a PC, 25-pin, D-SUB, 1.5 m	7357312
Cable for connecting a PC, 9-pin, D-SUB, 1.5 m	7357314
Cable for connecting isi, QA/QC, FB/FC scales (25-pin D-SUB male connector to 12-pin round male connector), 3 m	YCC01-02ISM3
Connecting cable for scales, 25-contact D-SUB male connector (25-pin D-SUB female connector to 25-pin D-SUB male connector), 3 m	YCCDI-01M3
Connecting cable for scales to IS platform (25-pin D-SUB male connector to 12-contact round female connector), 3 m	YCC01-03CISLM3
Cable for connecting scale to platform, junction box or other weighing system equipment, approx. 8 mm outer diameter, shielded, with open ends; e.g., 5 × = 5 m	69YO1100

Other accessories

In-use covers (set of 2)	YDC01CI
IP65 upgrade kit for the IP44 protected Combics CISL indicators	YAS01CISL
Anti-theft locking device	YTP01CI
Cable gland for Combics model CIS, IP67 protected*	YAS04CIS
Installation kit for integration in a control panel	YAS03CI

* only for CIS 1/2/3 indicator

Options – the magic word that means unbeatable convenience

You are already familiar with the proven quality of accessories from Sartorius. Now, they are available with extra service that will make it much easier for connecting and integrating the new Combics indicators to and into your peripherals. Just pick out the accessories you really need from the list below – we'll preconfigure your indicators. As a result, you'll obtain your customized version already pre-assembled at the factory. This saves time and lets you start using your new Combics equipment as soon as you get it.

Special options	Option code
Additional interface only one choice possible	
Interface (RS-232C)	A1
Interface (RS-422)	A2
Interface (RS-485)	A3
Analog interface (current output), 0–20 mA, 4–20 mA, 0–5 V, 16-bit	A4
Profibus module	B1
Bluetooth module (only for CIS models)	B2
Power supply	
24-volt industrial power supply module	L8
Connecting cable for rechargeable battery pack YRB10Z, 2 m*	L2
Connecting cable for car battery, 2 m	L5
Separable plug connection, indicator – platform	X1
Other options	
IP65 kit for IP44 CISL indicators	L1
Anti-theft locking device	L7
Extra-long connecting cable, indicator – platform, 6 m	P2
Extra-long connecting cable, indicator – platform, 9 m	P3
Extra-long connecting cable, indicator – platform, 15 m	P4
Equipment approved for use in Zone 2 and 22 hazardous areas (only for CIS 2/3 indicators)	Y2

* only for CIS 1/2/3 indicators

Special options	Option code
Connecting cables with cable gland, only for CIS indicators	
Connecting cable for accessories (25-pin D-SUB), 6 m	M1
Connecting cable for Sartorius scale (25-pin D-SUB), 6 m	M2
Connecting cable for YDP12/04IS-0CE printer (9-pin D-SUB), 6 m	M3
Connecting cable for PC (9-pin D-SUB), 6 m	M4
Connecting cable for Sartorius scale (12-pin, round), 6 m	M5
Connecting cable for accessories (12-pin D-SUB), 6 m	M6
Connecting cable for IS platforms (12-pin round), 6 m	M7
Connecting cable for YBR02FC bar code scanner	M8
Connecting cable for YDP03-0CE printer (9-pin D-SUB), 6 m	M9