

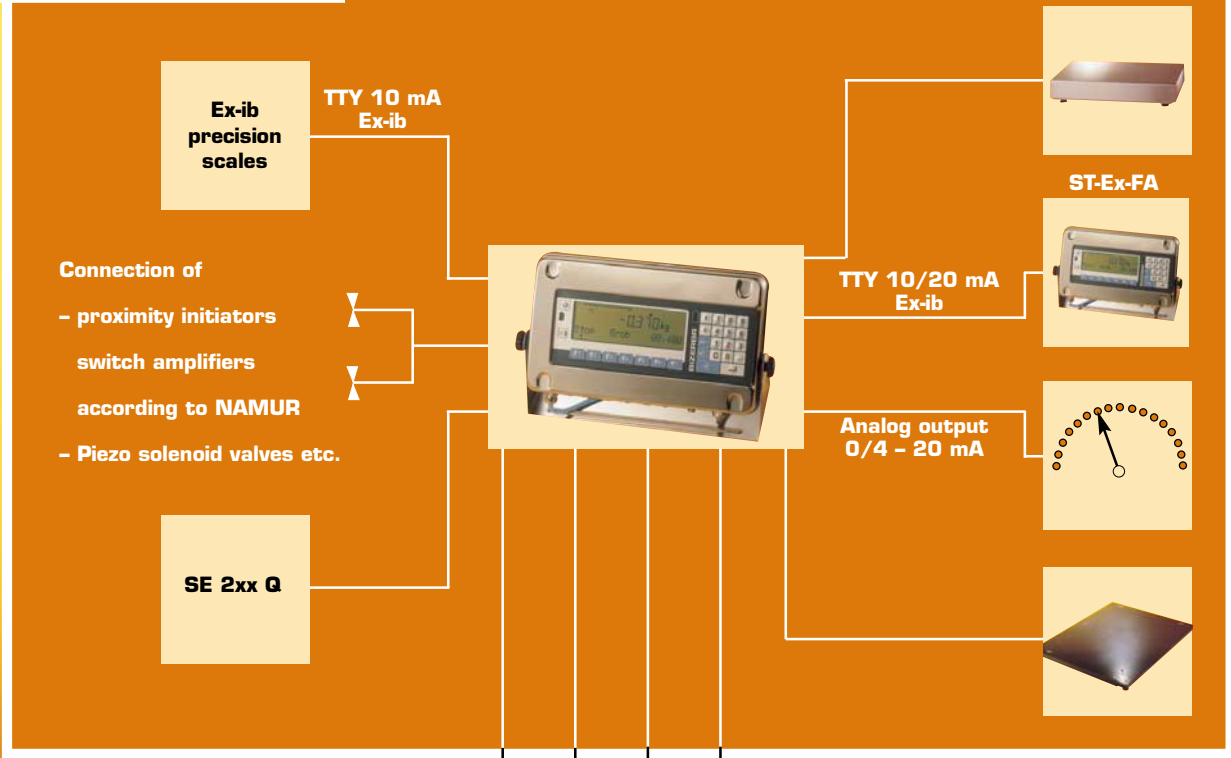
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**BIZERBA | INDUSTRIAL****WEIGHING TERMINAL ST-EX**

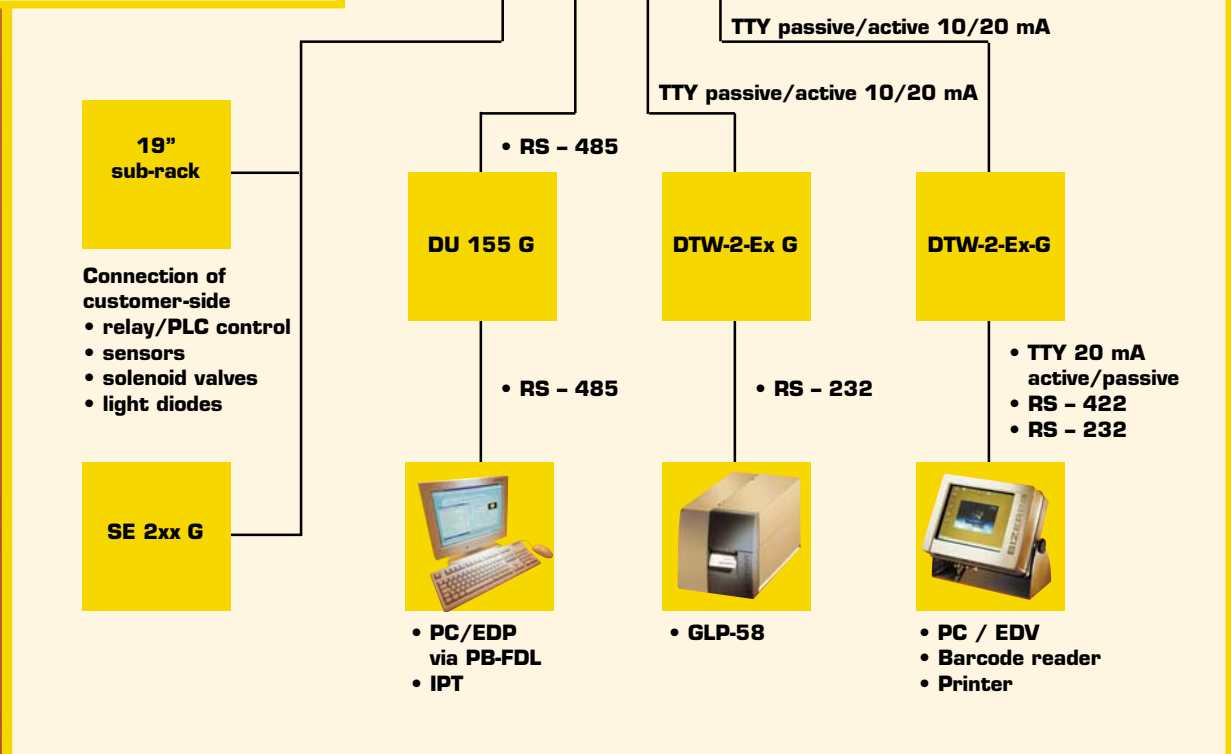
→ STANDARD TERMINAL IN STAINLESS
STEEL HOUSING FOR ZONES 1 AND 21.

→ CONNECTION OF DATA AND CONTROL BUFFER STAGES

EX AREA



NON EX AREA





ROBUST AND ELEGANT

WITH HIGH PROTECTION CLASS?

→ Industry-independent capability

The ST-Ex terminals for Ex-Zones 1 and 21 have versatile applications, whether in chemistry, petrochemistry, pharmaceuticals, plastics industry (paint filling, gas filling).

→ Top-level equipment

is standard with Bizerba

The ST-Ex terminals are distinguished by the latest technology and elegant design, ready to use and maintenance-friendly, all within a stainless steel housing as standard. Thanks to the high protection class IP68, the ST-Ex terminal is protected against corrosion, dust and water; irrespective of the place of use. The extremely resistant and easy to clean stainless steel housing also allows the ST-Ex terminals to be used in particularly sensitive areas. The LCD liquid crystal display is backlit, and offers particularly good legibility, as the reading angle can also be individually adjusted via the housing.

The clearly laid out membrane keyboard is very easy and positive to operate, thanks to a tactile mechanical pressure point. Freely assignable and configurable function keys enable direct invocation of definable weighing functions. The stainless steel housing is

The performance spectrum of the Bizerba ST-Ex terminals

→ WEIGHING AND RECORDING

→ COUNTING

→ DOSING/COLOR-MATCHING

→ CONTROL

→ TERMINAL MODE/EDP

suitable for table and wall mounting, but can also be combined with a universal stand column.

The ST-Ex terminals allow the connection of two load receptors. Intrinsically safe serial interfaces enable connection via data separating converters to PC, EDP printer or reading devices. The intrinsically-safe parallel interfaces allow the direct connection of proximity initiators and switch amplifiers according to Namur or; via control buffer stages, the connection of relay/PLC control, sensors, solenoid valves and light diodes.

→ ST-EX BUILT-IN HOUSING



→ ST-EX WITH STAND COLUMN



** A MATTER OF COURSE WITH THE BIZERBA ST TERMINALS.

→ ADDITIONAL COMPONENTS

Installation in Ex area

- **BK-Ex:** Battery case for use in Ex Zones 1 and 21
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- **EC type test certificate:** **Nr. EX 5 01 11 38033 014** according to Appendix III of Council Guideline no. 94/9/EC (ATEX) for equipment and protection systems intended for use in potentially explosive areas
 Nominal data:
 Device group II, Category 2 G/D
 Ignition protection type: EEx ed IIC T6
 Max. surface temperature: 80 °C
-
- **Explosion protection guideline:** ⓧ II 2 G EEx ed IIC T6
 ⓧ II 2 D, T 80 °C
-
- **Technical data:** Battery: Maintenance-free lead gel battery
 Voltage: 12 V
 Capacity: 20 Ah
 Working time: 12–30 h depending on design of the ST
 Charging time: 12 h
 Housing: Stainless steel 1.4301 [WxHxD] 28x332x140 mm
 Protection class – IP68
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- **Remote display:** STEx-FA for Ex Zone 1 and 21
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- **Control buffer stage:** For use in Ex Zone 1 with silica sand filling
 Nominal data: Ignition protection class: EEx [ib] IIC T6
 Technical data, see Ex-free area

Installation in Ex-free area

- **Control buffer stage:** For use in Ex-free area
 Nominal data:
 Ignition protection type: [EEx ib] IIC
 Technical data:
 Housing: Aluminium diecast, painted, 230x380x125mm [WxHxD]
- Control input separator **SET-Ex**
 – Optoelectronic coupler inputs: 8
 – Triggering d.c. voltage: 3 – 40 V
 – Triggering current: 2 – 3,5 mA
- Control input separator **SAT-Ex**
 – Transistor outputs: 8
 – DC connection voltage for output side: max. 30 V
 – Max. voltage drop: 1 V
 – Load current: max. 20 mA
 – Protective resistance per transistor output: 1,1 kΩ
- Relay card**
 – Outputs: 4
 – Power supply: 120 – 240 VAC
 24V DC/AC
 – Turn-on voltage: 20 - 250V
 – Switching current (at 250V): 100 mA DC
 3 A AC

→ Data separating converter DTW1:

The data separating converter separates an intrinsically-safe TTY current interface from a non-intrinsically-safe TTY interface

Technical data:
 Housing: Aluminium diecast, painted, 80x75x57mm [WxHxD]
 Protection class: IP65
 Ignition protection class: [EEx ib] IIC
 Ex-i-side: TTY 20mA (passive)
 External device side: TTY 20 mA (active/active)
 Channel: 1

→ Data separating converter DTW2:

The data separating converter separates an intrinsically-safe TTY current interface from a non-intrinsically-safe TTY, RS422, RS232 interface

Technical data:
 Housing: Aluminium diecast, painted, 220x120x87mm [WxHxD]
 Protection class: IP65
 Ignition protection class: [EEx ib] IIC
 Ex-i-side: TTY10/20mA (active/passive)
 External device side: TTY20mA (active/passive)
 RS422
 RS232
 Channels: 2

Option:
 Design as European insert card for installing in a 19" sub-rack

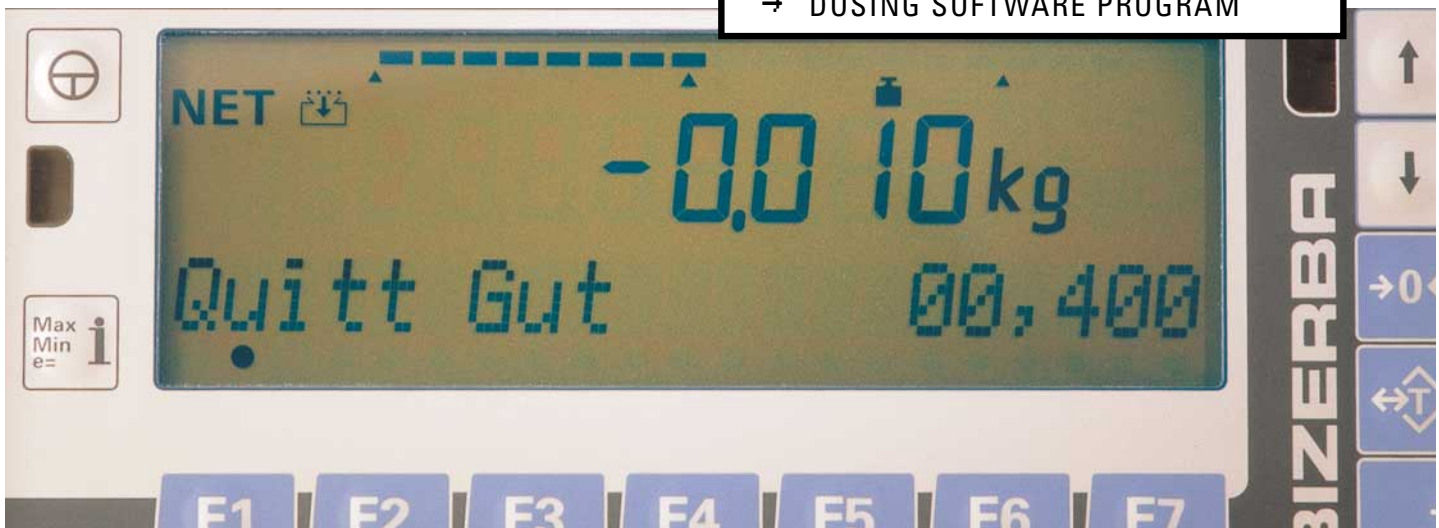
→ Separating repeater DU155:

The DU155 separating repeater safely separates an intrinsically-safe RS485 interface from a non-intrinsically-safe RS485 interface.

Technical data:
 Housing: Aluminium diecast, painted, 220x120x87mm [WxHxD]
 Protection class: IP65
 Ignition protection class: [EEx ib] IIC
 Ex-i-side: RS485 (Ex) with reduced level
 External device side: RS485
 Channels: 1

Option:
 Design as European insert card for installing in a 19" sub-rack

→ "DOSING SOFTWARE PROGRAM"





HOW WOULD YOU LIKE IT: SIMPLE, UNIVERSAL OR HIGHLY INTELLIGENT?

→ The intelligent interface

The standard ST-Ex terminals can provide solutions for the most diverse weighing tasks. Whether simple weighing or demanding processing of operating data, whether predominantly reading values or data input, in all cases the new Bizerba ST-Ex terminals represent the center of the weighing system. They provide a two-way interface between load receptor, PC and periphery and, at the same time, an intelligent evaluation terminal.

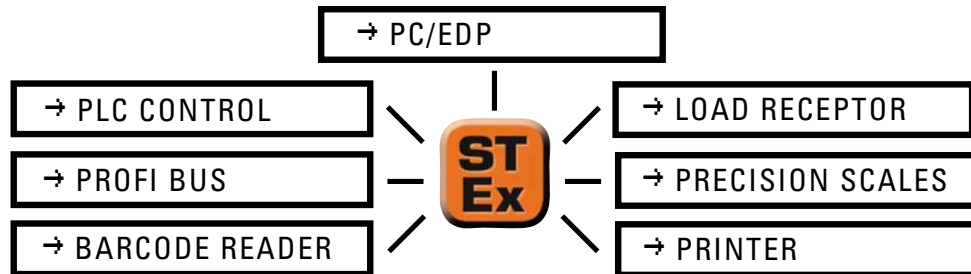
→ Extremely broad range of application

The Bizerba ST-Ex terminals, with their extensive functional features and customer-specific software licensing, enable individual,

reasonably-priced solutions, e.g. for weighing, counting, dosing, control and tolerance control. A large range of your daily applications can be professionally covered with the ST-Ex standard hardware and software.

→ Open to diverse possibilities

The ST-Ex terminal can act as an operating data recording station and an effective rationalization tool. Quality assurance. Provision of economical loading and storage units. Definition of quantities. Commissioning of equal-weight parts. Optimized material and energy use. Preparation of material schedules.



→ "TOLERANCE CONTROL" SOFTWARE PROGRAM



**** THE NEW BIZERBA ST TERMINALS MEET THE MOST DIVERSE REQUIREMENTS**



ST-Ex standard equipment

- **EC type test certificate:** Nr. EX5 01 10 38033 013 according to Appendix III of Council Guideline no. 94/9/EC (ATEX) for equipment and protective systems intended for use in potentially explosive areas.

Nominal data:
Equipment group II. Category 2 G/D
Ignition protection class: EEx ib m IIC T4
Max. surface temperature: 100 °C

- **Explosion protection guideline:** Ⓜ II 2 G EEx ib m IIC T4
Ⓜ II 2 D, T 100 °C

- **Housing:** Completely manufactured in stainless steel 1.4301.
Dimensions: 382x262x152 mm (WxHxD)

- **Protection class:** Dust and water-tight: according to IP68
Suitable for use in potentially explosive areas in Zones 1 and 21.

- **Display:** LCD display with backlighting, divided into display fields for the weight values, digit height approx. 18mm with status and weighing specific/calibration technical data; 21 digit display line for operator guidance or as additional character and function display, 5 x 7 dot matrix, character height approx. 12 mm

- **Keyboard:** 27 labeled membrane keys with mechanical pressure point and acoustic input acknowledgement. Including 7 freely configurable function keys.

- **ADW:** Plug-in ADW module on the display/CPU panel for connecting a load receptor.
Impedance min. 87 Ω

- **Auxiliary power:** Standard: 120 / 230 V AC
Optional: 24 V AC, 24 V DC
12 V battery
with total discharge protection

- **Power consumption:** Max. 20 W

- **Unladen weight:** Approx. 4 kg

- **Ambient temperature:** Operation: -10 to +40 °C
Storage: -20 to +60 °C

- **Dimensions in mm (inches):**

ST-Ex optional equipment

- **Additional ADW:** Second ADW for connecting a further load receptor. Selection via function key

- **Intrinsically-safe serial interfaces:** Equipped with maximum 2 interface cards in the following design variants

- **TTY 10/20mA:** Intrinsically-safe interface TTY 10/20 mA for direct connection of an ST-Ex-FA or for the connection of various peripheral devices via data separating converter

- **RS485 Ex:** Intrinsically-safe interface RS485 Ex for networking several ST-Ex evaluation units via Profibus FDL. The connection to the Ex-free Zone occurs via separating repeater

- **Analog output 0/4 – 20 mA:** Equipped with max. 2 interface cards. Intrinsically-safe analog output 0/4–20mA for connecting an Ex-isolating amplifier, measuring, control or display unit

- **Intrinsically-safe parallel interface P10 4E/4A:** Maximum equipment: 2 parallel interface cards 8 inputs / 8 outputs design variants on interface card selectable

- **Active input according to Namur 19234:** U₀ = 10 V, I₀ = 33 mA for potential-free contacts (Exi), relay components with ex-compliant isolation. Proximity initiators according to Namur 19234

- **Passive input:** 3.5 V to 15 V, 2.1 mA to 20 mA for safety barriers or ex-isolator

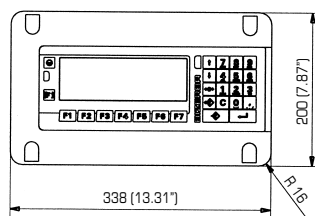
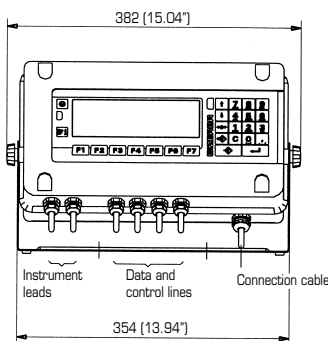
- **Active output:** 9 V, 25 mA for solenoid piezo valves, light diodes, evaluation barriers

- **Passive output according to Namur 19234:** Load 360 Ohm for switch amplifier according to Namur 19234 with resistors for cable monitoring (wire break and short-circuit)

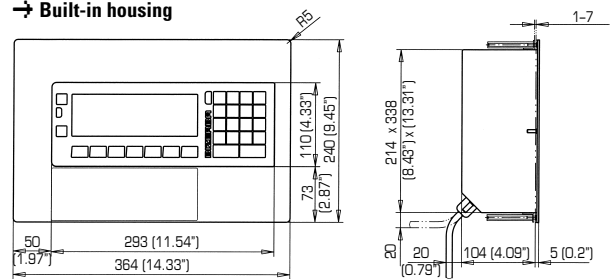
ST-Ex optional functions/software

- **Software modules:** Weighing/counting, plus/minus tolerance control, one-component dosing/filling, one-component dosing with filling column control, one-component dosing with BIG-BAG program, in-motion weighing, customer and article file program

- **Software modules for connection to external devices:** Connection via control/data buffer stages, printer, scanner, remote display, EDP connection with RS232, EDP connection via Profibus FDL



→ Built-in housing



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