Industrial Weighing Electronics

BAYKON
Industrial Weighing Systems
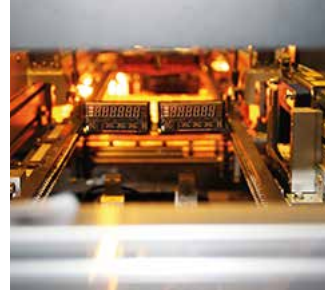
Sector leader...

BAYKON is one of the leading company in Global Industrial Weighing sector with;

✓ Wide range products from basic weighing to advanced weighing solutions,
✓ Possessor of international accreditations and sectoral certificates,
✓ Trained and experienced professional manpower to support our business partners,
✓ Export more than 90 countries with Global experience.

Since 1987, industrial weighing instruments manufacturer BAYKON has built upon its reputation for product quality, international experience, technical innovation, fast and effective customer support.

We deliver weighing products that integrate productivity, compliance, quality and safety into your weighing applications and solutions. Our experienced and well trained team using the most up-to-date technology, develops and manufactures state of the art weighing instruments; our project team, as a solution provider, eliminates customers problems by developing innovative products and customized solutions.

ISO 9001   ISO 17025   TÜRKAK   METAS Federal Office of Metrology   CE   OIML   PCT

CONTENTS

Weighing Transmitters

Weighing Indicators & Terminals

Weighing Accessories

Transmitters

	Analogue Transmitters		Digital Transmitters
	TX11 / TX12	**TX13 / TX13VL**	**TX2**
Approval / Features			
EU approval / OIML features	——	——	——
Range	Single range		Single range
Load cell type	Analogue load cell		Analogue load cell
Scale input quantity Maximum	1	1	1
ATEX / IECEx Approval	——	——	——
Display	3 x status LED		3 x status LED
eCal electronic calibration	☺ TX12	☺	☺
Set-up from PC by Indface software	☺ TX12	☺	☺
Alibi memory	——	——	——
Applications			
Basic weighing	☻	☻	☻
Process weighing	☻	☻	☻
Measurement data in count	——	——	☻
Checkweighing / Classifying	——	——	——
Basic Filling/ Manual Packing	——	——	——
Automatic Packing / Filling	——	——	——
Accumulation	——	——	——
Peak hold / Display hold	——	——	——
Automatic checkweighing / Sorting	——	——	——
Discontinuous Totalizer, Flow rate control	——	——	——
Truck scale software	——	——	——
Labeling / Report	——	——	——
Force measurement	——	☺	☺
Memory for applications	——	——	——
Data logging	——	——	——
Other		Analog out for motor control (TX13VL)	
Communication & Input / Output			
RS 232C Serial interface	1(for programming)	1	1
RS 485 Serial interface	——	——	△
Ethernet TCP/IP	——	——	△
Profinet / Profibus DPV1	——	——	△
EtherNet IP / EtherCAT / Powerlink	——	——	△
Modbus RTU / Modbus TCP	——	△ Modbus RTU	△
CANopen	——	——	△
CC-Link	——	——	△
USB	——	——	——
Bluetooth / Wifi	——	——	——
Digital inputs / Outputs	2 out (TX12)	1 In / 2 out	——
Analogue Output	☺	☺	
Environment & Enclosure			
Housing & IP protection	Polyamide, DIN-rail mount, IP20		Polyamide, DIN-rail mount, IP20
Power Supply	12 - 28 VDC	12-28 VDC (TX13) / 9-28 VDC (TX13VL)	10 - 28 VDC
Battery	——	——	——
Operating Temperature	-15°C and +55°C		-15°C and +55°C
Dimensions (H x W x D)	114,5 x 22,5 or 45 x 99		114,5 x 22,5 or 45 x 99

☻ Standard   ☺ Option   —— Not available   △ Varyant

Transmitters			
Digital Transmitters			
TX4	TX20	BX18	MX08

TX4	TX20	BX18	MX08
——	——	——	——
Single range			
Analogue load cell			
1	1	1	8
——	——	——	——
3 x status LED	6 digits, LED, 11 mm high	6 digits, LED, 14 mm high	Δ 5 digits LED, red
☺	☺	☺	☺
☺	☺	——	☺
——	——	——	——
☺	☺	☺	☺
☺	☺	☺	☺
——	☺	——	——
——	☺	——	——
——	☺	——	——
——	☺	——	——
——	☺	☺	——
——	☺	☺	——
——	☺	——	——
——	——	——	——
——	——	——	——
——	——	——	——
☺	☺	☺	☺
——	☺	——	——
——	——	——	——
1	——	1	1
Δ	☺	1	Δ
Δ	Δ	——	Δ
Δ	Δ (Profinet)	——	Δ
Δ	Δ	——	Δ
Δ	☺	Modbus RTU	Δ
Δ	——	——	——
Δ	——	——	——
——	☺	——	——
——	——	——	——
——	Δ	4 in / 6 out	Max 32 in / 32 out
——	Δ	☺	——
Polyamide, DIN-rail mount, IP20	ABS, DIN-ray montaj, IP20	Polyamide, DIN-rail mount, IP20	
10 - 28 VDC	10 - 28 VDC	12 - 28 VDC	10 - 28 VDC
——	——	——	——
-15°C and +55°C			
114,5 x 22,5 or 45 x 99	25,4 x 106 x 126	89,7x 107,6 x 62,2	114,5 x 22,5 or 45 x 99

☺ Standard   ☺ Option   —— Not available   Δ Varyant

Industrial Weighing Indicators, Terminals and Controllers

Weighing Indicators (Desk / Wall type)

	BX21	BX21S	BX22
Approval / Features			
EU approval / OIML features	OIML R76,class III 10000 divisions		
Range	Single range, up to 2x MR		
Load cell type	Analogue load cell		
Scale input quantity Maximum	1	1	1
ATEX / IECEx Approval	——	——	——
Display	LCD with 25mm digit height, multicolor (only S variants)		
eCal electronic calibration	——	——	——
Set-up from PC by Indface software	——	——	——
Alibi memory	——	——	☺
Applications			
Basic weighing	●	●	●
Process weighing	——	——	——
Piece counting	●	●	——
Checkweighing / Classifying	●	●	●
Basic Filling/ Manual Packing	——	——	——
Automatic Packing / Filling	——	——	——
Accumulation	●	●	●
Peak hold / Display hold	——	——	——
Automatic checkweighing / Sorting	——	——	——
Discontinuous Totalizer, Flow rate control	——	——	——
Truck scale software	——	——	——
Labeling / Report	——	——	——
Force measurement	●	●	●
Memory for applications	●	●	●
Data logging	——	——	
Other			Δ Lightning protection
Communication & Input / Output			
RS 232C Serial interface	1	1	2
RS 485 Serial interface	——	——	——
Ethernet TCP/IP	——	——	——
Profinet / Profibus DPV1	——	——	——
EtherNet IP / EtherCAT / Powerlink	——	——	——
Modbus RTU / Modbus TCP	——	——	——
CANopen	——	——	——
CC-Link	——	——	——
USB	——	——	——
Bluetooth / Wifi	☺	☺	☺
Digital inputs / Outputs	——	——	——
Analogue Output	——	——	——
Environment & Enclosure			
Housing & IP protection	ABS, IP30	Stainless steel, IP65	Stainless steel, IP67
Power Supply	12 VDC	100-240 VAC, 50-60 Hz, Δ12 VDC	
Battery	☺	☺	☺
Operating Temperature	-15°C and +55°C		
Dimensions (H x W x D)	220 x 110 x 55	134 x 224 x 74	187 x 224 x 92

● Standard   ☺ Option   —— Not available   △ Varyant

Industrial Weighing Indicators, Terminals and Controllers

	Weighing Indicators (Desk / Wall type)			Weighing Terminals
	BX23 (D)	BX24 (D)	BX25 (D)	BX61
	OIML R76,class III 10000 divisions			OIML class III, 6.000 d
	Single range, up to 3 x MR / MI			Single range,multi range
	Analogue load cell (or △ Digital load cell)			Analogue load cell
	1	1	2 and Sum Scale	4
	—		—	—
	LCD, multicolor, 6 digits 22 mm weight display, 16 digits 8 mm alphanumeric display			TFT 5.7" Touchscreen
	●	●	●	—
	●	●	●	—
	☺	☺	☺	—
	●	●	●	●
	●	●	●	—
	—	●	●	●
	—	●	●	●
	—	●	●	—
	—	—	—	—
	—	●	●	●
	—	—	—	—
	—	—	—	—
	—	—	—	—
	—	—	—	—
	●	●	●	Customised
	—	—	—	—
	—	●	●	●
	●	●	●	—
	△ Lightning protection	△ Lightning protection	△ Lightning protection	Formulation
	2 isolated	2 isolated	2 isolated	2
	1	1	1	—
	●	●	●	●
	☺	—	☺	—
	☺	—	☺	—
	●	—	●	●
	☺	—	☺	—
	☺	—	☺	—
	●	●	●	2
	☺	☺	☺	☺
	☺ (4 in / 5 out)	☺ (4 in / 5 out)	☺ (4 in / 5 out)	4 in / 4 out
	☺	☺	☺	—
	Stainless steel, IP67			ABS IP54 or Stainless steel IP66 Panel
	100-240 VAC, 50-60 Hz or 12-28 VDC			120-230 VAC Adaptor
	—		—	—
	-15°C ~ +55°C			-10°C ~ +40°C
	Desk type : 250 x 180 x 85 mm Wall type : 260 x 200 x 64 mm			ABS 215 x 156 x 67 mm

● Standard   ☺ Option   — Not available   △ Varyant

Industrial Weighing Indicators, Terminals and Controllers

Weighing Terminals

	BX65	BX66 / BX66W	BX67W
Approval / Features			
EU approval / OIML features	OIML class III, 10.000 division		10.000 division
Range	Single range, multi range or multi interval		Single range
Load cell type	Analogue load cell		
Scale input quantity Maximum	1	2	4
ATEX / IECEx Approval	——	——	——
Display	TFT 7" Touchscreen	TFT 10" Touchscreen	TFT 15" Touchscreen
eCal electronic calibration	☻	☻	☻
Set-up from PC by Indface software	——	——	——
Alibi memory	☻	☻	☻ (İndustrial)
Applications			
Basic weighing	☻	☻	☻
Process weighing	——	——	——
Piece counting	——	——	——
Checkweighing / Classifying	——	——	——
Basic Filling/ Manual Packing	——	——	——
Automatic Packing / Filling	——	——	——
Accumulation	——	——	——
Peak hold / Display hold	——	——	——
Automatic checkweighing / Sorting	——	——	——
Discontinuous Totalizer, Flow rate control	——	——	——
Truck scale software	☻	☻	☻
Labeling / Report	☻	☻	☻
Force measurement	——	——	——
Memory for applications	☻	☻	☻
Data logging	☻	☻	☻
Other	△ Lightning protection Statistical quality control	△ Lightning protection Customised software	Customised software
Communication & Input / Output			
RS 232C Serial interface	1	1	2
RS 485 Serial interface	——	——	——
Ethernet TCP/IP	☻	☻	☻
Profinet / Profibus DPV1	——	——	——
EtherNet IP / EtherCAT / Powerlink	——	——	——
Modbus RTU / Modbus TCP	——	——	——
CANopen	——	——	——
CC-Link	——	——	——
USB	2	2	2
Bluetooth / Wifi	☺	☺	☺
Digital inputs / Outputs	☺ (4 in / 4 out)	☺ (4 in / 4 out)	☺ (Max 32 in / 32 out)
Analogue Output	——	——	——
Environment & Enclosure			
Housing & IP protection	Stainless steel, IP30 & IP67		Stainless steel, IP67
Power Supply	90 - 240 VAC, 50 / 60 Hz or 11-28 VDC		
Battery	——	——	——
Operating Temperature	-15°C ~ +55°C		
Dimensions (H x W x D)	BX65 / BX65H : 235 x 252 x 75 mm	285 x 338 x 90 mm	325 x 400 x 62 mm

☻ Standard   ☺ Option   —— Not available   △ Varyant

Industrial Weighing Indicators, Terminals and Controllers

Exproof Indicators

BX23 Ex2/22	BX24 Ex2/22	BX25 Ex2/22	BX2n Ex1/21
OIML R76,class III, 10000 divisions			
Single range, up to 3x MR / MI			
Analogue load cell			
1	1	2 and Sum Scale	2 and Sum Scale
ATEX II 3G Ex ic ec [ic] IIC T6 (Gases) ; II 3D Ex ic tc [ic] IIIC T85 IP67 (Dust) IECEx Gases Ex ic ec [ic] IIC T6 Gc ; Dust Ex ic tc [ic] IIIC T85 Dc IP67			Certification in progress
LCD, multicolor, 6 digits 22 mm weight display, 16 digits 8 mm alphanumeric display			
●	●	●	●
●	●	●	●
○	○	○	○
●	●	●	●
●	●	●	●
—	●	●	●
—	●	●	●
—	●	●	●
—	—	—	—
—	●	●	●
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
●	●	●	●
—	—	—	—
—	●	●	●
●	●	●	●
2 isolated	2 isolated	2 isolated	2 isolated
1	1	1	1
●	●	●	○
○	—	○	○
○	—	○	○
●	—	●	○
—	—	—	—
○	—	○	○
● (use in safe area)	● (use in safe area)	● (use in safe area)	● (use in safe area)
△	△	△	△
○ (4 in / 5 out)	○ (4 in / 5 out)	○ (4 in / 5 out)	○ (4 in / 5 out)
○	○	○	○
Stainless steel, IP67			
100-240 VAC, 50-60 Hz or 12-28 VDC			
○ Ex-proof Battery pack			
-15°C ~ +55°C			
Desk type : 250 x 180 x 85 mm Wall type : 260 x 200 x 64 mm			
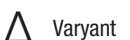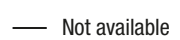
● Standard   ○ Option   — Not available   △ Varyant

Industrial Weighing Indicators, Terminals and Controllers

Process Weighing Indicators & Controllers (Panel type)

	BX10	BX11	BX13 / BX14
Approval / Features			
EU approval / OIML features	OIML R76 (BX10 / BX11 / BX13 / BX14) R61(BX13), OIML R107 (BX14), class III, 10000 divisions		
Range	Single range		
Load cell type	Analogue load cell		
Scale input quantity Maximum	1	1	1
ATEX / IECEx Approval	——	——	——
Display	6 digits, 7 segments, LED red, 13,5 mm high		
eCal electronic calibration	☺	☺	☺
Set-up from PC by Indface software	☺	☺	☺
Alibi memory	——	——	——
Applications			
Basic weighing	☺	☺	☺
Process weighing	☻	☻	☻
Piece counting	——	——	——
Checkweighing / Classifying	——	——	——
Basic Filling/ Manual Packing	——	——	☺ BX13
Automatic Packing / Filling	——	——	☺ BX13
Accumulation	☻	☻	☻
Peak hold / Display hold	☻	☻	——
Automatic checkweighing / Sorting	——	——	——
Discontinuous Totalizer, Flow rate control	——	——	☺ BX14
Truck scale software	——	——	——
Labeling / Report	——	——	——
Force measurement	☺	☺	——
Memory for applications	——	——	——
Data logging	——	——	——
Other			
Communication & Input / Output			
RS 232C Serial interface	1	1	1
RS 485 Serial interface	1	1	1
Ethernet TCP/IP	——	Δ	Δ
Profinet / Profibus DPV1	——	Δ	Δ
EtherNet IP / EtherCAT / Powerlink	——	Δ	Δ
Modbus RTU / Modbus TCP	Δ	RTU (☻) / TCP (Δ)	RTU (☻) / TCP (Δ)
CANopen	——	Δ	Δ
CC-Link	——	Δ	Δ
USB	——	——	——
Bluetooth / Wifi	——	——	——
Digital inputs / Outputs	2 in / 2 out	4 in / 5 out	4 in / 5 out
Analogue Output		Δ	——
Environment & Enclosure			
Housing & IP protection	Plastic front panel, Aluminum body	Stainless steel front panel, aluminum body, stainless steel rear panel / IP65	
Power Supply	12 - 28 VDC		
Battery	——	——	——
Operating Temperature	-15 ºC to +55ºC		
Dimensions (H x W x D)	50 x 100 x 100	48 x 96 x 100	

☻ Standard   ☺ Option   —— Not available   △ Varyant

Industrial Weighing Indicators, Terminals and Controllers

Process Weighing Indicators & Controllers (Panel type)

	BX30(D)	BX30(D) Plus	BX30 Fill	BX30 Total / BX30 Check
	OIML R76, class III 10000 divisions		OIML R61 (Fill), R51(Check), R107 (Total) Class III 10000 divisions	
	Single range, up to 3x MR / MI		Single range	
	Analogue load cell (or △ Digital load cell)		Analogue load cell	
	1	1	1	1
	—	—	—	—
	LCD, multicolor, 6 digits 22 mm weight display, 16 digits 8 mm alphanumeric display			
	●	●	●	●
	—	—	—	—
	☺	☺	☺	☺
	●	●	●	●
	●	●	●	●
	—	—	—	—
	—	●	—	● BX30 Check
	—	●	●	—
	—	—	●	—
	●	●	●	●
	●	●	—	—
	—	—	—	● BX30 Check
	—	—	—	● BX30 Total
	—	—	—	—
	●	●	●	—
	●	—	—	—
	●	●	●	●
	●	●	●	●
	up to 10 peak at peak hold testing			
	1	1	1	1
	1	1	1	1
	●	●	●	●
	△	△	△	△
	△	△	△	△
	●	●	●	●
	△	△	△	△
	△	△	△	△
	●	●	●	●
	☺	☺	—	—
	△ (4 in / 5 out)	△ (4 in / 5 out)	12 digital inputs and 14 digital outputs via In-house digital I/O board or DIN rail mount RIO16 unit.	
	△	△	△ feeding control	△ feeding control
	IP67 stainless steel front panel, aluminium body			
	12 - 28 VDC		12 - 28 VDC	
	—	—	—	—
	-15°C ~ +55°C max.		-15°C ~ +55°C max.	
	108 x 205 x 112,5		108 x 205 x 112,5	

● Standard   ☺ Option   — Not available   △ Varyant

TX11 Analogue Transmitter

Precise analogue load cell transmitter

Easy and Accurate Calibration
- 2 pcs rotary switch for zero and span adjustments.
- You can adjust the instrument output precisely because of its high external resolution.
- Calibration at PLC with default adjustment.
- Reloadable defaults.

Accurate Adjustment
- Very low drifts in long term and at temperature changes.
- Up to 60 000 resolution on analogue output.
- Up to 16 000 000 internal resolition.

TX11 analogue load cell transmitter is accurate and reliable instrument which is easily integrated into process control systems and force measurement systems. Its adjustment is as easy as digital watch adjustment. By its "digital heart", TX11 allows easy calibration with zero and gain programming rotary switches.

Its high quality analog and digital hardware minimizes the temperature and long time zero and span drifts.

The instrument is set up to 4-20 mA and 0 – 10 V output types for 0 – 10mV load cell signal range as a factory default. This feature enables zero and gain adjustments at PLC in high resolution and accuracy. Reloading the factory default is available.

Technical Specifications

Analogue Output	
Analogue output	4-20 mA, 0-20 mA, 0-10 V or 0-5 V
D/A conversion	16 bit very low drift and very high accurate DAC
External resolution	Analogue output resolution is up to 60 000 steps.
A/D Conversion	
Load cell signal range	-19 mV to +19 mV
Minimum load cell signal range	< 1 mV
Linearity	< % 0.01
Temperature drift	< 0.007 % FSR / ºC
A/D conversion	24 bit Delta-Sigma ratiometric with integrated analogue and digital filters
Internal resolution	Up to 16 000 000 counts
Weighing	
Calibration	Performed with zero and gain adjustment rotary switches on the front of the instrument.
Digital filter	Smart adaptive filter.
Load Cells	
Excitation	5 VDC
Number of load cells	Up to 4 load cells 350 Ω or up to 12 load cells 1100 Ω (min. 85 Ω)
Connection	4 wire technique.
Setup & Communication	
Front panel	3 x status LED, 2 x rotary switches
Power	
Power supply	12 - 28 VDC, max. 0.2 A
Environment and Enclosure	
Operation temperature	Between -15°C and +55°C
Humidity	At 85% RH max, non-condensing.
Enclosure	Polyamide, for DIN-rail mount, IP20
Dimensions	Front width: 22.5 mm, front length: 99 mm, height: 114.5 mm

4 - 20 mA, 0 - 10 V (default)
0 - 20 mA, 0 - 5 V
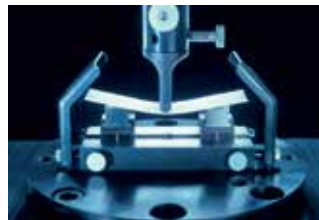
| Tank and silo weighing | Tensile and compressive tests | Strength measurement | Process control applications |

TX12 Analogue Transmitter
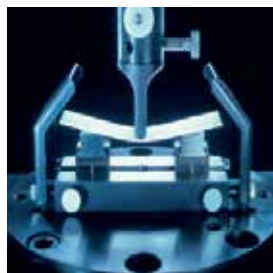
Precise analogue load cell transmitter

System Integration
- 4-20 mA, 0-20 mA, 0-10 V or 0-5 V analogue outputs
- Normalised, matched and high resolution analogue outputs
- Calibration at PLC side with default adjustments
- 2 relay contact outputs
- Minimized long time drifts

eCal - Electronic Calibration
- Calibration without using test weights via RS-232C port
- Provides big advantage for heavy capacity tank, silo and hopper scale calibration
- High accuracy because of instrument's normalisation process at the production

Typical Applications
- Tank and silo weighing
- Compressive and tensile tests
- Force measurement
- Strength measurement
- Process control applications
- Dosing systems

TX12 analog load cell transmitter is accurate and reliable instrument which is easily integrated into process control and force measurement systems.

Analogue output is programmable to 4-20 mA, 0-20 mA, 0-10 V or 0-5 V. Its high quality analog and digital hardware minimizes long time zero and span drifts. Its high resolution, matched and normalized analogue output gives advantage calibration at PLC and changing the instrument without recalibration.

eCal electronic calibration gives advantage easy calibration of the high capacity tanks and silos. Its additional fast calibration feature enables performing calibration similar to digital indicators.

2 cut off outputs of TX12 can be set via programming rotary switches on front of the instrument or via PC software to produce control or alarm signals.

Technical Specifications

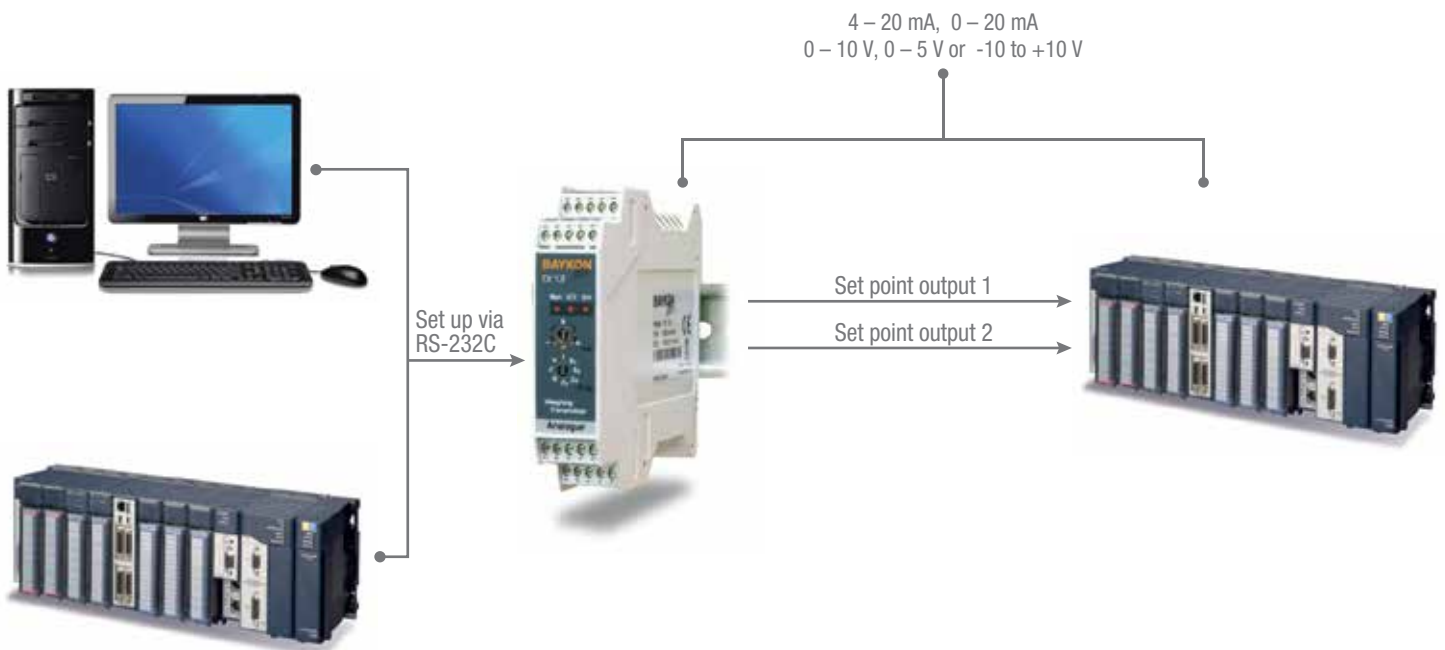|	
Analogue Output	
Analogue output range	4 - 20 mA, 0 - 20 mA, 0 - 10 V or 0 - 5 V
D/A conversion	16 bit very low drift and very high accurate DAC
External resolution	Analogue output changes up to 60 000 steps
A/D Conversion	
Analogue input signal range	-19 mV to +19 mV
Minimum input range	< 1 mV
Linearity	< % 0.01
Temperature drift	< 0.007 % FSR / ºC
A/D conversion	24 bit Delta-Sigma ratiometric with integrated analogue and digital filters
Internal resolution	Up to 16 000 000 counts
Weighing	
Adjustment	Performed with rotary switches on the front of instrument.
Electronic adjustment	eCal calibration in high accuracy without test weights.
Fast adjustment	Automatic zero adjustment and span adjustment with load 20% max.
Digital filter	3 steps adjustable smart adaptive filter.
Set points	2 programmable free setpoints, Relay contact: 240 VAC, 0.25 A or 30 VDC 0,15 A.
Load Cells	
Excitation	5 VDC
Number of load cells	Up to 4 load cells 350 Ω or up to 12 load cells 1100 Ω (min. 85 Ω)
Connection	4 wire technique.
Setup & Communication	
Front panel	3 x status LED and 2 x rotary switches.
RS-232C	For programming from PC or PLC.
Set up and adjustment software	xFace.
Power	
Power supply	12 - 28 VDC, max. 0.2 A
Environment and Enclosure	
Operation temperature	-15°C to +55°C
Humidity	85% RH max, non-condensing.
Enclosure	Polyamide, for DIN-rail mount, IP20.
Dimensions (W x L x H)	22,5 x 99 x 114,5 mm

4 – 20 mA, 0 – 20 mA
0 – 10 V, 0 – 5 V or -10 to +10 V

Set up via RS-232C

Set point output 1

Set point output 2

TX13 Analogue Load Cell Transmitter

High speed and precise analogue output

Fast and Accurate Output
- Up to 800 conversion per second
- Programmable adaptive digital filter
- Up to 16 000 000 internal resolution
- Up to 60 000 analogue output resolution
- Very low zero and gain drift at temperature changes.
- Very low drift in long term.

Analog Output With
- Bipolar load cell signal input for force measurement
- 6 wire load cell connection for high accuracy
- 2 pcs relay contact cutoff outputs and one zeroing input
- Bipolar analogue voltage output
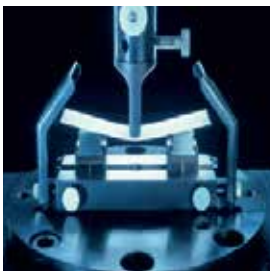
Typical Applications
- Tank and silo weighing
- Compressive and tensile tests
- Force measurement
- Strength measurement
- Process control applications
- Dosing systems

TX13 analog load cell transmitter converts load cell signal to analog output very fast and accurately. Programmable smart filter of TX13 minimizes the environmental vibration to produce the best filtered signal to your PLC for your weight and force measurement systems. Its high quality analog & digital hardware eliminates zero and span drifts caused by temperature changes and provides perfect stability for long term unlike traditional analogue transmitters.

Analogue output is programmable as 4-20 mA, 0-20 mA, 0-10 V, 0-5 V. TX13 MB has additionally -10 to 10 V analog output range. All instruments are normalized and matched in the production for direct replicement when calibration done at the PLC side and to provide highest accuracy for electronic calibration (eCAL).

2 cut off outputs can be used for alarm or control valves; one digital input can be used for zeroing the scale.

Technical Specifications

Analogue Output

Analogue output	TX13 TX13 MB	4-20 mA, 0-20 mA, 0-10 VDC or 0-5 V TX13 MB has additionally bipolar -10 to +10 V output.
D/A convertion		16 bit high resolution and very low drift DAC
Analogue output resolution		Up to 60 000 steps.
Analogue output update rate		Up to 800 conversion per second.

Load Cell Signal

Load cell signal range	-18 mV to +18 mV.
Minimum load cell signal range	< 0,8 mV
Linearity	< 0.01 %
Temperature drift	< 0.005 % FSR / ºC
A/D converter	24 bit Delta-Sigma ratiometric with integral analog and digital filters. High EMC immunity.
Internal resolution	Up to 16 000 000 counts.

Weighing

Calibration with test weight	Performed with rotary switches on the front of instrument or from PC/PLC
eCal electronic calibration	All instruments are matched at the production for high accuracy at electronic calibration via serial port.
Fast calibration	Automatic zero adjustment and span adjustment with load 20% max
Digital filter	9 step adjustable smart and adaptive filter.
Zeroing	Via serial port or opto isolated digital input.
Set points	2 programmable free setpoints, Relay contact: 240 VAC, 0.25 A or 30 VDC 0,15 A.

Load Cells

Excitation	5 VDC
Number of load cells	Up to 8 load cells 350 Ω or up to 24 load cells 1100 Ω (min. 43 Ω)
Connection	4 or 6 wire technique.

Serial Interface

RS-232C	For setup from PC / PLC or digital weight data output to connect it any other instrument.

Power

Power supply	TX13 TX13 MB	12 - 28 VDC, max. 0.2 A 9 - 28 VDC, max. 0.3 A

Environment and Enclosure

Enclosure	Polyamide, for DIN-rail mount, IP20
Front panel	3 x status LED, 2 x rotary switches for set up.
Dimensions	Width: 22,5 mm, Height: 99 mm, Depth: 114,5 mm
Operation temperature	Between -15°C and +55°C
Humidity	85% RH max, non-condensing.

4 – 20 mA, 0 – 20 mA
0 – 10 V, 0 – 5 V or -10 to +10 V

RS-232C

Set point output 1

Set point output 2

Zeroing the scale
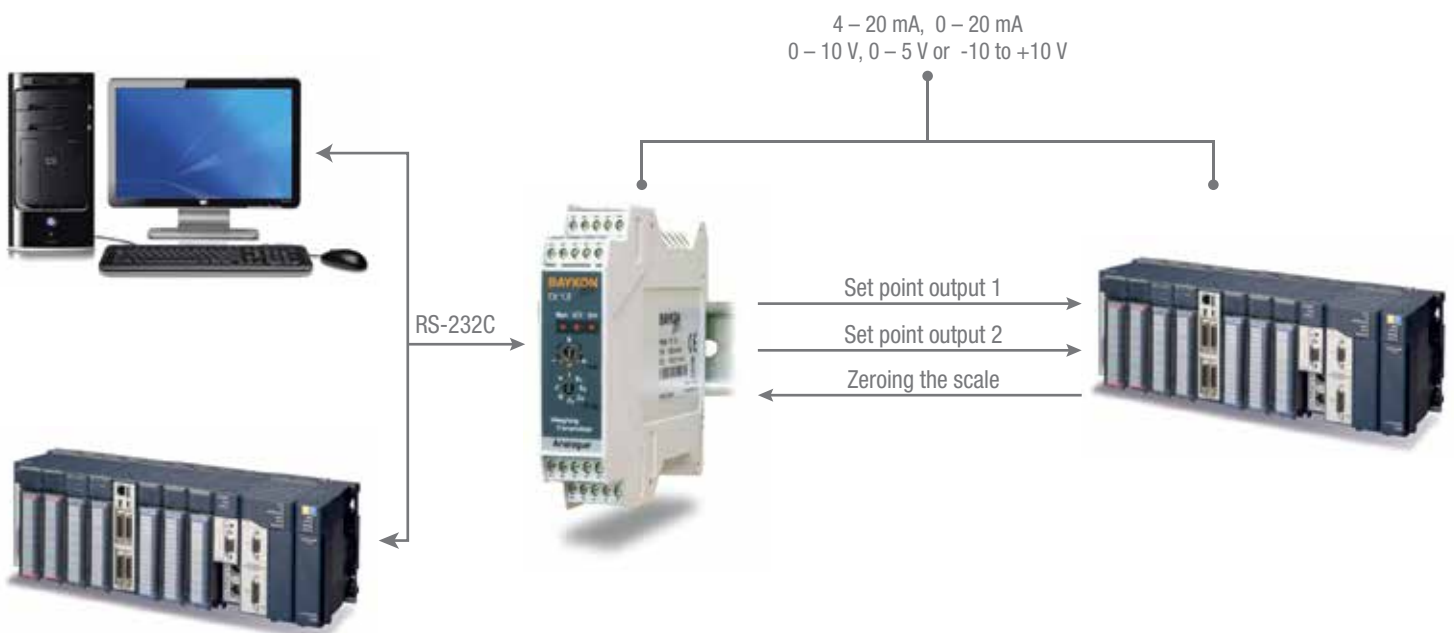
TX2 Digital Load Cell Transmitters

Precise Digital Weighing Data to PLC / DCS or PC

- RS-232C
- RS-485
- Modbus RTU
- Modbus TCP/IP
- Profibus DP
- Profinet
- CANopen
- EtherNet/IP
- EtherCAT
- CC-Link
- Powerlink

CE IP 20

Features
- Communication: Reliable data transfer with industrial communication protocols for various for PLC / DCS or PC systems
- High speed: 800 conversion/sec.
- Weighing functions: Zeroing & taring, power-on zero, AZT, net indication at power on, motion detection
- Software support: Windows based BAYKON xFace software for calibration and setup via PC
- eCal: Electronic calibration without test weight
- Vibration filter: Configurable active filter for stable weight

TX2 digital transmitter family is designed for static or dynamic weighing and force measurement processes to provide fast and accurate digital data through RS-232C, RS-485, Ethernet TCP/IP and bus systems as Profibus, Modbus TCP, Modbus RTU, Profinet, CANopen, EtherNet/IP, EtherCAT, CC-Link, Powerlink.

Weighing functions such as Zeroing, Taring, Power-On zero, Net indication at power on, Motion detection, etc. are integrated in TX2 transmitters. Configurable vibration suppression digital filter settings and calibration with test weight or electronic calibration without test weights (eCal) via Windows based BAYKON xFace software. DIN rail type enclosure provides easy montage in control panel.

Technical Specifications

TX2 Series Instruments	TX2 MB : RS-232 / RS-485 / Modbus RTU TX2 EI : EtherNet/IP
	TX2 EN : Ethernet / Modbus TCP/IP TX2 EC : EtherCAT
	TX2 PB : Profibus DP TX2 CC : CC-Link
	TX2 PN : Profinet TX2 PL : Powerlink
	TX2 CO : CANopen

A/D Converter

Type	24 bit Delta-Sigma ratiometric with integral analog and digital filters
Conversion rate	Up to 800 measurements per second
Minimum input voltage	< 1 mV
Minimum input sensitivity	0.1µV per interval
Analogue input range	0 mV to 18 mV unipolar or -18 mV to 18 mV bipolar
Linearity	Within 0.0015% FS, 2 ppm/°C
Resolution	Internal up to 8 000 000; External up to 100 000 counts in Weighing / Force modes, 1 000 000 counts for unipolar input and for selected range in Count mode and 2 000 000 counts for bipolar input and for selected range in Count mode

Calibration and Programming

Calibration	By etalon weights: Via xFace software or fieldbus
	eCal: Electronic calibration without etalon weights via xFace
	Count mode: All instruments are adjusted in production for equal performance. Calibration at PLC side
Digital filter	10 step adjustable digital adaptive filter
Weighing functions	Tare, zero, auto zero tracking, motion detection, auto-zero at power-up, net indication at power on

Load Cell

Excitation	5 VDC, max. 100 mA
Number of load cells	Up to 6 load cells 350 Ω or 18 load cells 1100 Ω in parallel
Connection	4 or 6 wire technique. Cable length 274 m/mm² for 6 wire connection

Communication

Serial Interface RS-232C	9600 baud, 8 None 1, continous data output or BSI (Baykon serial interface) communication protocol
Serial Interface RS-485 (TX2 MB)	1200 to 57600 baud, 7 even/odd, 8 None 1, continous data output, BSI or Modbus RTU comm. protocol
Modbus RTU interface (TX2 MB)	Up to 31 units on the bus, Baudrate up to 57600
Ethernet / Modbus TCP/IP (TX2 EN)	10Mbits (half duplex), galvanically isolated
Profibus DP V1 interface (TX2 PB)	9,6 kbits/s to 12 Mbits/s automatic baudrate detection
ProfiNet interface (TX2 PN)	100Mbits (full duplex), galvanically isolated
CANopen interface (TX2 CO)	10 kbits/s to 1 Mbits/s automatic baudrate detection
EtherNet/IP (TX2 EI)	10 Mbit/s or 100 Mbit/s, full duplex, galvanically isolated Adressing: Assign DHCP or manual IP with PC software
EtherCAT (TX2 EC)	100 Mbit/s, full duplex, galvanically isolated
CC-Link (TX2 CC)	156 kbps - 10 Mbps communication speed Adressing: Up to 64 stations per network
Powerlink (TX2 PL)	100Mbit/s, half duplex

Power Supply and Others

Power Supply	10 to 28 VDC, min 60mA – max. 600 mA (According to model and connected load cell units)
Enclosure	Polyamide, for DIN-rail mount, protection class IP20
Operation Conditions	Between -15°C and +55°C at 85% RH max, non-condensing

Typical Application

- RS-232C
- RS-485
- Modbus RTU
- Modbus TCP/IP
- Profibus DP
- Profinet
- CANopen
- EtherNet/IP
- EtherCAT
- CC-Link
- Powerlink

TX4 Digital Load Cell Transmitters

Precise Digital Weighing Data to PLC / DCS or PC

- ● RS-232C
- ● RS-485
- ● Digital I/O
- ● Modbus RTU
- ● Modbus TCP/IP
- ● Profibus DP
- ● Profinet
- ● CANopen
- ● EtherNet/IP
- ● EtherCAT
- ● CC-Link
- ● Powerlink

C€ IP 20

Features
- Communication: Reliable data transfer with industrial communication protocols for various for PLC / DCS or PC systems
- High speed: 800 conv./sec
- Anti-vibration filter: Adaptive antivibration active filter for fast and stable reading
- Weighing functions: Taring, AZT, zeroing, power on zero, net indication at power on, motion detection
- eCal: Electronic calibration without test weights
- Digital I/O: Parallel port with 1 x Output and 2 x configurable as Inputs or Outputs
- Software support: Windows based BAYKON xFACE software for calibration and setup via PC

TX4 digital transmitter family is designed for static or dynamic weighing and force measurement processes to provide fast and accurate digital data through RS-232C, RS-485, Ethernet TCP/IP and bus systems as Profibus, Modbus TCP, Modbus RTU, Profinet, CANopen, EtherNet/IP, EtherCAT, CC-Link, Powerlink. TX4 transmitters have a parallel port including 1 x Output and 2 configurable as Inputs or Outputs which can be controlled directly by PLC.

TX4 transmitters are programmed and calibrated via PC by BAYKON xFace software. Weighing functions such as Zeroing, Taring, Power-On zero, net indication at power on, Motion detection, configurable vibration suppression digital filter and electronic calibration without test weights (eCal) are important features. DIN rail type enclosure provides easy montage in control panel.

Technical Specifications

TX4 Series Instruments	TX4 EN : Ethernet / Modbus TCP/IP TX4 EI : EtherNet/IP
	TX4 MB : Modbus RTU TX4 EC : EtherCAT
	TX4 PB : Profibus DP TX4 CC : CC-Link
	TX4 PN : Profinet TX4 PL : Powerlink
	TX4 CO : CANopen

A/D Converter

Type	24 bit Delta-Sigma ratiometric with integral analog and digital filters
Conversion rate	Up to 800 measurements per second
Minimum input voltage	< 1 mV
Minimum input sensitivity	0.1μV per interval
Analogue input range	0 mV to 18 mV unipolar or -18 mV to 18 mV bipolar
Linearity	Within 0.0015% FS, 2 ppm/°C
Resolution	Internal up to 16 000 000; External up to 100 000 counts in Weighing / Force modes, 1 000 000 counts for unipolar input and for selected range in Count mode and 2 000 000 counts for bipolar input and for selected range in Count mode

Calibration and Programming

Calibration	By etalon weights: via xFace software or fieldbus
	eCal : Electronic calibration without etalon weights, via xFace
	Count mode: Calibration in the PLC. Changing the instrument does not require recalibration due to matched production.
Digital filter	10 step adjustable digital adaptive filter
Weighing functions	Tare, zeroing, auto zero tracking, motion detection, auto-zero at power-up, net indication at power on

Digital Input / Output

Hardware	1 output (max.100 mA per output) and 2 configurable I/O (11 to 28 VDC input signal range, max. 100 mA per output)
Function	Outputs are programmable for set points with/without threshold, tolerance band output or control output via PLC/PC. Inputs can be used for zeroing, taring or control input to PLC/PC.

Load Cell

Excitation	5 VDC, max. 100 mA
Number of load cells	Up to 6 load cells 350 Ω or 18 load cells 1100 Ω in parallel
Connection	4 or 6 wire technique. Cable length 274 m/mm² for 6 wire connection

Communication

Serial Interface RS-232C	9600 baud, 8 None 1, xFace connection
Serial Interface RS-485 (TX4 MB)	1200 to 57600 baud, 7 even/odd, 8 None 1, continous data output, BSI or Modbus RTU comm. protocol
Modbus RTU interface (TX4 MB)	Up to 31 units on the bus, Baudrate up to 57600
Ethernet / Modbus TCP/IP (TX4 EN)	10Mbits (half duplex), galvanically isolated
Profibus DP V1 interface (TX4 PB)	9,6 kbits/s to 12 Mbits/s automatic baudrate detection
Profinet interface (TX4 PN)	100Mbits (full duplex), galvanically isolated
CANopen interface (TX4 CO)	10 kbits/s to 1 Mbits/s automatic baudrate detection
EtherNet/IP (TX4 EI)	10 Mbit/s or 100 Mbit/s, full duplex, galvanically isolated Adressing: Assign DHCP or manual IP with PC software
EtherCAT (TX4 EC)	100 Mbit/s, full duplex, galvanically isolated
CC-Link (TX4 CC)	156 kbps - 10 Mbps communication speed Adressing: Up to 64 stations per network
Powerlink (TX4 PL)	100Mbit/s, half duplex

Power Supply and Others

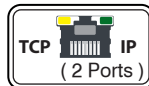|	
Power Supply	10 to 28 VDC, min 60mA – max. 600 mA (Depend on the model and connected load cell units)
Enclosure	Polyamide, for DIN-rail mount, protection class IP20
Operation Conditions	Between -15 °C and +55 °C at 85% RH max, non-condensing

Typical Application

Digital In/Out
Scale

- RS-232C
- RS-485
- Digital I/O
- Modbus RTU
- Modbus TCP/IP
- Profibus DP
- Profinet
- CANopen
- EtherNet/IP
- EtherCAT
- CC-Link
- Powerlink

TX20 Digital Transmitter

For Weight, Force, Moment and Pressure Sensors

CE   IP 20

RS 485 | Modbus RTU / TCP | TCP IP (2 Ports) | PROFINET (2 Ports) | PROFINET S2 (2 Ports) | EtherNet/IP (2 Ports) | EtherCAT (2 Ports) | ETHERNET POWERLINK (Ports)

Features
- All Ethernet output products are dual-port for daisy chain connection
- Variant with direct connection to Profinet S2 System Redundancy
- Additional Modbus RTU communication for products with Fieldbus outputs
- High reliability with triple signal isolation
- Programming and calibration via Fieldbus
- Easy programming with Alphanumeric display
- Vibration filter: Stable reading for agitated tanks and vibrating environments
- eCal: Error-free adjustment with products calibrated in production
- Remote programming via web page (EN variant)
- Logging of device interventions and system failures

TX20 series digital transmitters are designed for force, moment, and pressure measurement processes in addition to static and dynamic weighing. They transfer precise measurement information acquired at a high conversion rate to your PLC/SCADA/PC system in the most accurate and fastest way with industrial communication protocols. All products with Ethernet output are dual-ported to provide Ethernet daisy chain connection. TX20 can also be connected to Profinet Redundant S2 systems directly. 3 digital inputs, 4 digital outputs, and analog outputs are available as additional connection options.

TX20 transmitters are manufactured identically to each other and individually calibrated. Thanks to this feature, they can be replaced directly without needing any adjustment in the counting mode, and in the weight mode error on the electronic calibration because of replacement is less than 0.00003%.
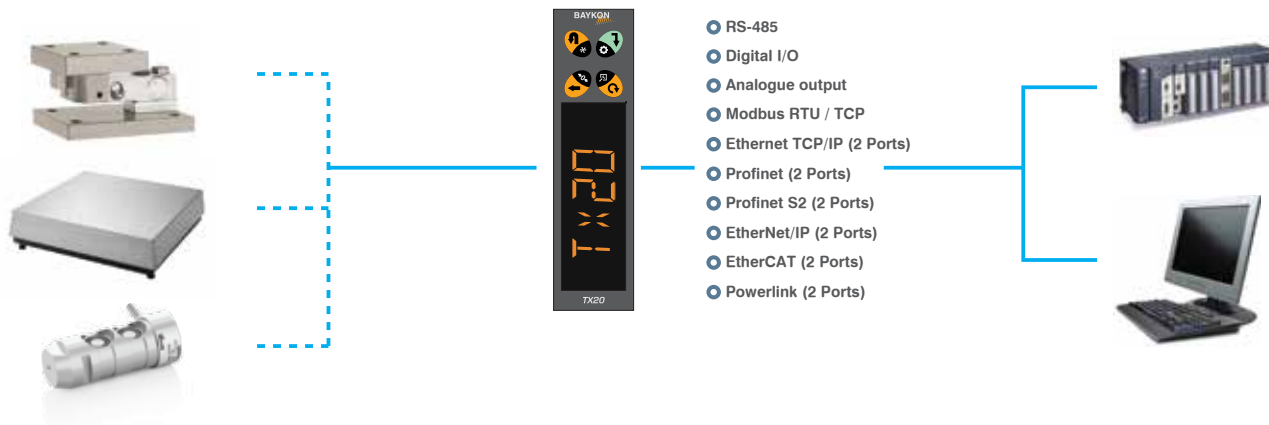
Technical Specifications

A/D Converter

Type	24-bit Delta-Sigma ratiometric with integral analog and digital filters and a conversion rate of up to 1600 cycles/second
Minimum input signal / vsi	0.1 µV
Input signal range	0 mV to 75 mV unipolar or -75 mV to +75mV bipolar
Linearity and thermal drift	< 0.0015% FS, ≤ 2 ppm/°C
Resolution	Internal : Up to 16 000 000 counts External: Max. 999 999 (weight and force mode), 2 000 000 counts in bipolar at full range and 1 000 000 counts in unipolar input

Calibration and Programming

Calibration	Easily via the alphanumeric display and the buttons on the transmitter, Via a PC with BAYKON xFace software connected to the serial port, With PLC commands via Fieldbus for programming and zero/gain setting, eCal - Electronic calibration with high accuracy without a test load (instrument error < 0.00004%)
Digital filter	7 steps programmable adaptive filter
Weighing functions	Taring, zeroing, auto zero tracking, auto tare, auto clear, auto print-out, motion detection, auto zero at power up, tare memory in case of power failure, increased resolution

Load cell

Excitation and connection	5 VDC, max. 125 mA / 4 or 6 wires cable connection
Number of parallel load cells	Minimum 43 ohm. Up to 8 load cells 350 Ω or 25 load cells 1100 Ω

Connection Options with Peripheral Units

RS-485 serial output	1200 - 115200 baud, Length 7 or 8 bits; parity even, odd or none. Selectable as Continuous , BSI or Modbus RTU data communication protocol. Maximum station number is 31.
Digital inputs and outputs	3 opto-isolated, 12 - 28 VDC digital inputs and 4 opto-isolated, 12 - 28 VDC digital outputs
Analog output	Galvanically isolated, 0 - 20 mA, 4 - 20 mA, 0-5 VDC, 0-10 VDC, ±5 VDC, ±10 VDC Analog output

Enclosure and Environment

|	
Power consumption	10 - 28 VDC, min. 60 mA ~ max. 600 mA (Depends on the TX20 model and the number of load cells)
Operation condition	-15 °C - +55 °C, 85% RH max, non-condensing
Enclosure material, type and protection class	Polyamit, DIN rail mount , IP20
Packing size and weight	132x112x30 mm, 254 g

Ordering Code

TX20 EN-AN

Analogue Out
(Blank)	: Not available
AN	: Analogue output

Variants
(Blank)	: Not available
IO	: Digital 3In/4Out
EN	: Ethernet TCP/IP + Digital 3In/4Out
PN	: Profinet + Digital 3In/4Out
PNS2	: Profinet S2 + Digital 3In/4Out
EI	: EtherNet/IP + Digital 3In/4Out
EC	: EtherCAT + Digital 3In/4Out
PL	: Powerlink + Digital 3In/4Out

Typical Applications

- RS-485
- Digital I/O
- Analogue output
- Modbus RTU / TCP
- Ethernet TCP/IP (2 Ports)
- Profinet (2 Ports)
- Profinet S2 (2 Ports)
- EtherNet/IP (2 Ports)
- EtherCAT (2 Ports)
- Powerlink (2 Ports)

MX08 Multichannel System

Digital weight data on to your fieldbus

- ◎ **Modbus RTU**
- ◎ **Ethernet TCP/IP**
- ◎ **Modbus TCP**
- ◎ **Profibus DP**
- ◎ **Profinet**
- ◎ **EtherNet/IP**
- ◎ **EtherCAT**
- ◎ **Powerlink**
- ◎ **Digital I/O**
- ◎ **RS232**
- ◎ **RS485**

$C\epsilon$ IP 20
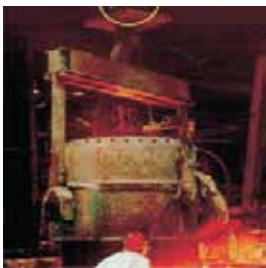
Features
- Communication: RS-232C, RS-485, Ethernet TCP/IP, Profibus, Modbus RTU, Modbus TCP, Profinet,EtherNet/IP, EtherCAT,Powerlink
- High speed: Up to 800 conv/sec.
- Anti-vibration filter: Adaptive antivibration active filter for fastand stable reading.
- Weighing functions: Taring, zeroing, AZT, power on zero, tare memory at power off, motion detection.
- eCal: Electronic calibration without test weights
- Software support: Windows based BAYKON xFace software for calibration and setup via PC
- Matched production: Direct replacement in Count mode without calibration
- Local display: Easy service and local indication in site.
- Digital I/O: Digital I/O's directly controlled by master PLC.

MX08 is a multichannel transmitter is designed to integrate analog measuring data of multi weighing, force or torque measuring systems into control PLC/PC in proper digital data format. MX08 family is programmed and calibrated via PC by BAYKON xFace software. MX08 main advantages are; fast conversion rate, fast response and anti-vibration adaptive digital filter, weighing functions, powerful calibration facilities including eCal, calibration without test weight.

Fully matched production provides direct replacement without calibration in Count mode. The maximum configuration is; Fieldbus gateway, up to 8 Analog Digitizer, 8 Digital I/O units, Local Display unit. DIN rail installation provides easy montage.

Technical Specifications

MX08 Series Instruments	MX08 AD: Analog Digitizer unit MX08 EN : Ethernet TCP/IP -Modbus TCP MX08 MB: Modbus RTU Gateway MX08 PB : Profibus Gateway MX08 PN : Profinet Gateway	MX08 EI : EtherNet/IP MX08 EC : EtherCAT MX08 PL : Powerlink MX08 IO : Digital I/O MX08 DP : Display

A/D Converter	
Type	24 bit Delta-Sigma ratiometric with integral analog and digital filters
Conversion rate	Up to 800 measurements per second
Minimum input voltage	< 1 mV
Minimum input sensitivity	0.1 µV per interval
Analogue input range	0 mV to 18 mV unipolar or -18 mV to 18 mV bipolar
Linearity	Within 0.0015% FS, 2 ppm/°C
Resolution	Internal up to 16 000 000; External up to 100 000 counts in Weighing / Force modes, 1 000 000 counts for unipolar input and for selected range in Count mode and 2 000 000 counts for bipolar input and for selected range in Count mode

Scale Calibration and Functions	
Calibration	By etalon weights: via xFace software or fieldbus eCal : Electronic calibration without etalon weights via xFace Count mode : No calibration. All instruments are adjusted in production for high calibration accuracy
Digital filter	10 step adjustable digital adaptive filter
Weighing functions	Tare, zero, auto zero tracking, motion detection, auto-zero at power-up tare memory at power off

Load Cell	
Excitation	5 VDC, max. 100 mA
Number of load cells	Up to 6 load cells 350 Ω or 18 load cells 1100 Ω in parallel
Connection	4 or 6 wire technique. Cable length 274 m/mm² for 6 wire connection

Communication	
Serial Interface RS-232C	9600 baud, 8 None 1
Serial Interface RS-485 (only MX08 MB)	1200 to 57600 baud, 7 even/odd, 8 None 1 demand (BSI mode) or Modbus RTU
Modbus RTU interface (only MX08 MB	Up to 31 units on the bus, Baudrate up to 57600
Modbus TCP and Ethernet TCP/IP(only MX08 EN)	10Mbits (half dupplex), galvanically isolated
Profibus DP V1 interface (only MX08 PB)	9,6 kbits/s to 12 Mbits/s automatic
Profinet interface (only MX08 PN)	100Mbits (full dupplex), galvanically isolated
EtherNet/IP (MX08 EI)	10 Mbit/s or 100 Mbit/s, full duplex, galvanically isolated Adressing: Assign DHCP or manual IP with PC software
EtherCAT (MX08 EC)	100 Mbit/s, full duplex, galvanically isolated
Powerlink (MX08 PL)	100Mbit/s, half duplex
Digital Input (only MX08 IO)	4 opto isolated inputs. Communication via Gateway unit.
Digital Output (only MX08 IO)	4 relay contact NO output. 1A@250VAC or 30VDC. Communication via Gateway unit.

Power Supply and Others	
Power Supply	10 to 28 VDC, max. 100 mA (MX08 AD, MX08 IO, MX08 DP, MX08 MB), max. 300 mA (others)
Enclosure	Polyamide, for DIN-rail mount, protection class IP20
Operation Conditions	Between -15 °C and +55 °C at 85% RH max, non-condensing

Typical Application

- Modbus RTU
- Ethernet TCP/IP
- Modbus TCP
- Profibus DP
- Profinet
- EtherNet/IP
- EtherCAT
- Powerlink
- Digital I/O
- RS232
- RS485

Digital In/Out
Scale 1
Scale 2
Scale 3
Digital In/Out

BX21 Weighing Indicator

Counting, classifying & dynamic weighing

Key Features
- 25mm wide angle LCD display with back light
- OIML approved
- Up to 30000d display resolution
- 2 programmable function keys and navigation keys provide easy operation
- Linearity correction
- Li-ion long life rechargable battery
- Multi-language ticket
- Accumulated weighing
- RS-232C data output
- 2nd RS-232C port option
- Stand and wall mount accessories
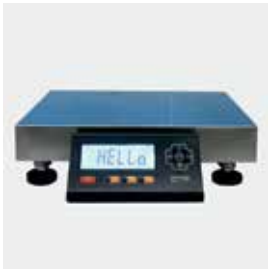
Basic Weighing Mode
- Multiple tare
- Auto tare
- Unit change
- Ticket with Date, Time, Ticket no, Gross, Tare & Net Weight

Counting Mode
- 100 pcs Average Part Memories (APW)
- APW optimization

Classifying
- 100 product memories
- Under, OK, Over Status Bars on display
- Acoustic warning with buzzer

Animal Weighing
- Smart dynamic weighing algorithm for animal weighing

BX21 is low cost, high quality general purpose weighing indicator in plastic housing. The instrument is approved by Weights & Measures Authorities for use in Accuracy Class III applications with intervals according to OIML R76.

Weighing, Counting, Classifying and Dynamic Weighing for animals are standard operation modes. It has 100 Average Part Memories for Counting and 100 product memories for Classifying.

Under, Ok, Over Status bars and programmable buzzer for operator prompting are available is classifying mode.

Easy and practical operation via navigation keys with two programmable function keys and 25mm wide angle, multi colour back LCD display.

BX21 is powered by AC adapter and rechargeable Li-ion long life battery is available as an option. Stand and wall mount accesories are available.

Technical Specifications

Accuracy	OIML R76 Class III
EU Type approval	6.000 intervals (single range) or 2 X 6000 intervals (multi range)
Resolution	16.000.000 internal, up to 30000d display resolution
Weighing units	g, kg, oz, lb
Unit change	If enabled, g-oz and kg-lb change by pressing function key
Display	112x40mm extra wide angle backlighted LCD with 25mm digit height
Buzzer	Different buzzer mode for operator promting in classifying mode
Auto power off	Programmable for saving battery life
Taring	Selectable as No tare, Multiple,Automatic and Tare-Clear in sequence
Filter	Selectable as very low, low, medium, high and very high
G/N selection	If enabled, G/N indication by pressing function key
Totalizing	2 x seperate memories for weighing and counting
Counting	
Operation	Sampling or using Average Part Memory (APW), APW optimization is available
APW memory	100 different parts
Sampling quantity	Selectable as 10,20,30,50,100 pcs
Classifying	
Product memory size	100 different products
Operator prompting	Under, OK, Over status bars on display and programmable buzzer
Dynamic Weighing	
Animal weighing	Supported by smart dynamic weighing algorithms
Weight Ticket	
Ticket format	Programmable for different weighing modes. It may include Date,Time,Ticket No, Gross, Tare and Net weights
Date format	Programmable as dd.mm.yyyy, mm.dd.yyyy or yyyy. mm.dd
Printout language	English, Turkish, German, French, Spanish
Printout Samples	

Weighing

```
Weighing number   #000010
15-09-2012        01:04:03

Gross        4.771 kg
Tare         1.675 kg
Net          3.097 kg
```

Dynamic Weighing

```
Weighing number   #000014
15-09-2012        01:08:57

Dyn Gross    4.771 kg
Tare         1.675 kg
Dyn Net      3.096 kg
```

Counting

```
Weighing number   #000018
15-09-2012        01:14:39

Gross        4.770 kg
Tare         1.675 kg
Net          3.096 kg

Piece Weight  0.00100 kg
Quantity      3096 pcs
```

Classifying

```
Weighing number   #000024
15-09-2012        01:24:06

Gross        1.705 kg
Tare         1.675 kg
Net          0.030 kg OK
```

Interface	RS-232C standard.
Data output	Demand, Continuous and Fast Continuous
Housing	ABS, IP30 protected, 220 x 110 x 55mm in sizes
Number of load cells	Up to 4 load cells 350 Ω or up to 14 load cells 1200 Ω (min. 85 Ω)
Mounting accesories	As standard for stand and wall mount accesories are available
Power	100-240 VAC, 50-60 Hz
Battery	2000mAh Li-ion, up to 36 hours continuous operation for single load cell (350 Ohm) and 24 hours continuous operation for 4x350 Ohm loadcells.(Optional)

Power socket   RS-232C   Load cell

Sealing hole   Mounting nut

Battery case

BX21S Weighing Indicator

Multi colour and stainless steel housing

Key Features
- 25mm wide angle LCD display with multi color
- OIML approved
- Up to 30 000d display resolution
- 2 programmable function keys and navigation keys provide easy operation
- Linearity correction
- Li-ion long life rechargable battery
- Multi-language ticket
- Acumulated weighing
- RS-232C data output
- 2nd RS-232C port option
- Stainless steel housing

Basic Weighing Mode
- Multiple tare
- Auto tare
- Unit change
- Ticket with Date, Time, Ticket no, Gross, Tare & Net Weight

Counting Mode
- 100 pcs Average Part Memories (APW)
- APW optimization

Classifying
- 100 product memories
- Under, OK, Over Status Bars on display
- Buzzer for acoustic warning

Animal Weighing
- Dynamic weighing algorithm for animal weighing

BX21S is low cost, high quality general purpose weighing indicator in IP66 stainless steel housing. The instrument is approved by Weights & Measures Authorities for use in Accuracy Class III applications with intervals according to OIML R76.

Weighing, Counting, Classifying and Dynamic Weighing for animals are standard operation modes. It has 100 Average Part Memories for Counting and 100 product memories for Classifying.

Under, Ok, Over Status bars and programmable buzzer for operator prompting are available is classifying mode.

Easy and practical operation via navigation keys with two programmable function keys and 25mm wide angle LCD display with multicolor backlighting.

BX21S is powered by AC adapter and rechargeable Li-ion long life battery is available as an option.

Technical Specifications

Accuracy	OIML R76 Class III
EU Type approval	6.000 intervals (single range) or 2 X 6000 intervals (multi range)
Resolution	16.000.000 internal, up to 30000d display resolution
Weighing units	g, kg, oz, lb
Unit change	If enabled, g-oz and kg-lb change by pressing Function key
Display	112x40mm extra wide angle multi color backlighted LCD with 25mm digit height
Buzzer	Different buzzer mode for operator promting in classifying mode
Auto Power Off	Programmable for saving battery life
Taring	Selectable as No tare, Multiple, Automatic and Tare-Clear in sequence
Filter	Selectable as Very low, Low, Medium and High
G/N selection	If enabled, G/N indication by pressing Function key
Totalizing	2 x seperate memories for Weighing and Counting
Counting	
Operation	Sampling or using Average Part Memory (APW), APW optimization is available
APW memory	100 different parts
Sampling quantity	Selectable as 10, 20, 30, 50, 100 pcs
Classifying	
Product memory size	100 different products
Operator prompting	Under, OK, Over status bars on multi color display and programmable buzzer
Dynamic Weighing	
Animal weighing	Supported by smart dynamic weighing algorithms
Weight Ticket	
Ticket format	Programable for different weighing modes. It may include Date,Time,Ticket No, Gross, Tare and Net weights
Date format	Programable as dd.mm.yyyy, mm.dd.yyyy or yyyy.mm.dd
Printout language	English, Turkish, German, French, Spanish
Print Samples	

	Weighing	**Dynamic Weighing**	**Counting**	**Classifying**
	Weighing number #000010 15-09-2012 01:04:03 Gross 4.771 kg Tare 1.675 kg Net 3.097 kg	Weighing number #000014 15-09-2012 01:08:57 Dyn Gross 4.771 kg Tare 1.675 kg Dyn Net 3.096 kg	Weighing number #000018 15-09-2012 01:14:39 Gross 4.770 kg Tare 1.675 kg Net 3.096 kg Piece Weight 0.00100 kg Quantity 3096 pcs	Weighing number #000024 15-09-2012 01:24:06 Gross 1.705 kg Tare 1.675 kg Net 0.030 kg OK

Interface	
Communication port	RS-232C standard.
Data output	Demand, Continuous and Fast Continuous
Housing	Stainless steel, IP65, 224X134 mm
Number of load cells	Up to 4 load cells 350 Ω or up to 14 load cells 1200 Ω (min. 85 Ω)
Mounting accesories	As standard for stand and wall mount accesories are available
Power	100-240 VAC, 50-60 HZ
Battery	2000mAh Li-ion, up to 36 hours countinuous operation for single load cell and 24 hours continuous operation for 4x350 Ohm loadcells.(Optional)
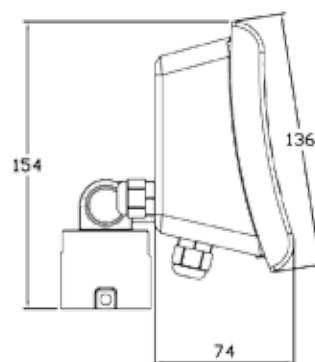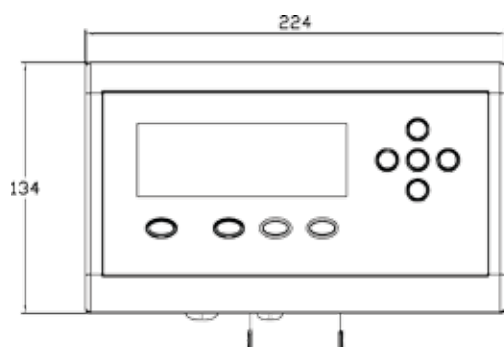
BX22 Weighing Indicator

Industrial indicator with lightning protection

Standard Features
- Stainless steel, IP67 protected for wet, hygienic & harsh areas
- 25 mm wide angle LCD display with multi-color backlight
- Up to 30 000d display resolution
- Long life Li-ion rechargeable battery

Lightning & Surge Voltage Protection
- Protected load cell entry
- Protected power line entry
- Galvanically isolated 2 piece RS232C serial interfaces
- Increased EMC immunity

Typical Applications
- Basic weighing with multiple tare, auto tare, auto clear tare, auto print, unit change, etc.
- Classifying with color changing display at Under, OK and Over, status bar on display,100 product memories, acoustic warning
- Livestock weighing with smart dynamic weighing algorithm
- Weighbridges againts lightning and electrical discharge
- Industrial bench and floor scales in harsh environment

BX22 is a high quality general purpose weighing indicator in stainless steel housing. Its optional alibi memory provides usage with non-approved PC software for approved scales.

BX22L, the increased lightning & surge voltage protected variant of BX22, has a very high protection against lightning on its load cell and power supply connections. With its 2 pcs galvanically isolated RS232C ports, BX22L has important advantage for industrial weighing applications, in particular for weighbridges.

BX22 operation modes; basic weighing, classifying supported with color changing multi-color display and livestock weighing with smart dynamic filter.

With IP67 protected stainless steel housing, BX22 perfectly fits to wet, hygienic and harsh areas. BX22 and BX22L have re-chargeable Li-ion long life battery.

Technical Specifications

Accuracy		OIML R76 Class III
EU type approval		6.000 intervals (single range) or 2 x 6000 intervals (multi range)
Resolution		16 000 000 internal, up to 30 000d display resolution
Weighing units		g, kg, oz, lb
Unit change		g-oz and kg-lb change by pressing programmed function key
Display		112 x 40 mm extra wide angle multi color backlighted LCD with 25 mm digit height
Buzzer		Different buzzer mode to warn the operator at classifying
Auto power off		Programmable for saving battery life
Taring		Multiple, automatic and tare-clear in sequence
Filter		Very low, low, medium high and very high
G/N selection		If enabled, G/N indication by pressing function key
Totalizing		Yes
Classifying		
Product memory size		100 different products
Operator prompting		Under, OK, Over status bars on multi color display and programmable buzzer
Dynamic Weighing		
Animal weighing		Supported by smart dynamic weighing algorithms
EMC protection	BX22	According to OIML R76 and related EMC standards
	BX22L	Increased lightning protections of load cell, serial ports and power supply connection. RS-232C serial ports are galvanically isolated
Interface	BX22	2 pieces RS-232C serial ports
	BX22L	2 pieces galvanically isolated RS-232C serial ports
Alibi memory		65 000 weighing records (optional)
Data output		Programable as continuous or various weighing ticket format
Date format		Programable to dd.mm.yyyy, mm.dd.yyyy or yyyy.mm.dd
Printout language		English, French, German, Spanish and Turkish
Weighing ticket samples		

Weighing	Dynamic Weighing	Classifying
Weighing number #000010 15-09-2012 01:04:03 Gross 4.771 kg Tare 1.675 kg Net 3.097 kg	Weighing number #000014 15-09-2012 01:08:57 Dyn Gross 4.771 kg Tare 1.675 kg Dyn Net 3.096 kg	Weighing number #000024 15-09-2012 01:24:06 Gross 1.705 kg Tare 1.675 kg Net 0.030 kg OK

Housing	Stainless steel, IP67, 224 x 134 mm
Mounting accesories	Wall mount accesory is available as standard
Number of load cells	Up to 4 load cells 350 Ω or up to 14 load cells 1200 Ω (min. 85 Ω)
Battery	2000 mAh Li-Ion, up to 36 hours continuous operation for single load cell, 24 hours continuous operation for 4x350 Ohm load cells
Power	100-240 VAC, 50-60 Hz, optional 12 VDC input

Dimensions (mm)

BX23 / BX23D Weighing Indicator

Fits perfectly to your weighing processes

Main Features
- Stainless steel, IP67 protected for wet, hygienic and harsh areas
- Color selectable LCD display with alphanumeric info line
- Bar graph to follow gross weight capacity
- Key based locking against interfering

High Technology & Performance
- Up to 999 999 display resolution
- Up to 800 conversions per second
- Smart and adaptive filter
- High capacity tank scales supported by eCAL - electronic calibration
- Span adjustment of loaded tanks without emptying

Typical Applications
- Process weighing applications; tank, silo, hopper and conveyor weighing
- Programmable display color
- Livestock and dynamic weighing with strong dynamic weighing algorithm

Integration & Connectivity
- 2 x RS232C, RS485 (Modbus RTU) Ethernet TCP/IP (Modbus TCP), and USB are standard,
- Profibus, Profinet, CANopen, EtherNet/IP, EtherCAT, CC-Link, Powerlink, Analogue outputs, and Digital I/O are optional.

BX23 & BX23D are low cost weighing terminals; offer high accuracy, and performance with strong connectivity options for all weighing applications. With its IP67 protected stainless steel housing, it provides reliable and safe operation in wet, hygienic and harsh industrial areas.

BX23 & BX23D have strong calibration alternatives including eCAL electronic calibration which is extremely important tool for heavy capacity tank scales and calibration of tanks without emptying.

For connectivity, BX23 & BX23D have 2 x RS232C, 1 x RS485, Ethernet TCP/IP and 1 x USB as standards; and for optional interfaces they have Analogue output, EtherNet/IP, Profibus, Profinet, CANopen, EtherCAT, CC-Link, Powerlink and Digital I/O with 4 opto isolated inputs and 5 relay outputs.

Typical Applications

1. Industrial Scales
With their state of the art features, BX23 & BX23D are very accurate and reliable weighing indicators for industrial scale applications such as bench, floor and truck scales.

2. Industrial Process Weighing Applications
BX23 & BX23D are high tech instruments for usage at tank, silo, hopper, conveyor, and overhead scales.

3. Weighing at Wet, Hygienic and Harsh Environments
BX23 & BX23D are designed to use in wet and harsh industrial environments. Design of their stainless steel housings comply with international hygienic requirements.

4. Livestock and Dynamic Load Weighing
Weighing of dynamic items on the platform (like livestock) is available by BX23 & BX23D. These features usable for weighing at static scales, under vibration of industrial environments.

5. Applications Require Powerful Data Interface and Fieldbus Connection
BX23 & BX23D used at industrial weighing systems; require powerful interfaces like Profibus, Profinet, Ethernet TCP/IP, EtherNet/IP, Modbus RTU / TCP, CANopen, EtherCAT, CC-Link, Powerlink Analogue output, 2 x RS232C and 1x RS485 serial ports.

Technical Specifications

Model	BX23	BX23D
Accuracy class & EU type approval	OIML class III, single range, multi range or multi interval	
Display	Wide angle LCD display with multicolor backlight, 6 digits 22 mm in height weight display and 16 digits 8 mm in height alphanumeric information display	
Display resolution	Up to 999 999 division	Please refer to the following digital load cells
A/D convertion	24 bit Delta-Sigma ADC with up to 800 conversion rate	
Minimum input sensitivity	0.4 µV/d (legal metrology), 0.05 µV/d (industrial)	Baykon BS063SD, BR200SD,
Analogue input range	-5 mV to +19 mV	BR030/32SD & Flintec RC3D
Internal resolution	Up to 16 000 000 counts	
Calibration	Standard calibration tests with test weights eCAL: electronic calibration without test weight, span adjustment of non-empty tanks	
Digital filter	5 step adjustable digital adaptive filter	
Functions	Ticket number, date & time, unit change	
Standard applications	Labelling basic weighing, livestock weighing, interface with PC or PLC over Fieldbus, Ethernet etc.	
Memory	500 item limit values Each item has 5 pcs free programmable set points in the memory	
Digital inputs	Opto isolated 4 inputs programmable for zeroing, taring, print, fieldbus controlled input, etc.	
Digital outputs	Relay contact outputs can be programmable independently to 9 different functions	
Data output	Galvanically isolated 2 pcs RS232C, RS485 (Modbus RTU), Ethernet TCP/IP (Modbus TCP) and micro USB.	
Number of load cells	Up to 8 load cells 350 Ω or up to 24 load cells 1200 Ω (min. 43 Ω)	Up to 24 digital load cells
Load cell connection	Connection with 4 or 6 wires. Cable length maximum 1000 m/mm²	RS485, Home Cable max. 300m
Alibi memory	99 999 weighing records	
Operation temperature	-15°C ~ +55°C max. (Operational), -10°C ~ +40°C (Legal metrology)	
Humidity	Max. 90% non-condensing relative humidity legal metrology max. 80 %	
Housing and protection class	Desk top and wall type stainless steel, IP67 protected	
Power supply	100 - 240 VAC, 50/60 Hz or 12 - 28 VDC	
Options		
Scales options	Alibi memory	
Interfaces	Digital 4 inputs / 5 outputs EtherNet/IP Analogue Output EtherCAT Profibus CC-Link Profinet Powerlink CANopen	
Accessories	Column mount kit, Wall mount kit, 2D Wall mount kit	

BX24 / BX24D Weighing Indicator
Power & performance for weighing applications

Main Features
- Stainless steel, IP67 protected for wet, hygienic and harsh areas
- Color changing display, SmartAPP 16 digit alphanumeric info line,
- ID1, ID2, PT, item limit values, APW memories; each 500 items record
- Automatic memory linkage to IDs

High Technology & Performance
- High resolution scales up to 999 999 display resolution
- Up to 800 conversions per second
- Application based SmartAPP
- Changing color for prompting
- High capacity tank scales supported by eCAL - electronic calibration

Typical Applications
- Weighing and data collection
- Customized labelling with barcode
- Counting by sample & APW memory
- Livestock and dynamic weighing with strong filtering algorithm
- Checkweighing, classifying & filling
- Specific tare entry requirement

Interfaces & Communication
- 2 x RS232C, RS485, Ethernet TCP/IP and USB are standard,
- Printing via key, digital input, and serial port
- Continuous data output
- BSI command set for master slave communication

BX24 & BX24D are accurate, multifunctional weighing terminals which can be used in wet, hygienic and harsh industrial areas. Terminals have configurable operating modes for common weighing applications such as weighing, labelling, piece count-ing, checkweighing, classifying, dynamic weighing and filling. Depending on the application, 3 programmable keys can be set to related functions for quick and easy operation.

Instruments have 6 memories; ID1 & ID2, preset tare, APW and item limit values; each have 500 records capacity. IDs can be linked to other memory records for fast, easy and reliable opera-tion; when an ID is selected, depending on the operation mode item limit values, specific tare or APW values comes automati-cally.

BX24 & BX24D offer direct connection to remote display, PC and PLCs via various data protocols such as demand, continuous form and BSI command set.

Typical Applications

1. Labeling & Data Collecting
BX24 & BX24D can print different type of standard tickets including totalizing and customized ticket with barcode.

2. Piece Counting
Counting can be done by sampling or average piece weight taken from APW manual. 500 item memory capacity for APW.

3. Checkweighing
The weight or the quantity of the items in the package is checked. 500 item memory for limits set.

4. Classifying
Products can be classified according to the weight or the quantity of item in the package. 500 item memory for limits set.

5. Gravimetric Filling
Automatic / manual filling can be executed in gross mode or in net mode. 500 item memory for limits set.

6. Dynamic and Livestock Weighing
Weighing of dynamic items such as livestock is available by BX24 & BX24D. This feature is also usable for weighing at static scales under vibration of industrial environments.

Technical Specifications

Model	BX24	BX24D
Accuracy class & EU type approval	OIML class III, single range, multi range or multi interval	
Display	Wide angle LCD display with multicolor backlight, 6 digits 22 mm in height weight display and 16 digits 8 mm in height alphanumeric information display	
Display resolution	Up to 999 999 division	Please refer to the following digital load cells
A/D conversion	24 bit Delta-Sigma ADC with up to 800 conversion rate	
Minimum input sensitivity	0.4 µV/d (legal metrology), 0.05 µV/d (industrial)	
Analogue input range	-5 mV to +19 mV	Baykon BS063SD, BR200SD, BR030/32SD & Flintec RC3D
Internal resolution	Up to 16 000 000 counts	
Calibration	Standard calibration tests with test weights eCAL: electronic calibration without test weight, span adjustment of non-empty tanks	
Digital filter	5 step adjustable digital adaptive filter and 5 programmable digital dynamic filter	
Functions	2 x ID data,ticket number,date & time,total indication, ID1 & ID2 header definition as Customer,Material,Quality,Color,etc.	
Standard applications	Labelling, piece counting, totalization of the sequential weighing, totalization of the additive items, livestock weighing, checkweighing, classifying, filling	
Memory	ID1 and ID2 memories, specific tare memory, item limit values memory for basic weighing, filling, classifying and check weighing, average weight of items memory for piece counting. Each memory has 500 record capacity	
SD card	SD card slot for different applications	
Programmable keys	3 pieces programmable function keys	
Digital inputs	Opto isolated 4 inputs programmable for zeroing, taring, print, PLC remote input, etc. Inputs are set automatically to certain functions at checkweighing, classifying, filling etc.	
Digital outputs	Relay contact outputs are programmable as cut off, PLC remote outputs.	
Data output	Galvanically isolated 2 pcs RS232C, RS485 serial ports , Ethernet TCP/IP and micro USB	
Number of load cells	Up to 8 load cells 350 Ω or up to 24 load cells 1200 Ω (min. 43 Ω)	Up to 24 digital load cells
Load cell connection	Connection with 4 or 6 wires. Cable length maximum 1000 m/mm²	RS485, Home Cable max. 300m
Alibi memory	99 999 weighing records	
Operation temperature	-15°C ~ +55°C max. (Operational), -10°C ~ +40°C (Legal metrology)	
Humidity	Max. 90 % non condensing relative humidity. Legal metrology max. 80 %	
Housing and protection class	Desk top and wall type stainless steel, IP67 protected	
Power supply	100 - 240 VAC, 50/60 Hz or 12 - 28 VDC	
Options		
Scale options	Digital 4 inputs / 5 outputs, Analogue output, Alibi memory	
Accessories	Column mount kit, Wall mount kit, 2D Wall mount kit	

BX25 / BX25D Weighing Indicator

For weighing processes and applications

Main Features
- IP67 protected for wet, hygienic and harsh areas,
- 2 platform connections & total scale,
- Color changing display, SmartAPP, & 16 digit alphanumeric info line,
- User programmable 3 keys and, 2 touch free keys for applications,
- Data entry via barcode reader.

High Technology & Performance
- Up to 999 999 display resolution,
- Up to 800 conversions per second,
- Application based SmartAPP,
- Changing color for prompting,
- High capacity tank scales supported by eCAL - electronic calibration & span correction of non-empty tanks.

Typical Applications
- Weighing and data collection,
- Customized labelling with barcode,
- Counting by sample & APW memory,
- Classification & Checkweighing at weighing and counting, filling,
- Livestock and dynamic weighing with strong filters and algorithm,

6 Memories Each With 500 Items
- 2 pcs ID1 & ID2 identification data,
- Preset tare to enter specific tare,
- Limit values memory for weighing and piece counting,
- APW - Average piece for counting
- Item limits for check weighing and for classifying of packages,
- Automatic memory linkage to IDs
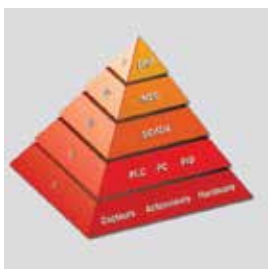
Integration & Connectivity
- 2 x RS232C, RS485 (Modbus RTU) Ethernet TCP/IP (Modbus TCP) USB are standard,
- Profibus, Profinet, EtherNet/IP, EtherCAT, CANopen, CC-Link, Powerlink, Analogue output and Digital I/Os are optional.

BX25 & BX25D are high accurate, multifunctional weighing termi-nals which are used in wet, hygienic and harsh industrial areas. It can be connected to two weighing platforms and it has total scale.

These weighing terminals can be programmable for weighing, labelling, checkweighing, classifying, filling, piece counting and dynamic weighing applications. Three user programmable keys and two touch free keys can be set for user applications to provide practical and error free operation. Instruments have 6 pcs memo-ries; ID1, ID2, preset tare, APW, item limit values; each have 500 records capacity.

BX25 & BX25D have important features for process weighings; strong calibration alternatives including electronic calibration (eCal) and various integration interfaces with PC or PLC via RS232C, RS485, Ethernet TCP/IP, Fieldbuses such as Profibus, Profinet, CANopen, EtherCAT, CC-Link, Powerlink, Modbus RTU, Modbus TCP, EtherNet/IP, Analogue output, Digital I/Os.

1. Industrial Process Weighing Applications
Strong calibration options and various integration features
including Fieldbus interfaces, provides perfect performance
for tank, mixer, conveyor scales.

2. Labelling & Data Collecting
BX25 & BX25D can print different type of standard tickets including
totalizing and customized tickets with barcode.

3. Piece Counting
Counting can be done by sampling or average piece weight
taken from APW memory. 500 item memory capacity for APW

4. Automatic / Manual Checkweighing
The weight or the quantity of the items in the package on the
scale are controlled. 500 item memory for sets of limits.

5. Automatic / Manual Classifying
Products can be classified according to the weight or quantity
of item in the package. 500 item memory for sets of limits.

6. Automatic / Manual Gravimetric Filling
Automatic / manual filling can be executed in gross mode
or in net mode. 500 item memory for sets of limits.

7. Data Entry Via Barcode, RFID Reader
Direct connection of barcode reader or RFID reader to enter IDs, PT.

```
Baykon A.S.
www.baykon.com
Istanbul, Turkey

23.02.2017
09:16
CN       34

OPERATOR
JOSEPH SMITH

MATERIAL
ASCORBIC ASID

G      4.772 kg
T      1.675 kg
N      3.097 kg




* Thank you *
```

```
Baykon A.S.
www.baykon.com
Istanbul, Turkey

Date     23.02.2016
Time         09:24
CN            54

OPERATOR
JOSEPH SMITH

MATERIAL
POLYETHYLENE

Tare     0.201 kg
1 Net    0.599 kg
2 Net    0.604 kg
3 Net    0.600 kg
------------------
TOTAL
Gross    1.803 kg
Tare     0.201 kg
Net      1.602 kg

* Thank you *
```

Technical Specifications

Model	BX25	BX25D
Accuracy class & EU type approval	OIML class III, single range, multi range or multi interval	
Display	Wide angle LCD display with multicolor backlight, 6 digits 22 mm in height weight display and 16 digits 8 mm in height alphanumeric information display.	
Display resolution	Up to 999 999	Please refer to the following digital load cells Baykon BS063SD, BR200SD, BR030/32SD & Flintec RC3D
A/D conversion	24 bit Delta-Sigma ADC with up to 800 conversion rate	
Minimum input sensitivity	0.4 µV/d (legal metrology), 0.05 µV/d (industrial)	
Analogue input range	-5 mV to +19 mV	
Internal resolution	Up to 16 000 000 counts	
Calibration	Standard calibration test with test weights eCAL, electronic calibration without test weight, span adjustment of non-empty tanks	
Digital filter	5 step adjustable digital adaptive filter and 5 programmable digital dynamic filter	
Functions	2 x ID data,ticket number,date & time,total indication Header definitions for IDs as customer,material,quality,color...etc.	
Standard applications	Labelling, piece counting, checkweighing, classifying, filling, totalization of the sequential weighing, totalization of the additive items, livestock weighing	
Memory	ID1 and ID2 memories, specific tare memory, item limit values memory for basic weighing, filing classifying and checkweighing, average weight of items memory for piece counting. Memory record size is 500 items	
SD card	SD card slot for different applications	
Programmable keys	3 function keys and 2 touch free keys	
Digital inputs	Opto isolated 4 inputs programmable for zeroing, taring, print, Fieldbus controlled input, etc. Inputs are set automatically to certain functions at checkweighing, classifying, filling etc.	
Digital outputs	Relay contact outputs are programmable as cut off, Fieldbus controlled output	
Data output	Galvanically isolated, 2 pcs RS232C and RS485 (Modbus RTU), Ethernet TCP/IP (Modbus TCP) and micro USB	
Number of load cells	Up to 8 load cells 350 Ω or up to 24 load cells 1200 Ω (min. 43 Ω)	Up to 24 digital load cells
Load cell connection	Connection with 4 or 6 wires. Cable length maximum 1000 m/mm²	RS485, Home Cable max. 300m
Operation temperature	-15°C ~ +55°C max. (Operational), -10°C ~ +40°C (Legal metrology)	
Humidity	Max. 90 % non condensing relative humidity. Legal metrology max. 80 %	
Alibi memory	99 999 weighing records	
Housing and protection class	Desk top and wall type stainless steel, IP67 protected	
Power supply	100 - 240 VAC, 50/60 Hz or 12 - 28 VDC	
Options		
Scale options	Second analogue scale input, Alibi memory	
Interfaces	Digital 4 inputs / 5 outputs, Analogue output, Profibus, Profinet, CANopen, EtherNet/IP, EtherCAT, CC-Link, Powerlink	
Accessories	Column mount kit, Wall mount kit, 2D Wall mount kit	

BX27 Weighing Indicator

Big display at industrial weighing

Features
- Up to 999.999 display resolution
- 16.000.000 internal resolution
- Electronic calibration (eCAL) without test weight
- Programmable via PC

Outdoor Usage
- Sun visor (standard)
- Serial interface via RS-232C, RS-485 or 20mA Current Loop
- Stainless steel robust housing

BX27 designed for industrial weighing applications to provide long distance reading such as crane operators working with scale or as outdoor big display for weighbridges with BAYKON PC software.

It has stainless steel robust housing for heavy industrial environment and outdoor usage with standard sun visor. It has LED display 57mm digit height. Key functions executed with keys on front panel, remotely via cable and through serial interface.

BX27 can be configured up to 999.999 display resolution and offers serial interfaces RS-232C, RS-485 or 20mA CL.

Technical Specifications

Accuracy

Linearity	% 0.0015 FS
Temperature coefficient	≤ 2 ppm/°C

Display and Keyboard

Display	6 digits, 7 segments, LED red, 57 mm high
Status annunciators	Gross, Net, motion, centre of zero, 1. Range, 2. Range
Keyboard	7-key

A/D Converter

Type	24 bit Delta-Sigma ADC
Conversion rate	Up to 1600 measurements per second
Min. input sensitivity	0,1 µV per interval
Analogue input range	- 18 mV to +18 mV
Resolution	Internal up to 16.000.000; display up to max. 999.999 counts

Scale Calibration and Functions

Calibration	Standard: By etalon weights via keys or serial port via IndFace1x software eCal: Electronic calibration without etalon weights
Digital filter	10 steps programmable adaptive filter
Weighing functions	Tare, zeroing, auto zero tracking, motion detection, auto-zero at power-up.
Other functions	Label number, gross, tare indication
RS-232C	1200...57600 baud, programmable Continuous, Printer, BSI (Baykon Serial Interface) protocol
RS-485 20mA CL	1200...57600 baud, programmable, up to 31 units on the RS-485 bus Continuous, Printer, BSI (Baykon Serial Interface)

Loadcell Connection

Excitation	5 VDC max. 300mA
Number of load cells	Up to 6 load cells 350 Ω or 18 load cells 1100 Ω in parallel
Connection	4 or 6 wire technique. Cable length 274 m/mm² for 6 wire connection

Environment and Enclosure

Operation Temperature	-15ºC to +55ºC; %85 RH max., non - condensing
Enclosure	Wall type, Stainless steel Front panel IP65. 18 cm x 47 cm x 7 cm
Power requirement	100 - 240 VAC, 50 Hz, 500mA 24 VDC, 1.5A
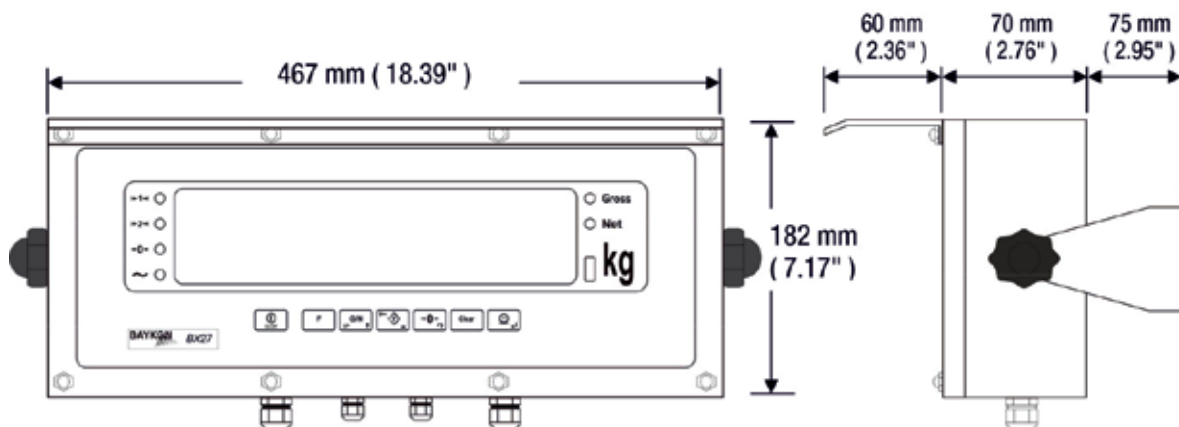
BX23 Ex2/22 Weighing Indicator

ATEX and IECEx certified for usage in Zones 2/22

Main Features
- Multi-language operator prompts
- Stainless steel, IP67 protected for wet, hygienic and harsh areas
- Color selectable LCD display with alphanumeric info line.
- Bar graph to follow gross weight capacity.
- Key locking against interfering.

High Technology & Performance
- Up to 999 999 display resolution.
- Up to 1600 conversions per second.
- Smart and adaptive filter.
- High capacity tank scales supported by eCAL - electronic calibration.
- Span adjustment of loaded tanks without emptying.

Typical Applications
- Weighing in the hazardous areas. ATEX and IECEx approvals for;
  Gases: Hydrogen, propan, etylene, acetylene, carbon disulfide etc.
  Dust: Carbon, magnesium, flour, grain, rayon, cotton lint, flax etc.
- Scales and Process weighing.

Integration & Connectivity
Zone 2/22 Certified interfaces;
- 2 x RS232C, 1 x RS485.
- Ethernet TCP/IP,
- Profibus, Profinet, EtherNet/IP, EtherCAT, CC-Link, Powerlink,
- Analogue output and Digital I/O.

BX23 Ex2/22 is a weighing terminal offers high accuracy and performance with strong connectivity options for weighing applications in hazardous areas. With its IP67 protected stainless steel housing, it provides reliable and safe operation in wet, hygienic and harsh industrial areas. BX23 Ex2/22 is certified for ATEX and IECEx and can be used in the zones 2/22 hazardous areas having explosive gases and dust.

BX23 Ex2/22 has strong calibration alternatives including eCal-electronic calibration, which is an extremely important tool for heavy cpacity tank scales and for the calibration of tanks without emptying.

For connectivity, BX23 Ex2/22 is certified for the following interfaces: 2 x RS232C, 1 x RS485, and Ethernet TCP/IP, Modbus RTU, Modbus TCP as standard; and Analogue output, EtherNet/IP, Profibus, Profinet, EtherCAT, CC-Link, Powerlink and Digital I/O with 4 opto isolated inputs and 5 relay outputs option.

Typical Applications in Hazardous Area

1.Industrial Scales in Hazardous Areas
BX23 Ex2/22 is very accurate and reliable weighing indicator
for industrial scale applications such as bench, floor and truck scales.

2.Industrial Process Weighing Applications
BX23 Ex2/22 is high tech instrument for usage at tank, silo, hopper,
conveyor and overhead scales in hazardous areas.

3.Weighing at Wet, Hygienic and Harsh Environments
BX23 Ex2/22 is designed to use in wet and harsh industrial
environments. Design of its stainless steel housing complies with
international hygienic requirements.

4.Dynamic Load Weighing
With its statistical filter, BX23 Ex2/22 weighs the dynamic loads accurately.

5.Applications Require Powerful Data Interface and Fieldbus Connection
BX23 Ex2/22 is used in industrial weighing systems in Zones 2/22 hazardous
area, which require the following interfaces: Profibus, Profinet, Ethernet TCP/IP,
EtherNet/IP, Modbus RTU / TCP, EtherCAT, CC-Link, Powerlink, Analogue output,
2 x RS232C and RS485 serial ports and opto isolated digital 4 inputs and 5 outputs.

Technical Specifications

Accuracy class & EU type approval	OIML class III, single range, up to three range multi range or multi interval.
Display	Wide angle LCD display with multicolor backlight, 6 digits 22 mm in height weight display and 16 digits 8 mm in height alphanumeric information display.
Display resolution	Up to 999 999 division.
A/D conversion	24 bit Delta-Sigma ADC with up to 1600 conversion rate.
Minimum input sensitivity	0.4 µV/d (legal metrology), 0.05 µV/d (industrial).
Analogue input range	-5 mV to +19 mV
Internal resolution	Up to 16 000 000 counts.
Calibration technics	Standard calibration tests with test weights, multipoint calibration eCAL: Electronic calibration without test weight, span adjustment of non-empty tanks.
Digital filter	5 step adjustable digital adaptive filter.
Functions	Ticket number, date & time, unit change.
Standard applications	Basic industrial weighing, tank / silo weighing, control at weighing, dynamic weighing, weighing in process, interface with PC or PLC over Fieldbus, Ethernet etc.
Memory	500 item limit values. Each item has 5 pcs free programmable set points in the memory.
Digital inputs	Opto isolated 4 inputs programmable for zeroing, taring, print, fieldbus controlled input, etc.
Digital outputs	Relay contact outputs can be programmable independently to 9 different functions.
Data output	Galvanically isolated 2 pcs RS232C, RS485 (Modbus RTU), Ethernet TCP/IP (Modbus TCP) and micro USB.
Number of load cells	Up to 8 load cells 350 Ω or up to 24 load cells 1200 Ω (min. 43 Ω)
Load cell connection	Connection with 4 or 6 wires. Cable length maximum 1000 m/mm²
Alibi memory	99 999 weighing records.
Hazardous Area	ATEX Approval — II 3G Ex ic ec [ic] IIC T6 (Gases) — II 3D Ex ic tc [ic] IIIC T85°C IP67 (Dust) — IECEx Approval — Gases Ex ic ec [ic] IIC T6 Gc — Dust Ex ic tc [ic] IIIC T85°C Dc IP67
Operation temperature	-15°C ~ +50°C max. (Operational), -10°C ~ +40°C (Legal metrology and Hazardous area)
Humidity	Max. 90% non-condensing relative humidity. Legal metrology max. 80 %
Housing and protection class	Desktop and wall type stainless steel, IP67 protected.
Power source	100 - 240 VAC, 50/60 Hz or 12 - 28 VDC for power supply in Ex area or for external Battery.
Options	
Scales options	Alibi memory.
Interfaces	ATEX and IECEx certified interfaces are; Analogue Output — Profibus — Profinet — Ethernet IP — Digital 4 Inputs / 5 Outputs — Powerlink — EtherCAT
Accessories	Ex Battery pack, Ex load cell cable, data cable, Ex junction box, Column mount kit, Wall mount kit, 2D Wall mount kit.

BX24 Ex2/22 Weighing Terminal

ATEX and IECEx certified for usage in Zones 2/22

Main Features
- Multi-language operator prompts.
- Stainless steel, IP67 protected for wet, hygienic and harsh areas.
- Color changing display, SmartAPP 16 digit alphanumeric info line.
- ID1, ID2, PT, item limit values, APW memories; each 500 items record.
- Automatic memory linkage to IDs.

High Technology & Performance
- High resolution scales up to 999 999 display resolution.
- Up to 1600 conversions per second.
- Application based SmartAPP.
- Changing color for prompting.
- High capacity scales are supported by eCAL - electronic calibration.

Typical Applications
- Weighing and data collection.
- Customized labelling with barcode
- Counting by sample & APW memory.
- Livestock and dynamic weighing with strong filtering algorithm.
- SmartAPP Checkweighing, packing classifying & filling applications.
- Specific tare entry requirement.

Integration & Connectivity
- Zone 2/22 Certified interfaces; 2 x RS232C, 1 x RS485. Ethernet TCP/IP,
- Micro USB
- Printing via key, digital input or via serial port.
- BSI command set for master slave communication.
- Analogue output and digital I/O.

BX24 Ex2/22 is ATEX and IECEx certified weighing terminal, which offers high accuracy and performance in the hazardous areas with strong connectivity options.

This weighing terminal is programmable for basic weighing, labelling, packing, checkweighing, classifying, filling, piece counting and dynamic weighing applications. Three user programmable keys provide practical and error free operation. This instrument has article memories; ID1, ID2, preset tare, APW, item limit values; each have 500 records capacity.

BX24 Ex2/22 offers direct connection to PC and PLC via various communication interfaces. Additionally, Analogue output, and programmable Digital 4 inputs and 5 outputs are available, which can be used to control the peripheral equipment of the weighing system.

Typical Applications in Hazardous Area

1. Industrial Process control and Weighing Applications
Its SmartAPP weighing applications and multi- language operator prompt minimizes the operator error.

2. Labelling & Data Collecting
BX24 Ex2/22 can print different type of standard tickets including totalizing and customized tickets with barcode.

3. Piece Counting
Counting can be done by sampling or average piece weight is saved from APW memory. 500 items memory capacity for piece weights.

4. Automatic / Manual Packing
Most common usage of this mode is manual packing of agricultural products. 500 items memory for sets of limits.

5. Automatic / Manual Checkweighing
The weight or the quantity of the items in the package on the scale is controlled. 500 items memory for sets of limits.

6. Automatic / Manual Classifying
Products can be classified according to the weight or quantity of item in the package. 500 items memory for sets of limits.

7. Automatic / Manual Gravimetric Filling
Automatic / manual filling can be executed in gross mode or in net mode. 500 items memory for sets of limits.

8. Accumulation
Batch total of sequential or additive product weighings and piece countings are available.

Technical Specifications

Accuracy class & EU type approval	OIML class III, single range, up to three range multi range or multi interval.
Display	Wide angle LCD display with multicolor backlight, 6 digits 22 mm in height weight display and 16 digits 8 mm in height alphanumeric information display.
Resolution	Display resolution is up to 999 999 and internal resolution is up to 16 000 000 counts.
A/D conversion	Up to 1600 conversion rate, 24 bit Delta-Sigma ADC, 0.4 µV/d (legal metrology), 0.05 µV/d (industrial).
Analogue input range	-5 mV to +19 mV
Calibration technics	Standard calibration test with test weights, multipoint calibration, eCAL, electronic calibration without test weight, span adjustment of non-empty tanks.
Digital filter	5 step adjustable digital adaptive filter and 5 programmable digital dynamic filter.
Functions	2 x ID data,ticket number,date & time,total indication, Header definitions for IDs as customer,material,quality,color...etc.
Standard applications	Labelling, checkweighing, classifying, packing, filling, piece counting,totalization of the sequential weighing, totalization of the additive items, livestock weighing. SD card slot for data logging.
Memory	ID1 and ID2 memories, specific tare memory, item limit values memory for basic weighing and applications, average piece weight memory for piece counting. Each memory record size is 500 items.
Programmable keys	3 function keys.
Digital inputs and outputs	Programmable, opto isolated 4 inputs and 5 relay contact outputs. Application specified In / Out functions at SmartAPP.
Data output	Galvanically isolated, 2 pcs RS232C and RS485, Ethernet TCP/IP and micro USB.
Number of load cells	Up to 8 load cells 350 Ω or up to 24 load cells 1200 Ω (min. 43 Ω).
Hazardous Area	ATEX Approval — II 3G Ex ic ec [ic] IIC T6 (Gases) / II 3D Ex ic tc [ic] IIIC T85°C IP67 (Dust) IECEx Approval — Gases Ex ic ec [ic] IIC T6 Gc / Dust Ex ic tc [ic] IIIC T85°C Dc IP67
Operation temperature	-15°C ~ +55°C max. (Operational), -10°C ~ +40°C (Legal metrology and Hazardous area)
Humidity	Max. 90 % non condensing relative humidity. Legal metrology max. 80 % RH.
Alibi memory	99 999 weighing record size.
Housing and protection class	Desktop and wall type stainless steel, IP67 protected.
Power source	100 - 240 VAC, 50/60 Hz or 12 - 28 VDC for power supply in Ex area or for external Battery.
Options	
Scale options	Alibi memory.
Interfaces	Opto isolated digital 4 inputs / 5 relay contact outputs, Analogue output.
Accessories	Ex-proof Battery pack, Ex-proof Junction box, Ex-proof load cell cable, data cable, Column mount kit, Wall mount kit, 2D Wall mount kit.

BX25 Ex2/22 Weighing Terminal

ATEX and IECEx certified for usage in Zones 2/22

Main Features
- Multi-language operator prompts
- Color changing display, SmartAPP & 16 digit alphanumeric info line.
- User programmable 3 keys and 2 touch free keys for applications.
- 2 platform connections & total scale
- Data entry via barcode reader.
- Stainless steel, IP67 protected for wet, hygienic and harsh areas.

High Technology & Performance
- Up to 999 999 display resolution.
- Up to 1600 conversions per second.
- Application based SmartAPP for easy human machine interface.
- High capacity tank scales supported by eCAL- electronic calibration & span correction at non-empty tanks.

SmartAPP Applications
- Weighing and data collection.
- Customized labelling with barcode
- Classification, checkweighing, packing and filling.
- Piece counting.
- Vertical or Horizontal Totalization.
- Livestock and dynamic weighing.

6 Memories, Each with 500 Items
- 2 pcs ID1 & ID2 memory.
- Item limits memory for applications.
- Preset tare memory.
- Average piece weight memory at piece counting.
- Automatic linkage between memories.

Integration & Connectivity
Zone 2/22 Certified interfaces;
- 2 x RS232C, 1 x RS485.
- Ethernet TCP/IP,
- Profibus, Profinet, EtherNet/IP, EtherCAT, CC-Link, Powerlink,
- Analogue output and Digital I/O.

BX25 Ex2/22 is ATEX and IECEx certified weighing terminal, which offers high accuracy and performance in the hazardous areas with strong connectivity options.

This weighing terminal is programmable for basic weighing, labelling, packing, checkweighing, classifying, filling, piece counting and dynamic weighing applications. Five user programmable keys including two touch free keys provide practical and error free operation. This instrument has 6 pcs memories; ID1, ID2, preset tare, APW, item limit values; each have 500 records capacity.

BX25 EX2/22 offers various interfaces for seamless integration with PC or PLC for transactional or process weighing applications. Additionally, Analogue output, and programmable Digital 4 inputs and 5 outputs are available to control the external equipment.

Typical Applications in Hazardous Area

1.Industrial Process control and Weighing Applications
Its SmartAPP weighing applications and integration features including Fieldbus interfaces.

2.Labelling & Data Collecting
BX25 Ex2/22 can print different type of standard tickets including totalizing and customized tickets with barcode.

3.Piece Counting
Counting can be done by sampling or average piece weight is saved from APW memory. 500 items memory capacity for piece weights.

4.Automatic / Manual Packing
Most common usage of this mode is manual packing of agricultural products. 500 items memory for sets of limits.

5.Automatic / Manual Checkweighing
The weight or the quantity of the items in the package on the scale is controlled. 500 items memory for sets of limits.

6.Automatic / Manual Classifying
Products can be classified according to the weight or quantity of item in the package. 500 items memory for sets of limits.

7.Automatic / Manual Gravimetric Filling
Automatic / manual filling can be executed in gross mode or in net mode. 500 items memory for sets of limits.

8.Data Entry Via Barcode, RFID Reader
Direct connection of barcode reader or RFID reader to enter IDs, PT.

9.Statistical report
Statistical report has total, average, statistical deviation, relative statistical deviation, min, max and range data.

```
Baykon A.S.
www.baykon.com
Istanbul, Turkey

23.02.2017
09:16
CN       34

OPERATOR
JOSEPH SMITH

MATERIAL
ASCORBIC ASID

G     4.772 kg
T     1.675 kg
N     3.097 kg

* Thank you *
```

```
Baykon INC
www.baykon.com

Date     23.02.2016
Time         09:24
CN               54

OPERATOR
JOSEPH SMITH

MATERIAL
POLYETHYLENE
Tare     0.201 kg
1 Net    0.599 kg
2 Net    0.604 kg
3 Net    0.600 kg
-------------------
    TOTAL
Gross   1.803 kg
Tare    0.201 kg
Net     1.602 kg
Ave     0.602 kg
SD      0.003 kg
Srel       0.2%
Min     0.599 kg
Max     0.604 kg
Range   0.005 kg
*********
```

Technical Specifications

Accuracy class & EU type approval	OIML class III, single range, up to three range multi range or multi interval.
Display	Wide angle LCD display with multicolor backlight, 6 digits 22 mm in height weight display and 16 digits 8 mm in height alphanumeric information display.
Resolution	Display resolution is up to 999 999 and internal resolution is up to 16 000 000 counts.
A/D conversion	Up to 1600 conversion rate, 24 bit Delta-Sigma ADC, 0.4 µV/d (legal metrology), 0.05 µV/d (industrial).
Analogue input range	-5 mV to +19 mV
Calibration technics	Standard calibration test with test weights, multipoint calibration, eCAL, electronic calibration without test weight, span adjustment of non-empty tanks.
Digital filter	5 step adjustable digital adaptive filter and 5 programmable digital dynamic filter.
Functions	2 x ID data,ticket number,date & time,total indication, Header definitions for IDs as customer,material,quality,color...etc.
Standard applications	Labelling, checkweighing, classifying, packing, filling, piece counting,totalization of the sequential weighing, totalization of the additive items, livestock weighing. SD card slot for data logging.
Memory	ID1 and ID2 memories, specific tare memory, item limit values memory for basic weighing and applications, average piece weight memory for piece counting. Each memory record size is 500 items.
Programmable keys	3 function keys and 2 touch free keys.
Digital inputs and outputs	Programmable, opto isolated 4 inputs, and 5 relay contact outputs. Application specified In / Out functions at SmartAPP
Data output	Galvanically isolated, 2 pcs RS232C and RS485 (Modbus RTU), Ethernet TCP/IP (Modbus TCP) and micro USB.
Number of load cells	Up to 8 load cells 350 Ω or up to 24 load cells 1200 Ω (min. 43 Ω).
Hazardous Area	ATEX Approval Il 3G Ex ic ec [ic] IIC T6 (Gases) Il 3D Ex ic tc [ic] IIIC T85°C IP67 (Dust) IECEx Approval Gases Ex ic ec [ic] IIC T6 Gc Dust Ex ic tc [ic] IIIC T85°C Dc IP67
Operation temperature	-15°C ~ +55°C max. (Operational), -10°C ~ +40°C (Legal metrology and Hazardous area).
Humidity	Max. 90 % non condensing relative humidity. Legal metrology max. 80 % RH.
Alibi memory	99 999 weighing record size.
Housing and protection class	Desktop and wall type stainless steel, IP67 protected.
Power source	100 - 240 VAC, 50/60 Hz or 12 - 28 VDC for power supply in Ex area or for external Battery.
Options	
Scale options	Second analogue scale input, Alibi memory.
Interfaces	Opto isolated digital 4 inputs / 5 relay contact outputs, Analogue output, Profibus, Profinet, EtherNet/IP, EtherCAT, CC-Link, Powerlink.
Accessories	Ex-proof Battery pack, Ex-proof Junction box, Ex-proof load cell cable, data cable Column mount kit, Wall mount kit, 2D Wall mount kit.

BX10 Weighing Terminal

Beyond the basic weighing process

OIML CE IP65

Features
- 16.000.000 internal resolution
- Fast weighing at 1600 conv/s
- Programmable via PC
- RS-232C serial interface
- RS485 serial interface with Modbus RTU
- 2 pcs programmable digital In/Out
- Analogue output

Powerful Calibration
- Calibration with test weight
- eCal-Electronic calibration, especially for heavy capacity scales
- Calibration via serial interface
- Span calibration under load for non-empty tanks and silos
- Calibration via Modbus RTU

BAYKON BX10 is a state-of-the art indicator for industrial weighing applications. Its RS232C and RS485 serial ports, two digital ports programmable as input or output, and analog output features make BX10 an excellent solution in process control.

Powerful calibration options, including eCal-electronic calibration without test weights, support easy and fast start-up and service. BX10 features adaptive digital filtering for fast settling, display resolution up to 999.999 with extremely stable indication, and up to 1600 conversions per second.

Its small size aluminum body provides a perfect installation advantage in control panels with a lack of space. Its bright and large display with red LED in 13,5 mm high offers easy reading from far distance.

Technical Specifications

Accuracy

Accuracy class	OIML Class III
EU Type approval	10.000 division
Linearity	% 0.0015 FS
Temperature coefficient	≤ 2 ppm/°C

Display and Keys

Display	6 digits, 7 segments, red, 13,5 mm high
Status annunciators	Gross, net, motion, centre of zero, unit
Keys	5-keys (function, GN, tare/clear, zero, print)
Key lock	Keys can be locked against unauthorized access

A/D Converter

Type	24 bit Delta-Sigma ratiometric ADC
Conversion rate	Up to 1600 measurements per second
Minimum input sensitivity	0.4 µV/d (Approved); 0.1 µV/d (Non approved)
Analogue input range	0 mV to -18 mV (unipolar); -18 mV to +18 mV (bipolar)
Resolution	Internal up to 16 000 000; up to 10 000 increment (Approved); up to 999 999 increment (Non approved)

Calibration and Programming

Calibration	eCal: Electronic calibration without etalon weights sCal: Span calibration of non-emptied tanks
Digital filter	10 step adjustable adaptive digital filter
Weighing functions	Tare, zeroing, auto zero tracking, motion detection, auto-zero at power-up.
Other functions	Label number, gross, tare indication.

Interface

I / O ports (BX10 MB only)	2 ports can be programmed as digital input or digital output, non-isolated
RS-232C / RS-485 serial port	1200 to 115200 baud, programmable to Continuous, Printer, BSI (Baykon Serial Interface) data protocol formats, up to 31 units on the RS485 bus
Modbus RTU	Modbus-RTU High-Low and Modbus-RTU Low-High
Analogue output (BX10 AN only)	Programmable to 4 – 20 mA, 0 – 20 mA, 0 – 5 VDC or 0 – 10 VDC

Loadcell Connection

Excitation	5 VDC, max. 300 mA
Number of load cells	Up to 8 load cells 350 Ω or up to 24 load cells 1100 Ω (min. 43 Ω)
Connection	4 or 6 wire technique. Cable length 1000 m/mm² for 6 wire connection

Environment And Enclosure

Operation temperature	-15°C to +55°C
Enclosure	Panel type aluminum body with plastic front panel and stainless-steel rear panel
Dimensions	100mm x 50 mm front panel size; depth 95 mm
Power Requirement	12 - 28 VDC, max. 300 mA

BX10 Variants

BX10 AN :	Analogue output, RS-232C, RS–485, Modbus RTU
BX10 MB :	RS-232C, RS–485, Modbus RTU, 2 pcs programmable digital input and output
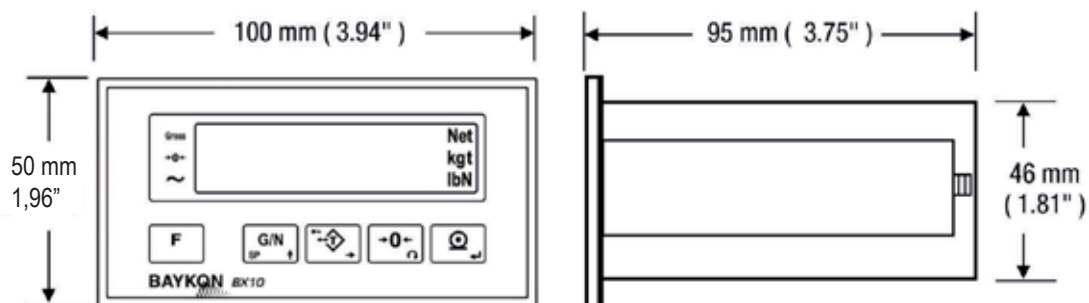
BX11 Weighing Indicator

Powerful features in small size

OIML R76 · CE · IP65

Features
- Up to 1600 measurement per second
- 16.000.000 internal counter
- Ergonomic design with small size
- 13,5 mm LED display
- eCal Electronic calibration
- Programmable via PC
- RS-232C & RS-485 serial interface
- 4 digital input 5 Relay contact output

System Integration
- 4-20 mA, 0-10 V Analogue output
- RS-232C / RS 485
- Modbus RTU, Modbus TCP
- Ethernet TCP/IP, EtherNet/IP
- EtherCAT
- Profibus, Profinet
- CANopen
- CC-Link

BAYKON BX11, is a smart indicator for industrial weighing process applications offering powerful PLC integration facilities; serial ports as RS-232C, RS-485, 4 digital inputs and 5 digital outputs, Ethernet, Analog Output and fieldbus connections such as EtherNet/IP, Modbus, Profibus, Profinet, CANopen, EtherCAT and CC-Link.

Powerful calibration options including electronic calibration without test weights supports easy and fast start-up and service. BX11 is featuring adaptive filtering for fast settling, high display resolution and 1600 conversion per second-speed.

It's small size aluminium body provides perfect panel installation with its big display and with its small space need on control panels. The instrument has stainless steel front panel for usage in harsh environments.

Technical Specifications

Accuracy

Accuracy class	OIML Class III
EU Type approval	10.000 division
Linearity	% 0.0015 FS
Temperature coefficient	≤ 2 ppm/°C

Display and Keyboard

Display	6 digits, 7 segments, LED 13,5 mm high
Status annunciators	Gross, net, motion, centre of zero, units
Keyboard	5-key (function, GN, tare/clear, zero, print)
Key lock	Keys can be locked against unauthorized access

A/D Converter

Type	24 bit Delta-Sigma ratiometric ADC
Conversion rate	Up to 1600 conversions per second
Minimum input sensitivity	0.4 µV/d (Approved); 0.1 µV/d (Non approved)
Analogue input range	0 mV to +18 mV (unipolar); - 18 mV to +18 mV (bipolar)
Resolution	Internal up to 16.000.000; up to 10.000 increment (Approved); up to 999.999 increment (Non approved)

Scale Calibration and Functions

Calibration	Standard: With etalon weights via keys or via IndFace1X software on serial port eCal: Electronic calibration without etalon weights Fieldbus: Fieldbus commands for zero and span adjustments sCal: Span calibration of non-emptied tanks.
Digital filter	10 step adjustable adaptive digital filter
Weighing functions	Tare, zeroing, auto zero tracking, motion detection, auto-zero at power-up.
Other functions	Label number, gross, tare indication

Digital Inputs / Outputs

Digital outputs	5 set points with relay contact output.
Digital inputs	4 inputs are programmable for zeroing, tare, clear, hold, peak, print etc.

Interfaces

Analogue	Programmable to 4 – 20 mA, 0 – 20 mA, 0 – 5 VDC or 0 – 10 VDC
RS-232C	1200 to 115200 baud, programmable Continuous, Printer, BSI (Baykon Serial Interface) protocol
RS-485	1200 to 115200 baud, 8 none 1, 7 even 1, 7 odd 1, 8 even 1 or 8 odd 1, Up to 31 units on the bus
Modbus RTU	1200 to 115200 baud, 8 none 1, 8 even 1 or 8 odd 1, up to 31 units on the RS-485 bus
Ethernet TCP/IP or Modbus TCP	10 Mbit/s (half duplex), galvanically isolated
EtherNet/IP	10 Mbit/s or 100 Mbit/s, full dublex, galvanically isolated
EtherCAT	100 Mbit/s, full dublex, galvanically isolated
Profibus	Profibus DP V1. 9,6 kbit/s to 12 Mbit/s automatic baud rate detection
Profinet	100 Mbit/s (full duplex), galvanically isolated
CANopen	10 kbit/s to 1 Mbit/s automatic baud rate detection
CC-Link	156 Kbit/s – 10 Mbit/s (selectable), baud rate
POWERLINK	100Mbit/s, half duplex

Load Cell Connection

Excitation	5 VDC, max. 125 mA
Number of load cells	Up to 8 load cells 350 Ω or up to 24 load cells 1100 Ω (min. 43 Ω)
Connection	4 or 6 wire technique. Cable length 1000 m/mm² for 6 wire connection

Environment and Enclosure

Operation temperature	-15°C to +55 °C; 85% RH max., non-condensing.
Enclosure	Stainless steel front panel, aluminum body, stainless steel rear panel. 48mm x 96mm panel size; 100mm depth
Power requirement	12 to 28 VDC max. 300 mA

Order Codes

	BX11MB	BX11AN	BX11EN	BX11PB	BX11PN	BX11EI	BX11CO	BX11EC	BX11CC	BX11PW
RS232C										
RS485	● Selectable as Modbus RTU									
Digital IO	● Standard 4 optically-isolated input - 5 set points with relay contact output.									
Analogue	-	●	-	-	-	-	-	-	-	-
Ethernet TCP/IP	-	-	●	-	-	-	-	-	-	-
Ethernet Modbus	-	-	●	-	-	-	-	-	-	-
EtherNet/IP	-	-	-	-	-	●	-	-	-	-
Profibus	-	-	-	●	-	-	-	-	-	-
Profinet	-	-	-	-	●	-	-	-	-	-
CANopen	-	-	-	-	-	-	●	-	-	-
EtherCAT	-	-	-	-	-	-	-	●	-	-
CC-Link	-	-	-	-	-	-	-	-	●	-
POWERLINK	-	-	-	-	-	-	-	-	-	●

BX13 Filling Controller

Fast & accurate filling, ergonomic design

Advanced Technology
- 16.000.000 internal resolution
- Up to 1600 measurement values per second
- Display resolution up to 999.999 increment
- Easy control 4 Inputs and 7 Outputs
- Ergonomic design with small size

Filling Modes
- Liquid filling for open containers, filling under bung hole or at bottom filling
- "Weigh in and emptying" mode for automatic packing machines, bag fillers
- Filling and discharging for tanks or silos

External Programming
- Calibration is performed with or without test weights (eCal)
- Easy programming and calibration via RS-232C port by BAYKON "IndFace1x" software
- Calibration via PLC interfaces

System Integration
- RS-232C / RS 485
- Modbus RTU, Modbus TCP
- Ethernet TCP/IP, EtherNet/IP
- EtherCAT
- Profibus, Profinet
- CANopen
- CC-Link
- Powerlink

BX13, is a proffessional filling controller designed for any type of filling processes of liquid, bulk and granule material with all types of packages.

With its 16.000.000 internal resolution, high speed with up to 1600 measurements per second, selectable standard digital and statistical filters, BX13 provides fast and accurate filling results in even harsh environments with vibrations. It has 4 standard filling modes for open container filling and above level bung hole filling; 1 mode for filling of materials which has high viscosity and 3 modes for packing machines. This controller has 4 opto-isolated digital inputs and 5 relay contact outputs, 2 none - isolated output. They are used for filling and disacharge processes.

Powerful calibration options including electronic calibration without test weights supports easy and fast start-up and service. BX13 has powerful PLC integration facilities; serial ports as RS-232C, RS-485 and fieldbus connections such as Ethernet TCP/IP, Modbus RTU/TCP, Profibus, Profinet, CANopen, EtherNet/IP, EtherCAT, CC-Link and Powerlink.
It's small size aluminium body provides perfect panel installation with its big display and with its small space need on control panels.

Technical Specifications

Accuracy

Accuracy class	OIML Class III
EU Type approval	10.000 division
Linearity	% 0.0015 FS
Temperature coefficient	≤ 2 ppm/°C

Display and Keyboard

Display	6 digits, 7 segments, LED red, 13,5 mm high
Status annunciators	Gross, net, filling process steps, centre of zero, unit (kg, lb)
Keyboard	5 key (function, star key tare/clear, zero, print), with tactile feedback
Key lock	Keys can be locked against unauthorized access

A/D Converter

Type	24 bit Delta-Sigma ratiometric with internal analogue and digital filtres
Conversion rate	Up to 1600 measurement values per second
Min. input sensitivity	0.4 µV/d (Approved); 0.1 µV/d (Non approved)
Analogue input range	-18 mV to +18 mV
Resolution	Internal up to 16.000.000; up to 10 000 increment (Approved); up to 999 999 increment (Non approved)

Scale Calibration and Functions

Calibration	Calibration is performed with or without test weights (eCal)
Digital filter	10 steps programmable adaptive filter
Weighing functions	Taring, zeroing, auto zero tracking
Process functions	Motion detection; increased resolution, error and status messages, tons / hour, total impressions

Digital Inputs / Outputs

Digital outputs	5 relay contact 250 VAC or 30 VDC, 1 A and 2 non - isolated output
Digital inputs	4 opto - isolated digital inputs 12 - 28 VDC, 10 mA

Interfaces

RS - 232C	1200 to 115200 baud, 8 none 1, 7 even 1, 7 odd 1, 8 even 1 or 8 odd 1 Continuous, BSI (Baykon Serial Interface) protocol and printer forms
RS - 485	1200 to 115200 baud, 8 none 1, 7 even 1, 7 odd 1, 8 even 1 or 8 odd 1, up to 31 units on the RS-485 bus
Modbus RTU	1200 to 115200 baud, 8 none 1, 8 even 1 or 8 odd 1, up to 31 units on the RS-485 bus
Ethernet TCP/IP or Modbus TCP	10 Mbit/s (half duplex), galvanically isolated
EtherNet/IP	10 Mbit/s or 100 Mbit/s, full dublex, galvanically isolated
EtherCAT	100 Mbit/s, full dublex, galvanically isolated
Profibus	Profibus DPV1. 9,6 kbit/s to 12 Mbit/s automatic baud rate detection
Profinet	100 Mbit/s, full dublex, galvanically isolated
CANopen	10 kbit/s - 1 Mbit/s automatic baud rate detection
CC-Link	156 Kbit/s - 10 Mbit/s (selectable), baud rate
Powerlink	100Mbit/s, half duplex

Load Cell Connection

Excitation	5 VDC max. 125 mA
Number of load cells	Up to 8 load cells 350 Ω or up to 24 load cells 1100 Ω (min. 43 Ω)
Connection	4 or 6 wire technique. Cable length 1000 m/mm² for 6 wire connection

Environment and Enclosure

Operation temperature	-15 ºC to +55ºC; %85 RH max., non - condensing
Enclosure	Stainless steel front panel, aluminium body, stainless steel rear panel. 48mm x 96mm panel size; 100mm depth
Protection class	Front panel IP65.
Power requirement	12 - 28 VDC, Max. 300 mA

Application Modes

Surface Filling

Below Surface Filling

Filling for Packaging - Bagging

BX14 Weighing Controller

For discontinuous totalizer & extraction rate scales

Advanced Technology
- 16.000.000 internal resolution
- Up to 1600 measurement values per second
- Display resolution 999.999
- Easy control with digital 6 Inputs and 5 Outputs
- Ergonomic design with small size

Smart Process Control
- Flow rate control
- Totalising control
- By-pass functions
- Emptying pipe control
- Daily total, estimated next 24h total, batch total, turn total, Non-erasable total

External Programming
- Calibration is performed with or without test weights (eCal)
- Easy programming and calibration via RS-232C port by BAYKON "IndFace1x" software
- Calibration via PLC interfaces

System Integration
- RS-232C / RS 485
- Modbus RTU, Modbus TCP
- Ethernet TCP/IP, EtherNet/IP
- EtherCAT
- Profibus, Profinet
- CANopen
- CC-Link

BX14, is a smart weighing controller and it is designed for discontinuous totalizer or extraction rate scale applications. BX14 is used for flow control on the production line together with totalizing the transferred material. This instrument also gives information estimated next 24h total for the actual flow rate and daily total. Additional 3 accumulations can be used for different purposes like production batch total, turn total, Non-erasable total etc. This controller has 4 opto-isolated digital input, 2 non-isolated digital input and 5 relay contact outputs. They are used for filling and disacharge processes.

It has 16.000.000 internal resolution and high speed with up to 1600 measurements per second.

Powerful calibration options including electronic calibration without test weights support easy and fast start-up and service. It's small size aluminium body provides perfect panel installation with its big display and with its small space need on control panels.

Technical Specifications

Accuracy

Accuracy class	OIML Class III
EU Type approval	10.000 division
Linearity	% 0.0015 FS
Temperature coefficient	≤ 2 ppm/°C

Display and Keyboard

Display	6 digits, 7 segments, LED red, 13,5 mm high
Status annunciators	Gross, net, centre of zero, 1 / hour flow rate, estimated next 24 hour total, total, unit (kg, t, lb)
Keyboard	5 key (function, star key, tare/clear, zero, print), with tactile feedback
Key lock	Key can be locked against unauthorized access

A/D Converter

Type	24 bit Delta-Sigma ratiometric with internal analogue and digital filtres
Conversion rate	Up to 1600 measurement values per second
Min. input sensitivity	0.4 µV/d (Approved); 0.1 µV/d (Non approved)
Analogue input range	- 18 mV to +18 mV
Resolution	Internal up to 16.000.000; display up to 10 000 increment (Approved); up to 999 999 increment (Non approved)

Scale Calibration and Functions

Calibration	Calibration is performed with or without test weights (eCal)
Digital filter	10 steps programmable adaptive filter
Weighing functions	Taring, zeroing, auto zero tracking, motion detection, increased resolution
Process functions	Flow rate control, totalising control, emptying pipe control, by-pass functions Accumulations; daily total, estimated next 24h total, batch total, turn total, Non-erasable total

Digital Inputs / Outputs

Digital outputs	5 relay contact 250 VAC or 30 VDC, 1 A
Digital inputs	4 opto - isolated and 2 non - isolated digital inputs 12 - 28 VDC, 10 mA

Interfaces

RS-232C	1200 to 115200 baud, 8 none 1, 7 even 1, 7 odd 1, 8 even 1 or 8 odd 1 Continuous, BSI (Baykon Serial Interface) protocol and printer forms
RS-485	1200 to 115200 baud, 8 none 1, 7 even 1, 7 odd 1, 8 even 1 or 8 odd 1, 31 units on the bus
Modbus RTU	1200 to 115200 baud, 8 none 1, 8 even 1 or 8 odd 1, up to 31 units on the RS-485 bus
Ethernet TCP/IP or Modbus TCP	10 Mbit/s (half duplex), galvanically isolated
EtherNet/IP	10 Mbit/s or 100 Mbit/s, full dublex, galvanically isolated
EtherCAT	100 Mbit/s, full dublex, galvanically isolated
Profibus	Profibus DPV1. 9,6 kbit/s to 12 Mbit/s automatic baud rate detection
Profinet	100 Mbit/s, full dublex, galvanically isolated
CANopen	10 kbit/s - 1 Mbit/s automatic baud rate detection
CC-Link	156 Kbit/s – 10 Mbit/s (selectable), baud rate
Powerlink	100Mbit/s, half duplex

Load Cell Connection

Excitation	5 VDC max. 125 mA
Number of load cells	Up to 8 load cells 350 Ω or up to 24 load cells 1100 Ω (min. 43 Ω)
Connection	4 or 6 wire technique. Cable length 1000 m/mm² for 6 wire connection

Environment and Enclosure

Operation temperature	-15 ºC to +55ºC; %85 RH max., non - condensing
Enclosure	Stainless steel front panel, aluminum body, stainless steel rear panel. 48mm x 96mm panel size; 100mm depth
Protection class	Front panel IP65.
Power requirement	12 - 28 VDC, Max. 300mA

Application Modes

Discontinuous Totalizer
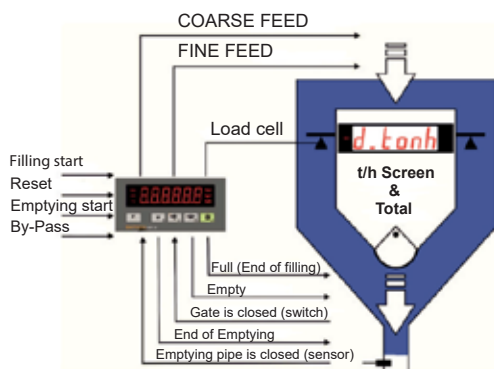
Extraction Rate Scales
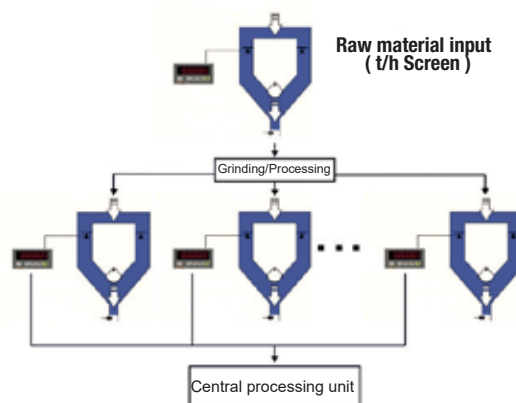
BX18 Weighing Indicator

DIN rail mounted weighing instrument

Features
- 14mm LED display
- Up to 1600 convertion/sec
- Calibration via keys and by PC/PLC through interfaces
- Electronic calibration (eCAL) without test weights
- Span calibration (sCAL) of non-empty tanks.

System Integration
- RS-232C serial port
- RS-485 serial port
- Modbus RTU
- Analog selectable as 0-20mA, 4-20mA, 0-5 VDC and 10 VDC
- Parallel I/O port as 4 x Inputs and 6 x Outputs

BAYKON BX18 is a DIN rail mounted indicator to install in a cabinet for intensive dusty enviroment. It offers RS-232C, RS-485, Analog output, Parallel port including 4 x Inputs and 6 x Outputs, Modbus RTU fieldbus interfaces as standard.

Powerful calibration options including electronic calibration without test weights, span calibration of non-empty tanks support easy and fast installation and service. BX18 is featuring 10 step adaptive filter for fast settling, up to 999.999 display resolution and 1600 conversion per second.

Programming and calibration can be executed via device keys and by PC/PLC through serial ports and fieldbus. BX18 is powered by from 12-28 volt DC supply.

Technical Specifications

Accuracy	
Linearity	% 0.0015 FS
Temperature coefficient	$\leq$ 2 ppm/°C

Display and Keyboard	
Display	6 digits, 7 segments, red, 14 mm high
Status annunciators	Gross, net, motion, centre of zero, units (kg, g, t, lb, klb, N, kN)
Keyboard	5-key (function, GN, tare/clear, zero, print)
Key lock	Keys can be locked against unauthorized access

A/D Converter	
Type	24 bit Delta - Sigma ratiometric ADC
Conversion rate	Up to 1600 conversions per second
Minimum input sensitivity	0.1 µV per interval
Analogue input range	0 mV to + 18 mV (unipolar) ; -18mV to +18mV (bipolar)
Resolution	Internal up to 16.000.000; display up to 999.999 d

D/A Converter	
Type	16 bit D/A converter
Max. cable length	300 meter
Max. load resistance (current output)	500 Ω

Scale Calibration and Functions	
Calibration	Standard: By etalon weights via keys or serial port via IndFace1x software eCal: Electronic calibration without etalon weights sCal: Span calibration of non-emptied tanks.
Digital filter	10 step adjustable adaptive digital filter
Weighing functions	Tare, zero ing, auto zero tracking, motion detection, auto-zero at power-up.
Other functions	Label number, gross, tare indication
Digital outputs	6 set points with relay contact output.
Digital Inputs	4 opto-isolated inputs are programmable for zeroing, tare, clear, hold, peak, print etc.

Interfaces	
RS -232C	1200 to 115200 baud, programmable Continuous, Printer, BSI (Baykon Serial Interface) protocol
RS -485	1200 to 115200 baud, 8 none 1, 7 even 1, 7 odd 1, 8 even 1 or 8 odd 1, Up to 31 units on the bus
Modbus RTU	1200 to 115200 baud, 8 none 1, 8 even 1 or 8 odd 1, up to 31 units on the RS-485 bus
Analogue	Programmable to 4 – 20 mA, 0 – 20 mA, 0 – 5 VDC or 0 – 10 VDC

Loadcell Connection	
Excitation	5 V DC, max. 300 mA
Number of load cells	Up to 8 load cells 350 Ω or up to 24 load cells 1100 Ω (min. 43 Ω)
Connection	4 or 6 wire technique. Cable length 274 m/mm² for 6 wire connection

Environment and Enclosure	
Operation temperature	-15°C to +55°C; 85% RH max, non-condensing.
Enclosure	Polycarbonate, mounting in standard DIN rails, IP20 89,7 mm x 107,6 mm x 62,2 mm
Power requirement	12 – 28 VDC, Max. 300 mA
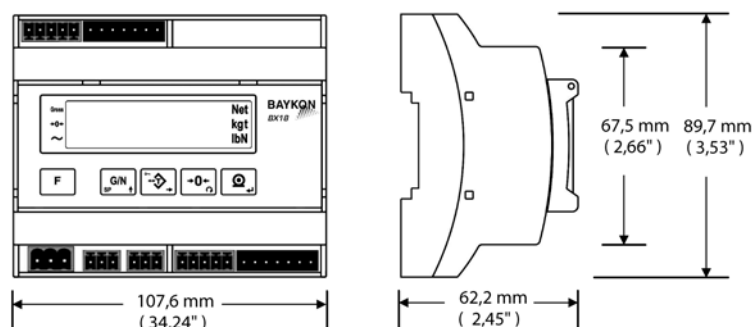
BX30 / BX30D Weighing Indicator

Fits perfectly to your weighing processes

Main Features
- Stainless steel front panel, IP67 protected for wet, hygienic and harsh areas
- Color selectable LCD display with alphanumeric info line
- Bar graph to follow gross weight capacity
- Key based locking against interfering

High Technology & Performance
- Up to 300 000 display resolution
- Up to 1600 conversions per second
- Smart and adaptive filter
- High capacity tank scales supported by eCAL - electronic calibration
- Span adjustment of loaded tanks without emptying

Typical Applications
- Process weighing applications; tank, silo, hopper and conveyor weighing
- Livestock and dynamic weighing with strong dynamic weighing algorithm
- Warning with display color at malfunction

Integration & Connectivity
- Galvanically isolated, RS232C and RS485, RS422
- Ethernet TCP/IP
- Micro USB port
- Profibus, Profinet, CANopen, EtherNet/IP, EtherCAT, CC-Link, Powerlink, Modbus RTU / TCP and Analogue outputs with Digital I/O

Standard Interfaces :
◉ Ethernet TCP/IP ◉ USB ◉ RS-232C ◉ RS-485 ◉ RS-422

Optional PLC Interfaces :
◉ Profibus ◉ Profinet ◉ Modbus RTU ◉ Modbus TCP ◉ EtherNet/IP ◉ EtherCAT
◉ CANopen ◉ CC-Link ◉ CC-Link IE ◉ Powerlink ◉ Analogue output ◉ Digital I/O

BX30 & BX30D are low cost panel type weighing indicators; offer high accuracy, and performance with strong connectivity options for all weighing applications. With its IP67 protected stainless steel front panel, it provides reliable and safe operation in wet, hygienic and harsh industrial areas.

BX30 & BX30D have strong calibration alternatives including eCAL electronic calibration which is extremely important tool for heavy capacity tank scales and calibration of tanks without emptying.

For connectivity, BX30 & BX30D have RS232C, RS485, RS422, USB and Ethernet TCP/IP as a standard; and Analogue output, EtherNet/IP, Profibus, Profinet, Modbus RTU, Modbus TCP, CANopen, EtherCAT, CC-Link, Powerlink and Digital I/O with 4 opto isolated inputs and 5 relay outputs, are supplied as variants of interfaces.

Typical Applications

1. Industrial Scales
With their state of the art features, BX30 & BX30D are very accurate and reliable weighing indicators for industrial scale applications such as bench, floor and truck scales.

2. Industrial Process Weighing Applications
BX30 & BX30D are high tech instruments for usage at tank, silo, hopper, conveyor, and overhead scales.

3. Weighing at Wet, Hygienic and Harsh Environments
BX30 & BX30D are designed to use in wet and harsh industrial environments. Design of its stainless steel housing complies with international hygienic requirements.

4. Livestock and Dynamic Load Weighing
Weighing of dynamic items on the platforms (like livestock) available by BX30 & BX30D. These features usable for weighing at static scales, under vibration of industrial environments.

5. Applications Require Powerful Data Interface and Fieldbus Connection
BX30 & BX30D used at industrial weighing systems; require powerful interfaces like Profibus, Profinet, Ethernet TCP/IP, EtherNet/IP, Modbus RTU / TCP, CANopen, EtherCAT, CC-Link, Powerlink, Analogue output, Digital I/Os, RS232C, RS485 and RS422 serial ports.

Technical Specifications

Model	BX30	BX30D
Accuracy class & EU type approval	OIML class III, single range, multi range or multi interval	
Display	Wide angle LCD display with multicolor backlight, 6 digits 22 mm in height weight display and 16 digits 8 mm in height alphanumeric information display	
Display resolution	Up to 300 000 divisions	Please refer to the following digital load cells
A/D convertion	24 bit Delta-Sigma ADC with up to 1600 conversions rate	
Minimum input sensitivity	0.4 µV/e (legal metrology), 0.05 µV/d (industrial)	Baykon BS063SD, BR200SD, BR030/32SD & Flintec RC3D
Analogue input range	-5 mV to +19 mV	
Internal resolution	Up to 16 000 000 counts	
Calibration	Standard: With etalon weights via keys or via PC software on serial port eCal: Electronic calibration without etalon weights Fieldbus: Fieldbus commands for zero and span adjustments sCal: Span calibration of non-emptied tanks	
Digital filter	5 step adjustable digital adaptive filter	
Functions	Ticket number, date & time, unit change	
Standard applications	Labelling with Barcode, livestock weighing and free setpoints, basic peak, hold, functional outputs, interface with PC or PLC over Fieldbus, Ethernet etc.	
Memory	500 item limit values Each item has 5 pcs free programmable set points in the memory	
Digital inputs	Opto isolated 4 inputs programmable for zeroing, taring, print, fieldbus controlled input, etc.	
Digital outputs	Relay contact outputs can be programmable independently to 14 different functions	
Data output	Galvanically isolated RS232C, RS422 and RS485, USB and Ethernet TCP/IP	
Number of load cells	Up to 8 load cells 350 Ω or up to 24 load cells 1200 Ω (min. 43 Ω)	Up to 24 digital load cells
Load cell connection	4 or 6 wire technique. Home cable length 1000 m/mm² for 6 wire connection	RS485, BLDC Protocol Home Cable max. 300m
Alibi memory	99 999 weighing records	
Operation temperature	-15°C ~ +55°C max. (Operational), -10°C ~ +40°C (Legal metrology)	
Humidity	Max. 90% non-condensing relative humidity legal metrology max. 80 %	
Housing and protection class	IP67 protected stainless steel front panel, aluminium body, stainles steel rear panel	
Power supply	12 - 28 VDC	
Indicator options	Alibi memory, Modbus RTU/TCP	
Interfaces of variants	Digital 4 inputs / 5 outputs Profinet Analogue Output (0-10V, 4-20mA) CANopen EtherNet/IP CC-Link EtherCAT Powerlink Profibus	
Dimensions (H x W x D)	108 x 205 x 112,5 mm, Panel mount cutout dimensions (H x W): 92 x 186 mm	
Gross weight	1,75 kg	

BX30 Plus / BX30D Plus

Weighing processes terminals

Main Features
- IP67 protected front panel for wet and harsh areas
- Color changing display, SmartAPP & 16 digit alphanumeric info line
- User programmable 3 keys
- On board Ethernet TCP/IP

High Technology & Performance
- Up to 300 000 display resolution
- Up to 1600 conversions per second
- Application based SmartBars
- Changing color for prompting
- High capacity tank scales supported by eCAL - electronic calibration & span correction of non-empty tanks

Typical Applications
- Weighing and data collection
- Customized labelling with barcode
- Classification, checkweighing, filling and peak hold
- Livestock and dynamic weighing with strong filters and algorithm

4 Memories Each With 500 Items
- 2 pcs ID1 & ID2 identification data
- Preset tare to enter specific tare
- Limit values memory for weighing
- Item limits for check weighing and for classifying of packages
- Automatic memory linkage to IDs

Integration & Connectivity
- Profibus, Profinet, CANopen, Ethernet TCP/IP, EtherNet/IP, EtherCAT, CC-Link, Powerlink, Modbus RTU, Modbus TCP, Analogue output and Digital I/Os
- Galvanically isolated, RS232C and RS485, RS422 serial ports
- Micro USB port
- Ethernet TCP/IP

Standard Interfaces :
⊙ Ethernet TCP/IP ⊙ USB ⊙ RS-232C ⊙ RS-485 ⊙ RS-422

Optional PLC Interfaces :
⊙ Profibus ⊙ Profinet ⊙ Modbus RTU ⊙ Modbus TCP ⊙ EtherNet/IP ⊙ EtherCAT ⊙ CANopen ⊙ CC-Link ⊙ CC-Link IE ⊙ Powerlink ⊙ Analogue output ⊙ Digital I/O

BX30 Plus & BX30D Plus are high accurate, multifunctional weighing terminals which are used in wet, hygienic and harsh industrial areas.

This weighing indicator can be programmable for weighing, labelling, checkweighing, classifying, filling, peak hold and dynamic weighing applications. Three user programmable keys can be set for user applications to provide practical and error free operation. The instrument has 4 pcs memories; ID1, ID2, preset tare, item limit values; each have 500 records capacity.

BX30 Plus & BX30D Plus have important features for process weighing; strong calibration alternatives including electronic calibration (eCAL) and various integration interfaces with PC or PLC via RS232C, RS485, RS422, USB, Ethernet TCP/IP as a standard. Fieldbuses such as Profibus, Profinet, CANopen, EtherCAT, CC-Link, Powerlink, Modbus RTU, Modbus TCP, EtherNet/IP, Analogue output, Digital I/O are optional.

Typical Applications

1. Industrial Process Weighing Applications
Strong calibration options and various integration features including Fieldbus interfaces, provides perfect performance for tank, mixer, conveyor scales.

2. Labelling & Data Collecting
BX30 Plus & BX30D Plus can print different type of standard tickets including totalizing and customized tickets with barcode.

3. Automatic / Manual Checkweighing
The weight or the quantity of the items in the package on the scale are controlled. 500 item memory for sets of limits.
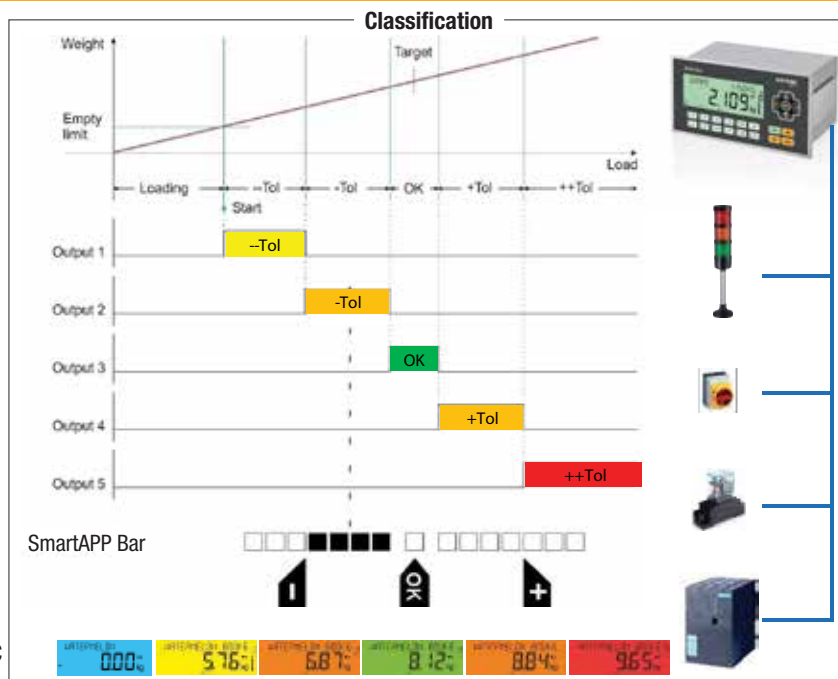
4. Automatic / Manual Classifying
Products can be classified according to the weight or quantity of item in the package. 500 item memory for sets of limits.

5. Automatic / Manual Gravimetric Filling
Automatic / manual filling can be executed in gross mode or in net mode. 500 item memory for sets of limits.

6. Peak Hold
Up to 10 peak force of the item can be detected during tension or compression test. Test result is displayed and transmitted to PC or printer. 500 item memory for testing different materials.

Technical Specifications

Model	BX30 Plus	BX30D Plus
Accuracy class & EU type approval	OIML class III, single range, multi range or multi interval	
Display	Wide angle LCD display with multicolor backlight, 6 digits 22 mm in height weight display and 16 digits 8 mm in height alphanumeric information display.	
Display resolution	Up to 300 000	Please refer to the following digital load cells
A/D conversion	24 bit Delta-Sigma ADC with up to 1600 conversion rate	
Minimum input sensitivity	0.4 μV/e (legal metrology), 0.05 μV/d (industrial)	Baykon BS063SD, BR200SD, BR030/32SD & Flintec RC3D
Analogue input range	-5 mV to +19 mV	
Internal resolution	Up to 16 000 000 counts	
Calibration	Standard: With etalon weights via keys or via PC software on serial port eCal: Electronic calibration without etalon weights Fieldbus: Fieldbus commands for zero and span adjustments sCal: Span calibration of non-emptied tanks	
Digital filter	5 step adjustable digital adaptive filter and 5 programmable digital dynamic filter	
Functions	2 x ID data,ticket number,date & time,total indication, Header definitions for IDs as customer, material, quality, color...etc.	
Standard applications	Labelling, checkweighing, classifying, filling, peak hold, totalization of the sequential weighing, totalization of the additive items, livestock weighing	
Memory	ID1 and ID2 memories, specific tare memory, item limit values memory. Each memory record size is 500 items	
SD card	SD card slot for different applications	
Programmable keys	3 function keys	
Digital inputs	Galvanically isolated 4 inputs programmable for zeroing, taring, print, Fieldbus controlled remote input, etc. Inputs are set automatically to certain functions at checkweighing, classifying, filling, peak hold.	
Digital outputs	Relay contact outputs can be programmable independently to 14 different functions	
Data output	Opto isolated RS232C, RS422 and RS485, USB and Ethernet TCP/IP	
Interfaces of variants	Profibus, Profinet, CANopen, Modbus TCP, Ethernet TCP/IP, EtherNet/IP, EtherCAT, CC-Link, Powerlink	
Number of load cells	Up to 8 load cells 350 Ω or up to 24 load cells 1200 Ω (min. 43 Ω)	Up to 24 digital load cells
Load cell connection	Connection with 4 or 6 wires. Cable length maximum 1000 m/mm²	RS485, BLDC Protocol Home Cable max. 300m
Operation temperature	-15°C ~ +55°C max. (Operational), -10°C ~ +40°C (Legal metrology)	
Humidity	Max. 90 % non condensing relative humidity. Legal metrology max. 80 %	
Alibi memory	99 999 weighing records	
Housing and protection class	Stainless steel IP67 protected front panel, aluminium body, stainles steel rear panel	
Power supply	12 - 28 VDC	
Dimensions (H x W x D)	108 x 205 x 112,5 mm, Panel mount cutout dimensions (H x W): 92 x 186 mm	
Gross weight	1,75 kg	

BX30 Fill - Filling Controller

Smart Controller for Filling and Packing Machines

Main Features
- 12 different operation modes for the most common applications,
- Configurable recipe content,
- 7 Programmable keys,
- Digital I/O's: Internal 12/14, external 16/16
- Spare I/O's to continue filling in case of any digital I/O malfunction.

Smart Operation with
- Smart filling algorithms,
- Smart start-up the filling.
- Full control of bagging machines,
- Master-slave operation to transfer set-up to other instruments,
- Multicolor LCD to guide and warn the operator.

Advanced Technology & Performance
- High speed real time operation,
- Up to 1600 conversions per second,
- 1000 times higher filling control resolution than scale increment,
- Freely programmable digital I/O's, timers and logic functions,
- Remote service via internet.

Integration & Connectivity
- Ethernet TCP/IP, USB, RS-232C, RS-485, Profibus, Profinet, Modbus RTU, Modbus TCP, EtherNet/IP, EtherCAT, CANopen, CC-Link, CC-Link IE, Powerlink
- DIN rail digital I/O unit for easy cabling in the cabinet.

BX30 Fill, filling and packing controller is high tech, smart and economic instrument for usage at various filling and packing machines. Its configurable specific recipe build feature and smart filling algorithms give big advantages in usage.

The most common filling & packing applications fit one of its 12 filling modes. Master-slave operation provides the set up and recipe transferring to all BX30 Fill slave controllers on the machine. Full control of multiscale bagging or packing machine is available.

BX30 Fill has Recipe and ID memories having 250 records size each, for fillings with different materials and specific fillings like batch filling.

Its programmable 7 keys can be assigned to the predefined functions in order to provide quick and informative operation. Freely programmable digital inputs and outputs eliminates additional PLC requirement in the cabinet to control customers pump, pilot valve, nitrogen purging, rotary valve, bag inflator, material activator etc.

Programmable reserved I/O ports enable operation until receiving the new digital I/O board in case of any digital I/O malfunction.

High accuracy at fast filling applications with BAYKON technology and know-how.

BX30 Fill is new generation filling controller developed with Baykon state of the art technology and know-how. It is developed to use at all kinds of gravimetric filling, dosing and packaging applications for powder and liquid fillings. With its advanced and intelligent electronic technologies, BX30 Fill meets all your requirements from basic filling machines to the most complex packaging machines. Integration of BX30 Fill to the factory automation system - like e PC / PLC / Scada etc. - is very simple!

SmartAPP

This a special function which helps the operator to follow the operation on the display by changing the display color and the analogue bar graph. The Smart adjustment technics and a the Smart start-up are its additional advantages at filling & packing.

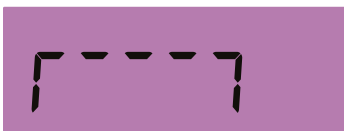## Changing Display Colour

Filling in progress

Under

Okay

Over

Error

Identification and Memory

Recipe and ID memories. Each has 250 records size for fillings of various materials.

MID Directive **OIML R61**

Functional Keys

Five user programmable function keys, change key and magnify key can be set to specified functions for your easy and informative usage.

Bar Graph

Operator may follow the filling on the bar graph

Max

Acoustic warning

The filling controller produces key sound at pressing keys. Additionally, the acoustic alarm warns the operator in case of hardware, scale and weighing related errors.

Filling Modes

✓ Open container filling
✓ Bung - hole type container filling
✓ Filling from bottom of the container with lance control
✓ Packing
✓ Bag filling
✓ Big bag filling
✓ Valve bag filling machine
✓ Bagging machine with single weighing hopper
✓ Bagging machine with up to 16 weighing hoppers
✓ Packing machine with up to 16 weighing hoppers
✓ Filling container from tank scale
✓ Weigh in - Weigh out

Digital Inputs and Outputs

In-house digital I/O board or DIN rail mount, RIO16 digital I/O unit.

In-house Digital I/O

RIO16
DIN rail mount
Digital I/O unit

Standard Interfaces :

- ⬤ **Ethernet TCP/IP**
- ⬤ **USB**
- ⬤ **RS 232C (isolated)**
- ⬤ **RS 485 (isolated)**

for PC, Printer, Barcode reader, remote display etc.

Analog feeding speed controller

PLC Interfaces :

⬤ **Profibus**	⬤ **CANopen**
⬤ **Profinet**	⬤ **CC-Link**
⬤ **Modbus RTU**	⬤ **CC-Link IE**
⬤ **Modbus TCP**	⬤ **Powerlink**
⬤ **EtherNet/IP**	⬤ **Digital I/O**
⬤ **EtherCAT**	

Load Cell Connection

✓ Analogue load cell (BX30 Fill)

Applications Samples

Open Container Filling

Material Tank Filling
Material Tank
Level Sensor
Coarse & Fine Feed
Drop Catcher
Start
Weighing Platform
Load Cell

Bung Hole Type Container Filling

Material Tank Filling
Material Tank
Level Sensor
Valve Up / Down
Coarse & Fine Feed
Out
In
Valve Position Switches
Start
Weighing Platform
Load Cell

Container Filling from Bottom, In or Above surface

Material Tank Filling
Material Tank
Level Sensor
Nitrogen Purging
Coarse & Fine Feed
Valve Up / Down
Out.
In
Mid.
Bot.
Valve Position Switches
Start
Weighing Platform
Load Cell
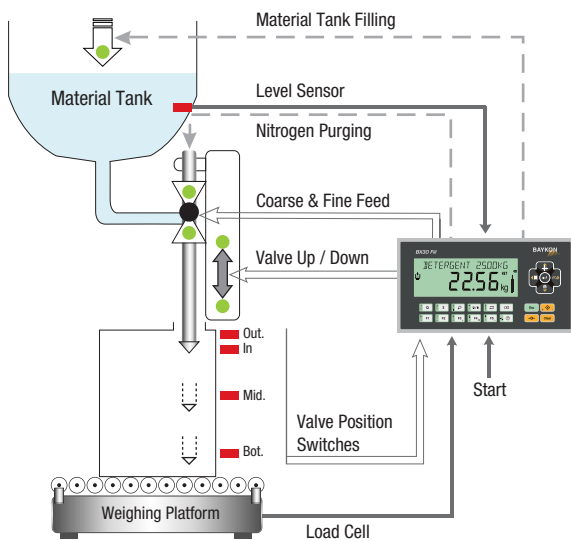
Pallet Filling in High resolution (200 kg x 0,1 kg)

Material Tank Filling
Material Tank
Level Sensor
Coarse & Fine Feed
Valve Up / Down
Out
In
200 kg x 0,1 kg
Valve Position Switches
Start
Weighing Platform
Load Cell
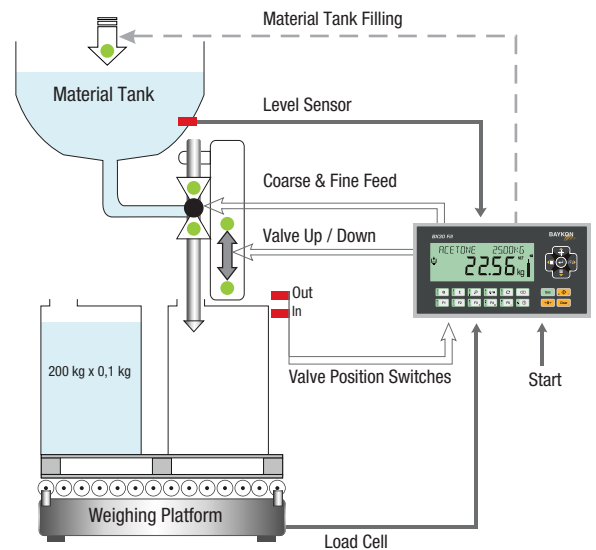
Filling Machine with Lifter

Fill The Product Tank
Product Tank
Product Tank Is Empty
Coarse & Fine Feed
Drop Catcher
Start
Weighing Platform
Lifter Position Switches
Lifter Up
Load Cell
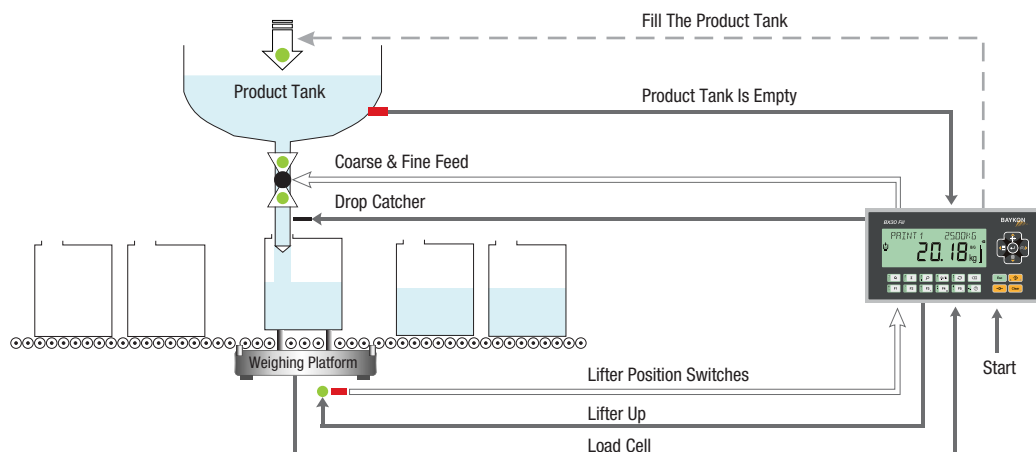
Master Slave Interface at Rotating Filling Machine

Product Tank

Weighing Platform   Weighing Platform   Weighing Platform

Start 1   Start 2   Start 30

Up to #30

#1   #2   Interconnection Serial Port
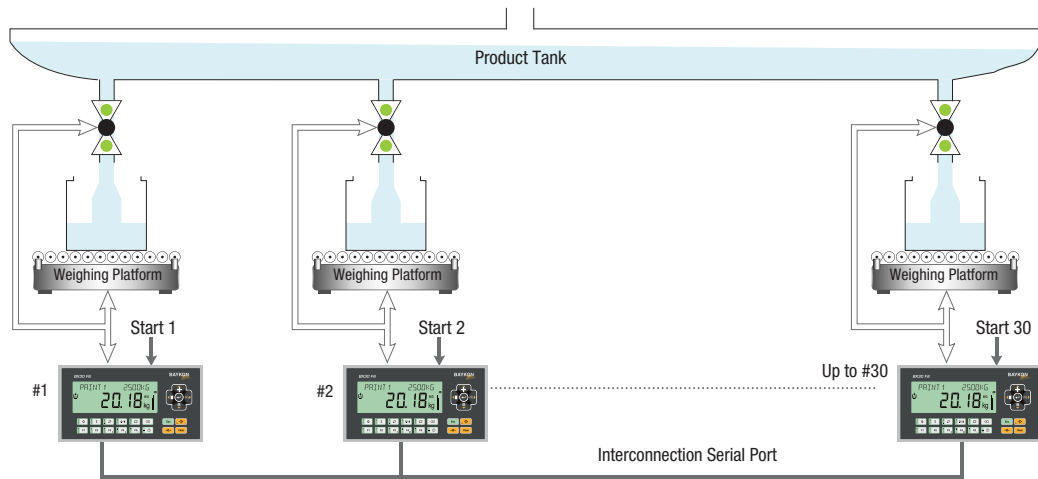
Filling from the Tank Scale

Material 1   Material 2   Material 3   Material n

Coarse & Fine Feed   Material Selection   2 Speed Filling

Fill

Load Cells

Discharge   Reset   2 Speed Discharging

Packing

Coarse & Fine Feed

Open Feeding Gate / Switch

Feeder

Load Cell

Emptying Gate

Open Emptying Gate / Switch

Run

Packing Machine & Controller

Synchronization of weighing & packing sections of the packing machine

Big Bag

Material Silo

Feeder

Coarse & Fine Feed

Lifter Up / Switch

Scale   Load Cell

Catch the Bag / Switch

Vibration   Start

53

Applications Samples

Bagging

Product Silo Filling

Level Sensors

Product Silo

Rotary Valve

Feeding is Done

Coarse & Fine Feed

Open Feeding Gate / Switch

Feeder

FLOUR   2500KG
20.18 kg

Load Cells

Open Emptying Gate / Switch

Weigh-in / Weigh-out

Material Silo

Coarse Feed

Feeder

Fill

Open Feeding Gate / Switch

Feeding Gate

PRODUCT1 25000KG
205.50 kg

Load cell

Discharge

Discharge Gate

Coarse & Fine Discharge

Discharge Conveyor

Open Discharge Gate / Switch

Valve Bag Filling Machine

Product Silo Filling

Product Silo

Level Sensors

Coarse & Fine Feed

CEMENT   2000KG
15.05 kg

Air flow control (blowing)

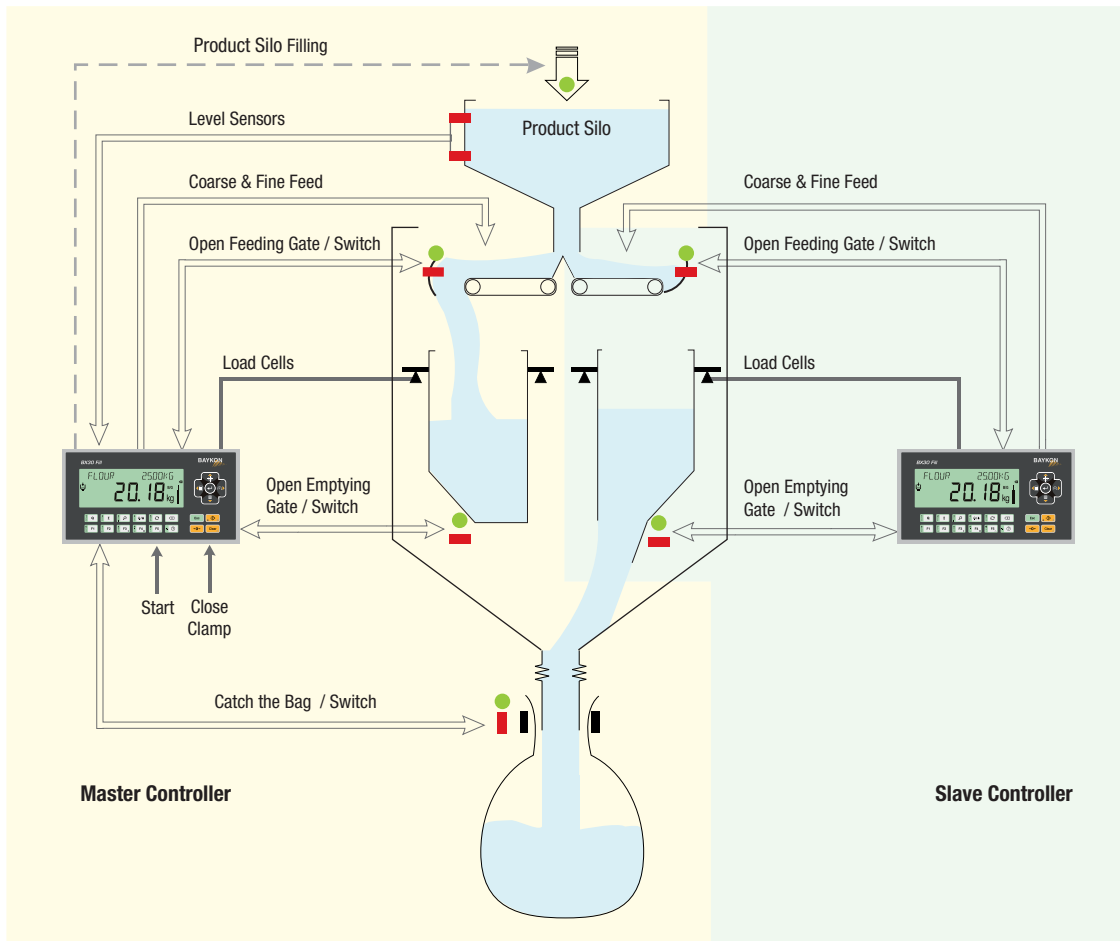Catch the Bag / Switch

Start

Close Clamp

Load Cells

Air outlet

Pusher

Vibration

Bagging Machine with Single Scale

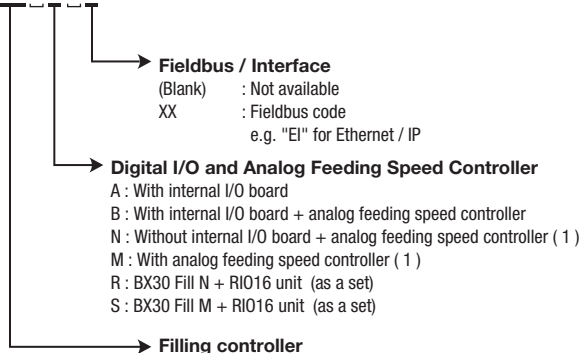
Bagging Machine with Double Scales

Technical Specifications

Model	BX30 Fill
Accuracy class & EU type approval	OIML class III, single range, multi range or multi interval up to 10000 divisions.
Display	Wide angle and bright LCD display with multicolor backlight, 22 mm in height 6 digits weight display and 8 mm in height 16 digits alphanumeric information display.
Display resolution	Up to 300 000 divisions at industrial usage.
A/D conversion	24 bit Delta-Sigma ADC with up to 1600 conversions rate.
Minimum input sensitivity	0.4 µV/e (legal metrology), 0.05 µV/d (industrial)
Analogue input range	-5 mV to +19 mV
Internal resolution	Up to 16 000 000 counts.
Calibration	Calibration with test weights, eCal-electronic calibration without test weights, Span calibration with temporary zero of charged tank, Zero adjustment, Gain adjustment, Coefficient entry.
Digital filter	7 steps programmable adaptive filter.
Scale functions	Taring, zeroing, auto zero tracking, motion detection, auto zero at power up, tare status save at power off, increased resolution, automatic tare and clear, temporary gross indication, unit change.
Filling modes	12 different packing / filling modes with smart filling algorithms.
Memory	Two memories for recipe and ID , each has 250 records size.
Programmable keys	7 programmable keys to assign specific functions.
Digital I/O	Internal: 12 digital inputs / 14 digital outputs External: 16 digital inputs / 16 digital outputs with DIN rail mounting RIO16 unit.
Digital inputs	Opto-isolated and reverse polarity connectable, 12 to 28 VDC, 10mA. Selectable input(s) can be programmed as logic and time functions or used as a Remote Input of your PLC over Fieldbus.
Digital outputs	Opto-isolated and short circuit protected transistor outputs, 12 to 28 VDC / 100 mA, Selectable output(s) can be programmed as logic and time functions or used as a Remote Output of your PLC over Fieldbus.
Data outputs	Galvanically isolated RS232C, RS485, USB and Ethernet TCP/IP
Fieldbus interface	Profibus, Profinet, CANopen, Modbus TCP, Modbus RTU, Ethernet TCP/IP, EtherNet/IP, EtherCAT, CC-Link, Powerlink
Number of load cells	Up to 8 load cells 350 Ω or up to 26 load cells 1200 Ω (min. 43 Ω)
Load cell connection	Connection with 4 or 6 wires. Cable with 6 wires length maximum 1000 m/mm²
Load cell supply voltage	5 VDC @ max. 150 mA
Operation temperature	-15°C ~ +55°C max. (Operational), -10°C ~ +40°C (Legal metrology)
Humidity	Max. 90 % non-condensing relative humidity. For legal metrology max. 80 %
Alibi memory	99 999 weighing records.
Housing and protection class	IP67 protected stainless steel front panel, aluminum body and stainless steel rear panel.
Power supply	12 – 28 VDC 100mA@24 VDC (Basic instrument)
Dimensions (H x W x D)	108 x 205 x 112,5 mm Panel mount cutout dimensions (H x W): 92 x 186 mm
Gross weight	1,75 kg

Ordering & Interface Selection Table

BX30 _Fill_ A _EI_

→ **Fieldbus / Interface**
(Blank) : Not available
XX : Fieldbus code
  e.g. "EI" for Ethernet / IP

→ **Digital I/O and Analog Feeding Speed Controller**
A : With internal I/O board
B : With internal I/O board + analog feeding speed controller
N : Without internal I/O board + analog feeding speed controller (1)
M : With analog feeding speed controller (1)
R : BX30 Fill N + RIO16 unit (as a set)
S : BX30 Fill M + RIO16 unit (as a set)

→ **Filling controller**

(1) For Digital I/O, please order RIO16 unit or R or S variant.

	BX30 Fill A	BX30 Fill A PB	BX30 Fill A C0	BX30 Fill A CC	BX30 Fill A PN	BX30 Fill A EI	BX30 Fill A EC	BX30 Fill A PL	BX30 Fill A IE
RS232C	●	●	●	●	●	●	●	●	●
RS485	●	●	●	●	●	●	●	●	●
RS422	●	●	●	●	●	●	●	●	●
USB	●	●	●	●	●	●	●	●	●
Ethernet TCP/IP	●	●	●	●	●	●	●	●	●
Modbus RTU	●	●	●	●	●	●	●	●	●
Modbus TCP	●	●	●	●	●	●	●	●	●
Profibus DPV1		●							
CANopen			●						
CC-Link				●					
Profinet					●				
EtherNet/IP						●			
EtherCAT							●		
Powerlink								●	
CC-Link IE									●
Alibi Memory	○	○	○	○	○	○	○	○	○

Note: Order code is arranged in the same way for BX30 Fill B, M, N, R, and S variants too.
e.g.: BX30 Fill B PB / BX30 Fill N CC /   BX30 Fill M IE / BX30 Fill S EC

● Standard   ○ Optional

BX30 Total Weighing Controller

Discontinuous Totalizer & Extraction Rate Scale Controller

MID
Directive
OIML
R107

Main Features
- 3 different operation modes for the most common applications,
- Flow rate control at discontinuous totalizer,
- Real time control of the extraction rate weighing system at every discharge,
- 7 Programmable user keys.

Smart Operation With
- Full control of discontinuous totalizing and extraction rate weighing systems,
- Multicolor LCD display guides the operator,
- Programmable spare digital I/O's to continue operation in case of any I/O malfunction.

Advanced Technology & Performance
- Controls discharges real-time for accurate weighing and flow rate,
- Up to 1600 conversions per second,
- 1000 times higher internal resolution at measurement,
- Control of the peripheral equipment with freely programmable digital I/O's.

Integration & Connectivity
- Ethernet TCP/IP, USB, RS-232C, RS-485, Profibus, Profinet, Modbus RTU, Modbus TCP, EtherNet/IP, EtherCAT, CANopen, CC-Link, CC-Link IE, Powerlink,
- Remote service via internet.

BX30 Total is a high-tech, smart, and economical device especially design to control the discontinuous totalizing and extraction rate weighing systems. It provides flow rate control in discontinuous totalizer and real-time flow control in extraction rate scales.

BX30 Total has 3 different operating modes designed to cover all discontinuous totalizer and extraction rate scale applications. Its programmable 7 keys can be assigned to the predefined functions to provide a quick and informative operation.

Freely programmable digital inputs & outputs eliminate PLC in the control cabinet to complete control the peripheral equipments in the system such as pump, valve, silo level control, discharge shut level control etc.

Spare digital I/O's ensure operation continues until the replacement card arrives in case of any digital I/O failure.

High accuracy at in-process weighing applications with BAYKON technology and know-how.

BX30 Total is a latest-generation filling controller developed with Baykon's state-of-the-art technology and know-how. It is an accurate weighing and control instrument suitable for use in all kinds of gravimetric discontinuous totalizing and in-process weighing systems applications of powders and liquids. BX30 Total is easily integrated into the factory automation systems such as PC, PLC, SCADA, etc.

Weighing Modes
✓ Weighing system without pre-feeding
✓ Weighing system with pre-feeding
✓ Double weighing hopper system

SmartAPP
This special function which helps the operator to follow the operation on the display by changing the display color and the analogue bar graph.
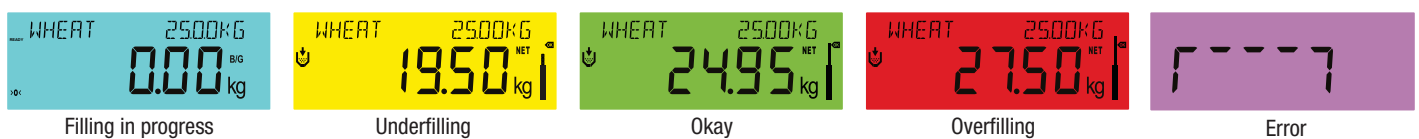
Identification and Memory
Recipe and Identification (ID) memory with 250 records each for filling different materials.
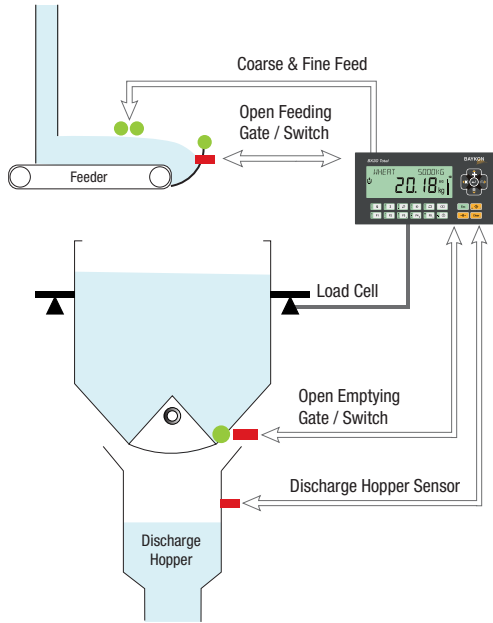
Programmable Keys
Five function keys, unit change key, and high-resolution key can be assigned to the predefined functions for easy and informative use.

Changing Display Colour

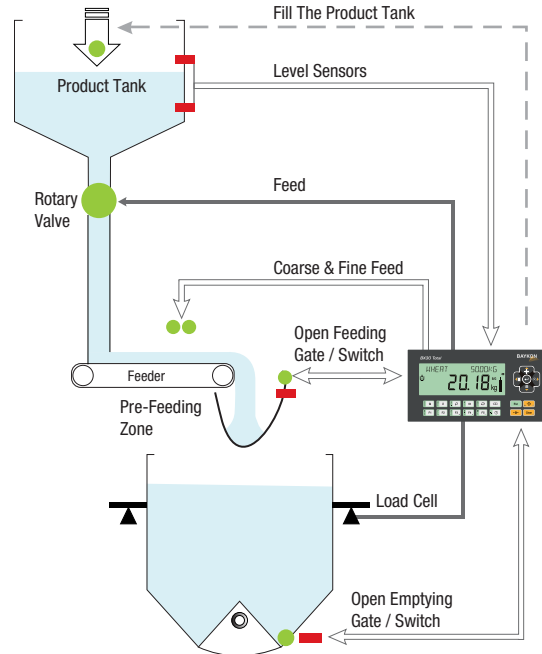| Filling in progress	Underfilling	Okay	Overfilling	Error

The operator follows the operation is done in tolerance by multicolor display. Continuous under filling or overfilling means that there is a mistake at the parameter entries of the controller, and this mistake must be corrected to increase system efficiency. For example, continuous overfilling (red display) may mean that the coarse feeding is made more than necessary.
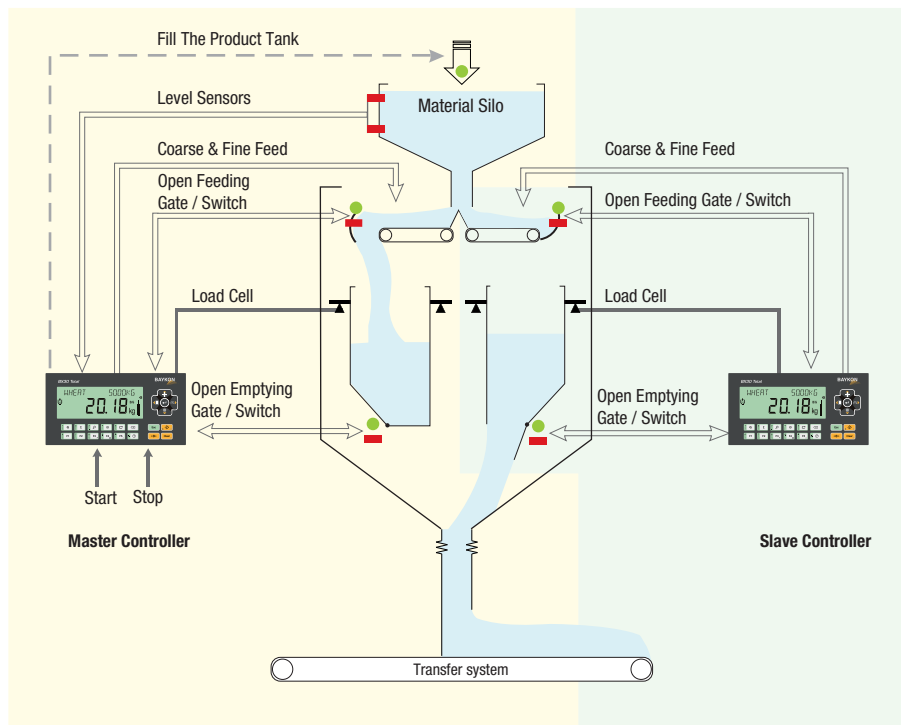
Extraction Rate Scale

Coarse & Fine Feed

Open Feeding Gate / Switch

Feeder

Load Cell

Open Emptying Gate / Switch

Discharge Hopper Sensor

Discharge Hopper

Discontinuous Totalizer
3 different pre-feeding types

Fill The Product Tank

Product Tank

Level Sensors

Rotary Valve

Feed

Coarse & Fine Feed

Feeder

Open Feeding Gate / Switch

Pre-Feeding Zone

Load Cell

Open Emptying Gate / Switch

Complete control of the discontinuous totalizer having double weighing hoppers

Fill The Product Tank

Level Sensors

Material Silo

Coarse & Fine Feed

Coarse & Fine Feed

Open Feeding Gate / Switch

Open Feeding Gate / Switch

Load Cell

Load Cell

Open Emptying Gate / Switch

Open Emptying Gate / Switch

Start

Stop

Master Controller

Slave Controller

Transfer system

Technical Specifications

Accuracy class & EU type approval	OIML class III, single range, multi range or multi interval up to 10000 divisions.
Display	Wide angle and bright LCD display with multicolor backlight, 22 mm in height 6 digits weight display and 8 mm in height 16 digits alphanumeric information display.
Display resolution	Up to 300 000 divisions at industrial usage
A/D conversion	24 bit Delta-Sigma ADC with up to 1600 conversions rate.
Minimum input sensitivity	0.4 µV/e (legal metrology), 0.05 µV/d (industrial)
Analogue input range	-5 mV to +19 mV
Internal resolution	Up to 16 000 000 counts. Process measurement resolution is 1000 x scale division.
Calibration	Calibration with test weights eCal-electronic calibration without test weights Span calibration with temporary zero of charged tank Zero adjustment, Gain adjustment, Coefficient entry.
Digital filter	7 steps programmable adaptive filter.
Scale functions	Taring, zeroing, auto zero tracking, motion detection, auto zero at power up, tare status save at power off, increased resolution, automatic tare and clear, temporary gross indication, unit change.
Filling modes	3 different filling modes especially for Single and Double scale discontinuous totalizers, Extraction rate controller.
Memory	Two memories for recipe and ID , each has 250 records size.
Programmable keys	7 programmable keys can be assigned pre-defined functions for applications.
Digital I/O	Internal: 12 digital inputs / 14 digital outputs External: 16 digital inputs / 16 digital outputs with DIN rail mounting RIO16 unit.
Digital inputs	Opto-isolated and reverse polarity connectable, 12 to 28 VDC, 10mA. Selectable input(s) can be programmed as logic and time functions or used as a Remote Input of your PLC over Fieldbus.
Digital outputs	Opto-isolated and short circuit protected transistor outputs, 12 to 28 VDC / 100 mA, Selectable output(s) can be programmed as logic and time functions or used as a Remote Output of your PLC over Fieldbus.
Data outputs (standard)	Galvanically isolated RS232C, RS485, USB and Ethernet TCP/IP.
Fieldbus interface (optional)	Profibus, Profinet, CANopen, Modbus TCP, Modbus RTU, Ethernet TCP/IP, EtherNet/IP, EtherCAT, CC-Link, Powerlink
Alibi memory	99 999 weighing records.
Number of load cells	Up to 8 load cells 350 Ω or up to 26 load cells 1200 Ω (min. 43 Ω)
Load cell supply voltage	5 VDC @ max. 150 mA
Operation temperature	-15°C ~ +55°C max. (operational), -10°C ~ +40°C (legal metrology)
Humidity	Max. 90 % non-condensing relative humidity. For legal metrology max. 80 %
Housing and protection class	IP67 protected stainless steel front panel, aluminium body and stainless steel rear panel.
Power supply	12 - 28 VDC 100 mA @24VDC (May increase with the selected options)
Dimensions (H x W x D)	108 x 205 x 112,5 mm Panel mount cutout dimensions (H x W): 92 x 186 mm
Package sizes & Gross weight	12,5 x 22 x 12,5 cm, 1,75 kg

Ordering & Interface Selection Table

BX30 Total A PN

Fieldbus Interface
(Blank) : Not available
BP   : Profibus
CO   : CANopen
CC   : CC-Link
PN   : Profinet
EI   : EtherNet/IP
EC   : EtherCAT
PL   : Powerlink
IE   : CC-Link IE

Digital I/O
A : With internal I/O board
R : BX30 Total with external DIN rail mount
    Digital I/O unit RIO16 (as a set)

Model Name
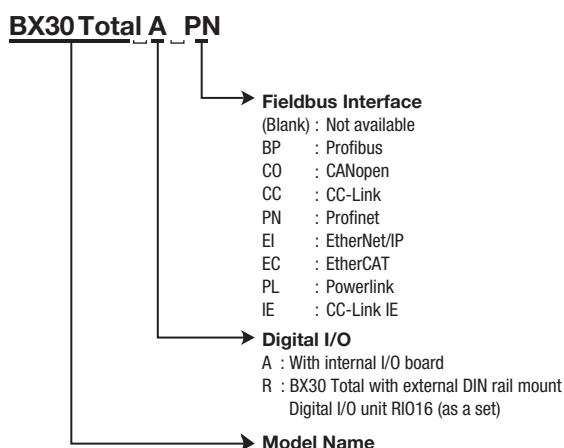
Note: Please specify your Alibi memory request as an option.

	BX30 Total A	BX30 Total A PB	BX30 Total A C0	BX30 Total A CC	BX30 Total A PN	BX30 Total A EI	BX30 Total A EC	BX30 Total A PL	BX30 Total A IE
RS232C	●	●	●	●	●	●	●	●	●
RS485	●	●	●	●	●	●	●	●	●
RS422	●	●	●	●	●	●	●	●	●
USB	●	●	●	●	●	●	●	●	●
Ethernet TCP/IP	●	●	●	●	●	●	●	●	●
Modbus RTU	●	●	●	●	●	●	●	●	●
Modbus TCP	●	●	●	●	●	●	●	●	●
Profibus DPV1		●							
CANopen			●						
CC-Link				●					
Profinet					●				
EtherNet/IP						●			
EtherCAT							●		
Powerlink								●	
CC-Link IE									●
Alibi Memory	○	○	○	○	○	○	○	○	○

● Standard   ○ Option

BX65/BX66 Weighing Terminals

For Industrial Applications & Solutions

Features
- Stainless steel 7" & 10.1" touchscreen weighing terminals
- IP67 sealed version for 7"
- OIML 10000d, 3 x multi range and multi interval approved
- Configurable menu, ticket
- Multi language

Standard Applications
- Labelling & data collection
- Truck Scale
- Milk/Coffee collection scale
- Statistical Quality Control (SQC)
- Customized solutions

Connectable Peripherals
- PC Keyboard & Mouse
- Printers & Remote Display
- Barcode & RFID Readers
- Traffic Lights & Tower Lamp
- Optic Sensors & Road Barriers
- 2nd Scale Platform (BX66)
- IP Camera & Balance (BX66)

Powerful Data Managment
- Data export to USB memory
- Offline file transfer to PC via Data Editor Software
- Web service for direct connection to MSSQL
- Interfaces: Eth.TCP/IP, RS232C 2xUSB, Digital I/Os, Centronics

BX65 & BX66 Weighing Terminals are stainless steel, Windows CE based industrial computers designed for transactional weighing and solutions. 7" (BX65) and 10.1" (BX66) color LCD touchscreen monitors provide intuitive and easy transactional operation. Standard models are IP30 protection. But, BX65 has IP67 protected sealed version.

Available with standard application software; Labelling & Data Collection, Truck Scale, Milk Collection Scale, SQC- Statistical Quality Control. They are very flexible for customized software. Depending on applications, they can be connected to Barcode and RFID readers, Text and Label Printers, Traffic light, Tower Lamp, Position Sensor, PC Keypad & Mouse, IP Camera, Precision Balance and PC.
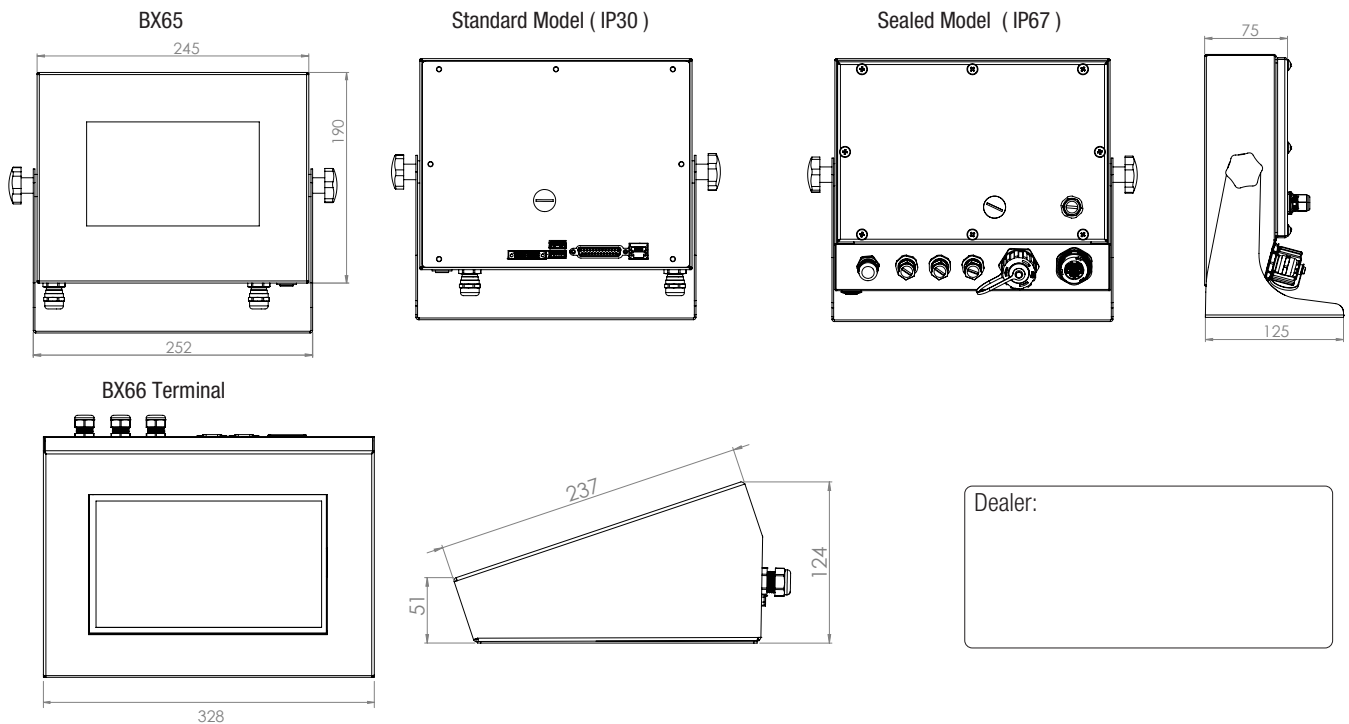
Powerful manual or automatic data integration alternatives; exporting weighing data to USB memory as CSV file, offline file transfer with BAYKON Data Editor software as Excel to PC and direct transfer to MS SQL via Web Service.

Technical Specifications

Model	BX65	BX66
Accuracy class & EU type approval	OIML class III, single range, multi range or multi interval up to 10.000 division	
Display	Active TFT 7" color LCD Touchscreen	Active TFT 10.1" color LCD Touchscreen
Display resolution	Up to 500 000	
A/D conversion	24 bit Delta-Sigma ADC	
Minimum input sensitivity	0.4 µV /e (Legal for trade), 0.1 µV /d (Industrial usage)	
Analogue input range	-5 mV to +19 mV	
Internal resolution	Up to 16 000 000 counts	
Keyboard	Softkeys with Tare, Clear, Zero, Print and Functions	
Status annunciators	Gross, net, motion, center of zero, units	
Conversion rate	Up to 1600 conversions per second	
Operation system	Windows CE	
Calibration	Calibration with test weights, eCal- Electronic calibration without test weights, Zero adjustment, Gain adjustment, Coefficient entry	
Digital filter	5 Adjustable adaptive digital filter	
Scale functions	Taring, zeroing, auto zero tracking, motion detection, auto-zero at power-up, automatic taring, automatic clear, automatic print	
Standard application software	Basic weighing (BX65 - Basic) Truck Scale (BX65 - Truck) Labelling & Data Collection (BX65 - Label) Milk Collection Scale (BX65 - Milk) Net weight control (BX65 - SCQ) Customized software solutions (BX65-Custom)	
Languages	English, German, French, Spanish, Italian, Arabic, Russian, Hebrew, Turkish	
Interface	2 x USB, RS232C, Centronis Parallel Port, Ethernet TCP/IP (10 / 100)	
Digital I/O (Optional)	4 digital isolated inputs / 4 digital relay outputs	
Load cell excitation	5 VDC, max. 125 mA	
Number of load cells	Up to 8 load cells 350 Ω or up to 24 load cells 1150 Ω (min. 43 Ω)	
Load cells connection	4 or 6 wire technique, cable length 1000 m/mm² for 6 wire connection	
Operation temperature	-15°C ~ +55°C max. (Operational), -10°C ~ +40°C (Legal metrology)	
Humidity	Max. 90% non-condensing relative humidity legal metrology max. 80 %	
Enclosure	Stainless steel, Desk & wall type, IP30 & IP67	Stainless steel, Desk type, IP30
Power requirement	90 - 240 V AC, 50 / 60 Hz or 11-28VDC	

Dimensions (mm)

BX65

245

190

252

Standard Model (IP30)

Sealed Model (IP67)

75

125

BX66 Terminal

328

237

51

124

Dealer:

BX07M Weighing Terminal

For industrial mobile weighing applications

Wireless Connection with Load Cell
- Connection to analogue or digital load cells and scales without cable.
- Battery status indication and automatic sleep mode for battery - powered load cells.

Flexible Weighing Operation with
- User configurable Weighing Menu, Label and Report
- Serial and additive totalizing mode with total ticket
- Peripherals; Barcode/RFID Readers, Printer, Remote Display, USB Flash

Powerful Data Integration
- Web Service for online transfer to SQL Server
- File transfer as Excel to a PC by Data Editor software
- Data export to USB memory as Excel file

BX07M is a Windows CE based industrial terminal with IP65 protected stainless steel housing and designed for mobile weighing applications. Its wireless communication with analogue or digital load cell-based weighing platform / scales provides enormous flexibility for industrial mobile weighing applications.

BX07M terminal's standard labelling and data collection software offers a customized weighing menu and ticket design with barcode. Transactional weighing data can be entered easily with 7" color touch screen monitor, wireless barcode and external PC keyboard. Peripherals like printers, barcode readers, remote display can be connected directly.

Weighing records saved in the terminal can be transferred directly to SQL Server with Web Service. Excel file transfer is also possible into USB memory or to a PC with Data Editor software.

Battery status is shown on BX07M monitor at battery powered scales. BX07M puts the battery powered load cell interface unit into sleep mode automatically to increase the battery operation time if the scale is at a standstill for a pre-programmed time.

Technical Specifications

Software	Standard Labelling as Single, Serial and additive Totalizing, User configurable Weighing Menu, Customized Software (Call Baykon)
Operating system	WinCE 6.0
Display	7" color TFT touch screen monitor
Calibration	Zero & Span, or electronic calibration without test weight
Auto sleep	Automatic sleep mode with programmable standstill time for the Li-ion battery powered MTx02
Overload	RED color display indication
Communication with Load cell interface unit	Baykon Master Bluetooth
Standard interfaces	RS232C, 2xUSB, Ethernet TCP/IP
Optional interfaces	Wi-Fi (Cannot be used together with Ethernet TCP/IP) Bluetooth (Cannot be used together with RS232C)
Power supply	10-30VDC - Optional 48VDC
Accessories	Text & Label Printer, Barcode/RFI reader (Wireless or cable) Remote Display, USB Memory, PC Keyboard
Data transfer	Direct transfer into USB Memory as Excel file, Excel File transfer to a PC via Data Editor Software Online transfer to SQL Server via Web Service
Housing	Stainless steel, IP65 protected

Models of load cell interface unit		
Digital load cell interface units	MTD01	MTD02
Analogue load cell interface units	MTA01	MTA02
Communication with BX07M	Baykon Slave Bluetooth	

Analog / Digital LC

Analog / Digital Scale

MTD01/02
MTA01/02

Load Cell Interface Unit

BX07M-D/A

Optional Wi-Fi

Optional Bluetooth

Barcode / RFID Reader

USB Memory

Remote Display

Text / Label Printer

Dimensions (mm)

220

175

63

50°

28°
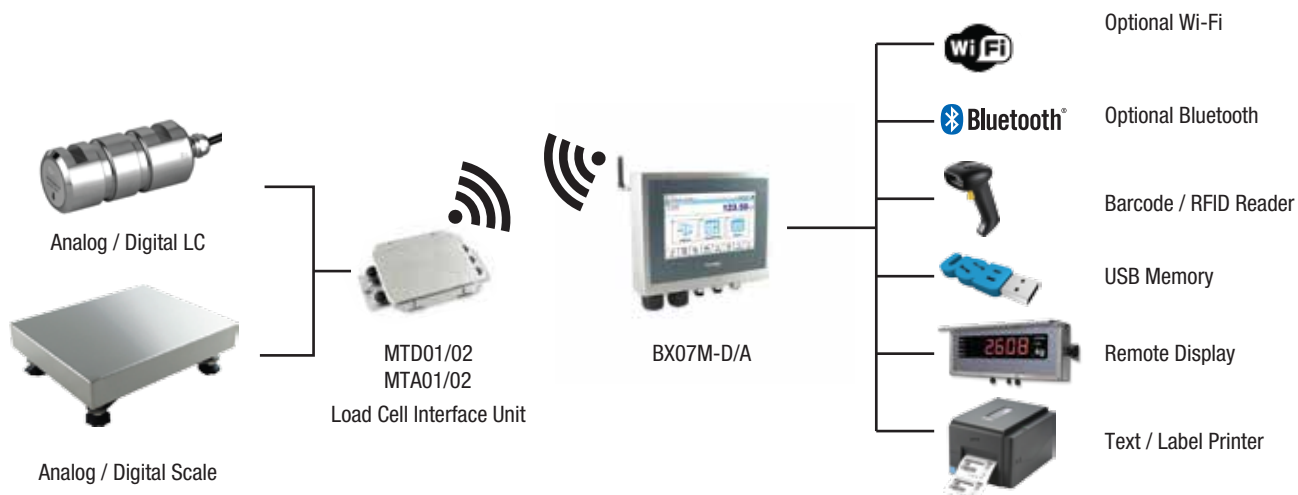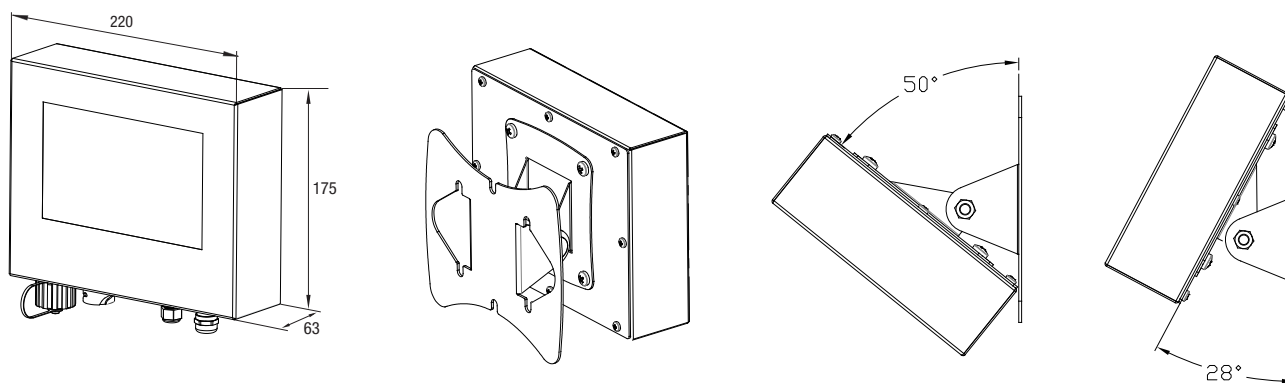
PX10 / PX15 Industrial PC

For industrial conditions

Technical Specifications

Model		PX10	PX15
Housing		Stainless steel, IP67	
LCD Display	Type	LCD + Projected Capacitive Touch	
	Size	10"	15"
	Resolution	1024 x 768 pixels	1024 x 768 pixels
Platform	OS	Windows 10 IoT	
	Chipset	SoC	
	CPU	Onboard Intel Celeron N2930(1.83GHz)	Intel® Pentium® N3710
	GPU	Intel Atom® Z3700 Processor, Intel® HD Graphics	
	Other	Intel Bay Trail Series CPU Based 3.5'' SBC	
Memory	Card slot	No	
	External	SATA Power connector, SATAII 3Gb/s port	Two SATA 6Gb/s connectors with 5V power output
	Ram	Onboard 4GB DDR 3L 1600 MHz	
Communication	LAN	1 x Rear Panel IP67 RJ45 Support Fast Ethernet LAN function of providing 10/100/1000Mbps Ethernet data transfer rate	
	WLAN	Option	
	Bluetooth	Option	
	USB	•1x USB 3.0 (IP67 Female Type A Connector) •1x USB 2.0 (Female Type M12 Connector)	
	Serial port	2x RS232 (Female Type M12 Connector)	
	HDMI	No	Option
Power Button		Yes	Yes
Power		230 VAC	230 VAC
Panel Apparatus		Yes	Yes

Dimensions (mm)

PX10 Housing

- 331
- 90
- 285
- 323
- 338

Power
On/Off
Ethernet USB USB RS232 RS232

PX15 Housing

- 400
- 62
- 325

RS232 RS232 IO USB USB HDMI Ethernet Power
On/Off
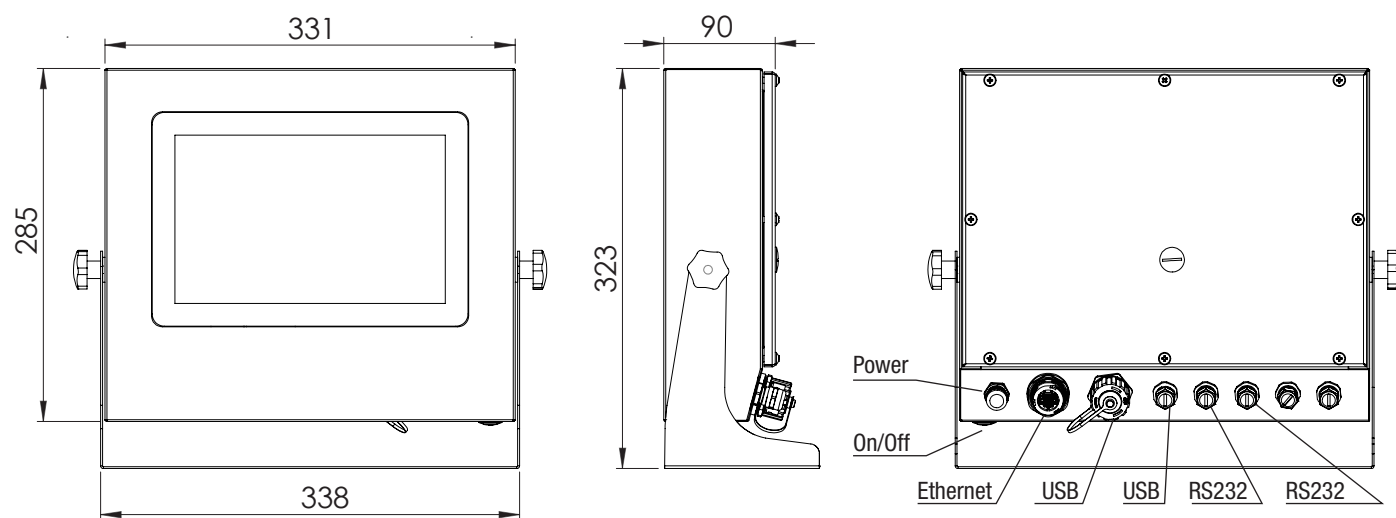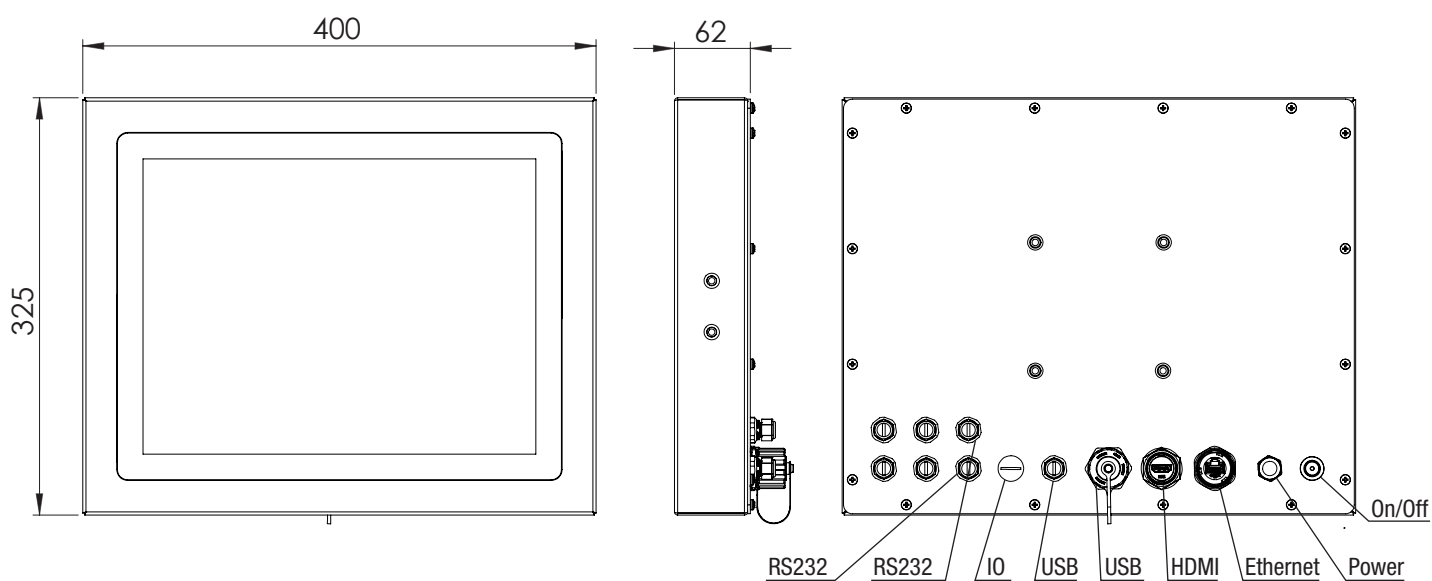
BJP Industrial Junction Boxes

Precise, polyester and waterproof

Typical Applications
• High capacity scales
• Weighbridges
• Industrial weighing applications
• In chemical environments
  which polyester can resist
• Weighing systems under
  lightning risk

Features
• Up to 8 load cell connection
• Corner trimming by high long
  term stable components
• Stainless steel housing
• IP67 waterproof protection
• Easy eccentricity adjustment
• Lightening protection at all models
• Doesn't distort the signal balance
  of the matched load cells

Heavy Industrial Products
• These instruments are designed for
  heavy industrial environments.
• IP30
• Wide Operating temperature range
  from -15 to 60 ºC
• Lightning protection increases your
  system's reliability in long term

IP30

The scale accuracy is not only depend on the quality of the indicator and the load cell. The Junction box is the third very important instrument which determines the scale accuracy. Precision BJP series polyester junction boxes are designed to use in every kind of industrial weighing applications including weighbridges, tank scales, silo weighing systems, conveyor scales and high capacity scales etc., especially in the chemical environments which polyester resist.

The most accurate output is produced from matched load cells to high unbalanced load cells for scale accuracy and for easy calibration. The signal accuracy of the matched load cells are not changed because of the electronic circuitry in the junction box. There is no any adjustment limit even the output signal unbalances of load cells are too much.

Technical Specifications

	BJP-04	BJP-08L
Technnology	Passive adjustment with precision components	
Load cell quantity	Up to 4	Up to 8
Lightning protection	No	Yes
Load cell impedance	350 ohm to 1200 ohm	
External grounding	Yes	
Sealing	Available	
Enclosure material	ABS, IP30	
Cable glands	PG9 for cable diameter 4 to 8 mm.	
Operating temperature range	-15 to +60 ºC	
Humidity	90% RH max , non condensing	
Dimensions	120 x 55 x 170 mm.	150 x 55 x 200 mm.
Weight (packed)	560 gr.	765 gr.

Dimensions (mm)

Order Configuration for Baykon J. Boxes

BJP - 08L

Baykon Junction Box

Enclosure
P: Industrial plastic
A: Aluminium
S: Stainless stell

Load cell connection
03: for 3 loads cells (only Ex.)
04: for 4 load cells
08: for 6 or 8 load cells

Description
G: General purpose, floor scales
A: Low profile scales
L: Lightning protection
Ex: Explosion proof
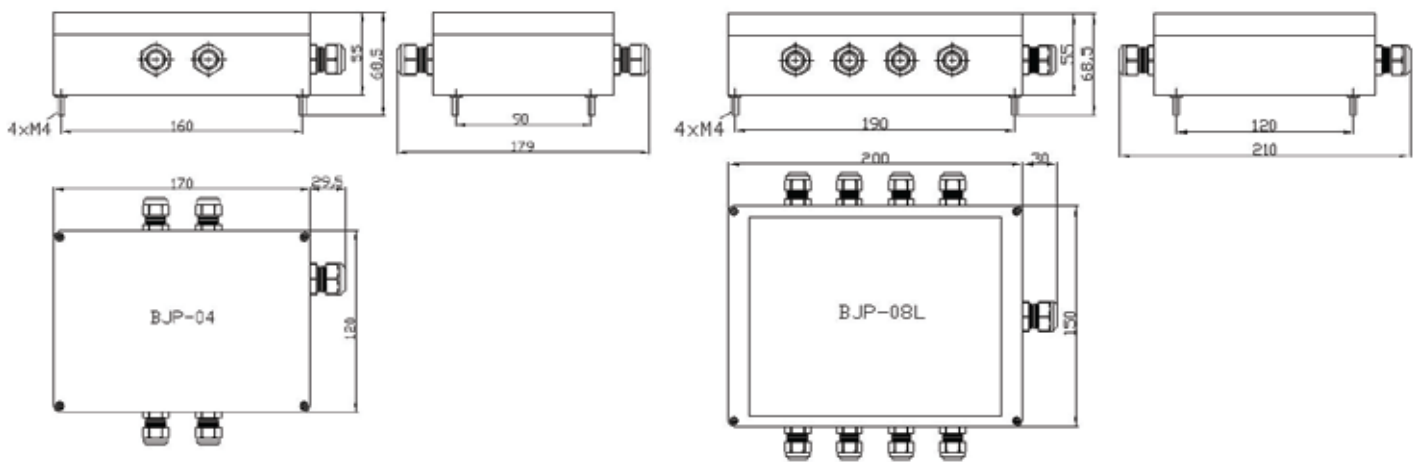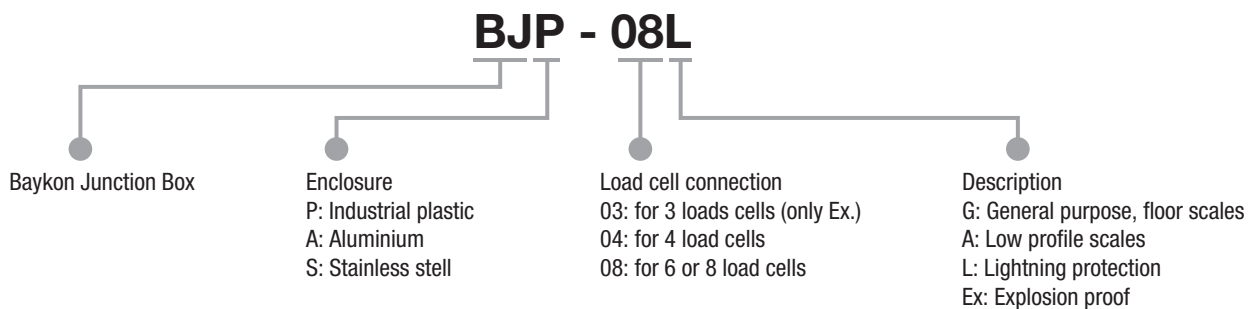
Precise, Stainless steel and Waterproof

Typical Applications
• High capacity scales
• Weighbridges
• Industrial weighing
  applications
• Weighing in wet and hygienic
  environments
• Weighing systems under
  lightning risk

Features
• Up to 8 load cells connection
• Corner trimming by high long
  term stable components
• Stainless steel housing
• IP67 waterproof protection
• Easy eccentricity adjustment
• Doesn't distort the signal balance
  of the matched load cells
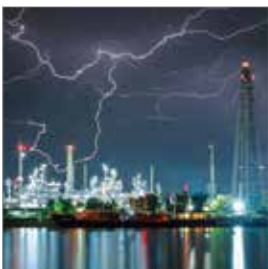
Heavy Industrial Products
• These instruments are designed
  for heavy industrial environments
• IP67 stainless steel housing
• Wide operating temperature range
• Lightning protection increases
  your system's reliability in long term.
• Junction box with metal glands
  are available.

The scale accuracy do not only depend on the quality of the indicator and load cell. The Junction box is the third very important instrument to determine the scale accuracy. Precision BJS series junction boxes are designed to use in every kind of industrial weighing applications including weigh- bridges, tank scales, silo weighing systems, conveyor scales and high capacity scales etc. Components of Baykon junction boxes has been carefully selected very sensitively to ensure high accuracy over a long life.

Baykon BJS series junction boxes are produced the most accurate output from matched load cells to high unbalanced load cells. The signal accuracy of the matched load cells does not changed because of the electronic circuitry in the junction box.

The scales equipped with BJS junction boxes can be used in all kind of industrial areas up to wet and hygienic environments.
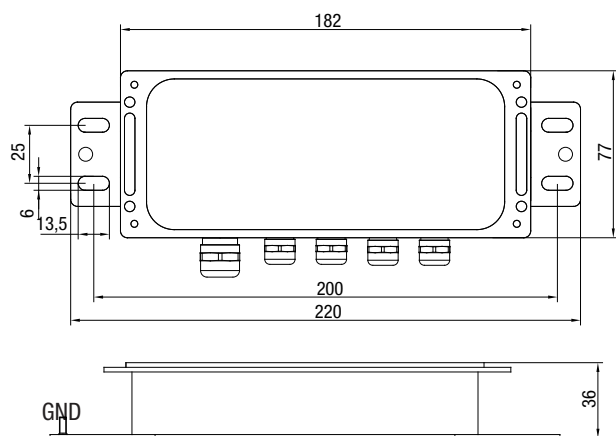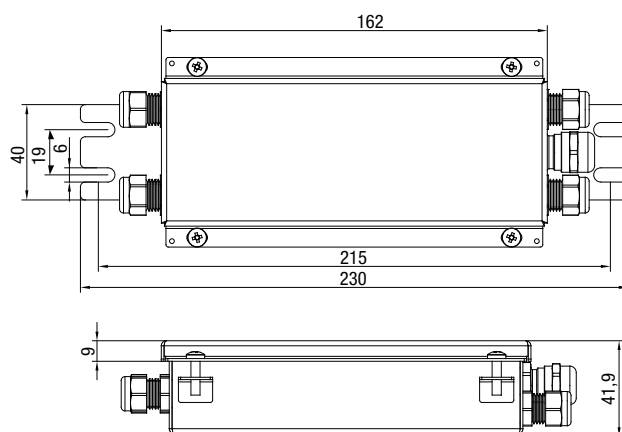
BJS Industrial Junction Boxes

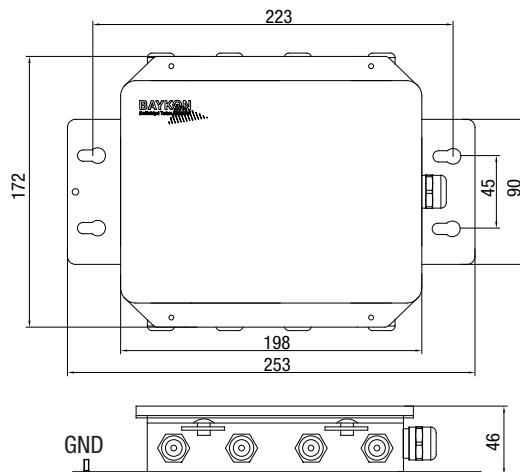|	BJS-04T	BJS-04P	BJS-04N	BJS-08NL
Load cell quantity	Up to 4			Up to 8
Lightning protection	No			Yes
Eccentricity adjustment	Yes			
Load cell impedance	Between 350 Ω - 1200 Ω for eccentricity adjustment			
External grounding screw	Yes	Via mounting screw	Yes	
Glands	4x PG7 and 1 X PG9 Polyamide PA6 V2, Black, IP68			9 x PG9 Polyamide PA6V2,Black, IP68
Cable diameters	Load cell cables: 3 - 6.5 mm; Instrument cable: 4 - 8 mm			4 - 8 mm
Holes for NAWI sealing	Yes			
Air ventilation, IP67	No			Yes
Enclosure & Protection	Stainless steel, IP67			
Operating temperature range	-15 to +70°C			
Humidity	90% RH max, non condensing			
Weight (packed)	400 g	550 g	550 g	1200 g
Options				
Metal gland	Yes			

Dimensions

BJS-04T

BJS-04P

BJS-04N
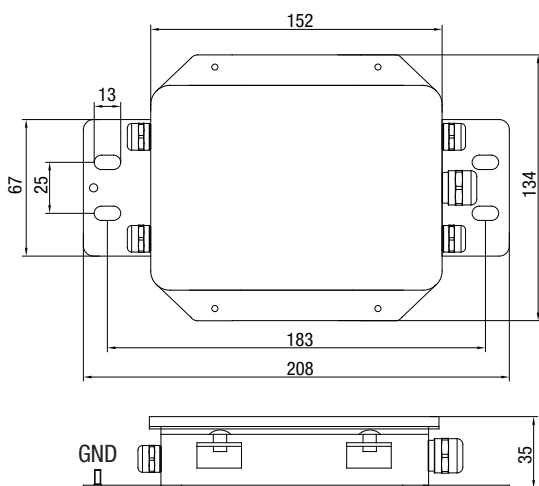
BJS-08NL

BJ-Ex Ex-proof Junction Boxes

Industrial junction boxes for hazardous areas

Typical Applications
• Platform scales which
   have multi load cells
• Ex-proof Weighbridges
• Industrial weighing systems
• Extension of the load cell
   cable in hazardous area

Features
• Up to 8 load cell connection
• Polyester, aluminium and
   stainless steel housings
• Atex certified products
• For zone 1 and zone 2

CE IP66

Baykon BJ-Ex series ex-proof junction boxes are compliant with hazardous area regulations to provide sufficient protection against explosive risks at Zone 1 and Zone 2.

Baykon BJ-Ex series ex-proof junction boxes can be connected with shielded 6 wire cable to the weighing instrument to eliminate error coming from the instrument cable.

These junction boxes do not reduce the accuracy in every kind of industrial weighing applications including tank scales, hopper scales, conveyor scales, platform scales etc. The scales equipped with Baykon ex-proof junction boxes can be used in wet and hygienic environments.
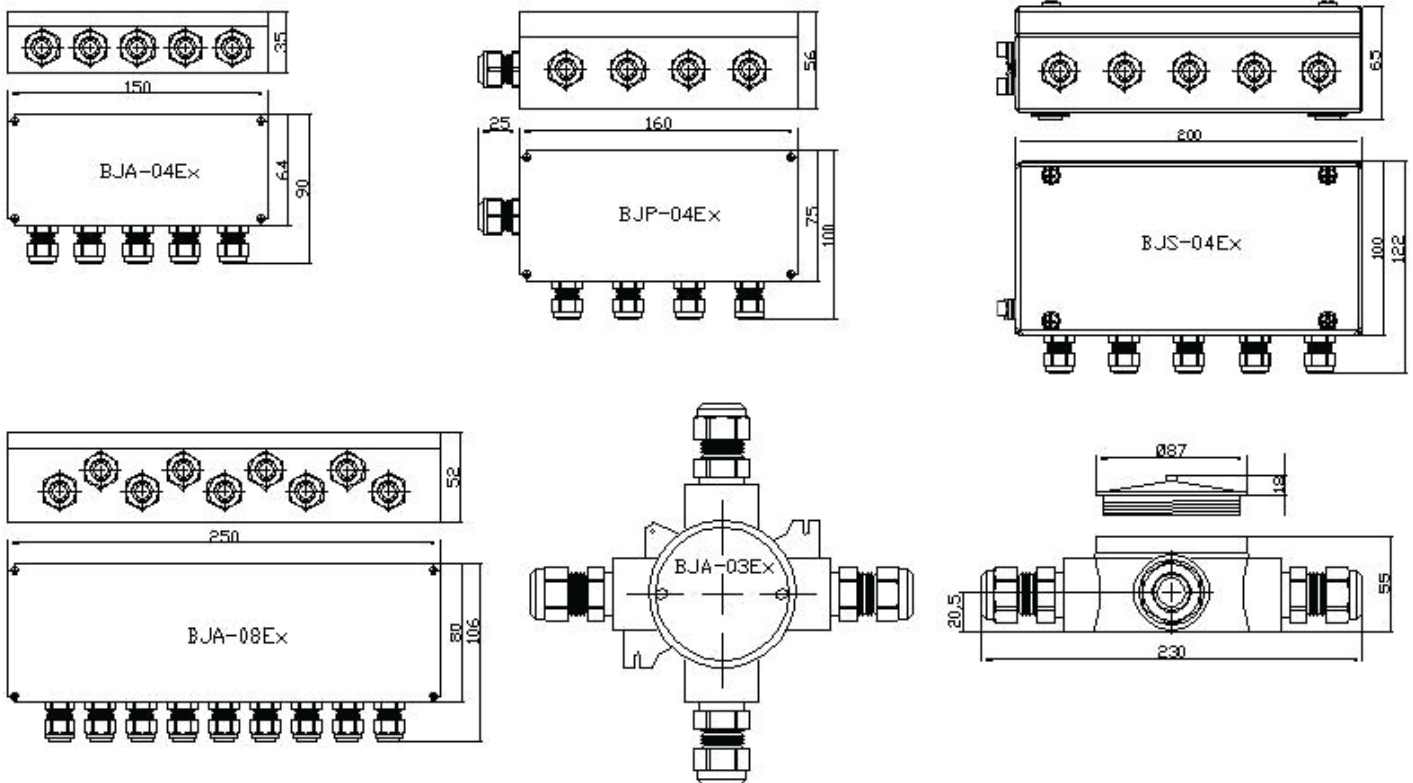
Suitable for Various Industries
• Designed for harsh
   industrial conditions
• From wet to hygienic
   environments
• Easy cleaning models
• Resistant to different
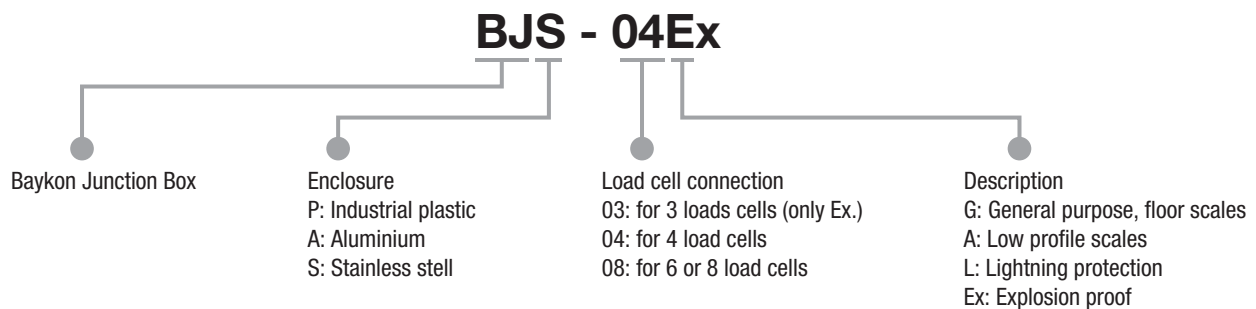   chemicals
• Wide temperature range

Technical Specifications

	BJA-03Ex	BJP-04Ex	BJA-04Ex	BJA-08Ex	BJS-04Ex
Hazardous protection	Eex d IIC T6/T5/T4	II 2G Ex e IIC T6 Gb II 2D Ex tb IIIC		II 2G Ex e IIC T6/T5/T4 Gb II 2G Ex ia IIC T6/T5/T4 Gb	
Load cell quantity	Up to 3	Up to 4		Up to 8	Up to 4
External grounding	Yes	No		Yes	
Sealing	No	Available			
Enclosure material	Aluminum	Polyester	Aluminum		Stainless steel
Protection class			IP66		
Cable glands	Galvanized steel R1/2	PG9 Polyamide			PG9 Nickel-plated brass
Cable diameter	4 to 10 mm.	4 to 8 mm.			
Humidity			90% RH max, non condensing		
Dimensions	87 x 55 x 230 mm.	75 x 56 x 160 mm.	64 x 35 x 150 mm.	80 x 52 x 250 mm.	100 x 65 x 200 mm.
Weight (packed)	1070 gr.	600 gr.	450 gr.	1230 gr.	1180 gr.

Dimensions

Order Configuration for Baykon J. Boxes

BJS - 04Ex

Baykon Junction Box

Enclosure
P: Industrial plastic
A: Aluminium
S: Stainless stell

Load cell connection
03: for 3 loads cells (only Ex.)
04: for 4 load cells
08: for 6 or 8 load cells

Description
G: General purpose, floor scales
A: Low profile scales
L: Lightning protection
Ex: Explosion proof

LDS-04 Smart Junction Box

Digital weight data from analog load cells

Typical Applications

• Tank, reactor, and silo scales,
• Batching scales,
• Heavy capacity platform scales,
• Scales with impact loading risk.

Features

• Up to 4 load cells connection,
• Digital data output,
• Automatic corner adjustment,
• Faulty load cell detection and stopping the weighing,
• Providing unbalanced loading data

The product for the harsh industries

• Designed for harsh industrial environments,
• IP67 stainless steel housing,
• Wide Operating temperature range,
• Increasing the system reliability in the long term with the lightning protection feature
• Metal glands as an option

Load cell failure may not always be detected in a scale with analog load cells. This case may cause faulty production and material loss, especially in tank and reactor scales.

Additionally, detecting the faulty load cell, and corner adjustment after the replacement is a troublesome and time-consuming process.

In addition to all these problems, carrying the analog signal at the microvolt level to the control room over long distances increases the risk of weighing errors due to electrical noise caused by magnetic and radio waves.

The LDS-04 Digital Junction Box is designed to help you avoid these classic disadvantages and risks of analog load cells by converting your scale to digital without replacing existing analog load cells. The signal from each load cell connected to the LDS-04 Smart Junction Box is converted into a digital signal by a microprocessor-based converter and transmitted to the weighing display as a digital weight signal.

LDS-04 Smart Junction Box Specifications

Number of load cells	up to 4 analog load cells
A/D Convertor	24 bit Delta-Sigma A/D convertor with integral analog and digital filters
Internal / External resolutions	10 000 000 counts / 200 000 increments
Analog input range	0 mV to 10 mV
Minimum input voltage	< 1 mV
Linearity	< % 0.02 FS
Temperature drift	< 0.01 % FS / °C
Load cell excitation	5 VDC
Instrument cable	Shielded 4 wires, Ø 4 – 8 mm, Max. 500 meters
External grounding screw	Yes
Enclosure / Protection / Glands	Stainless steel with air ventilation, IP67 and PG9-plastic glands, metal gland is optional
Operating temperature / Humidity	Between -10°C and +40°C at 85% RH maximum noncondensing
Dimensions (LxWxH)	25,3 x 17,2 x 4,6 cm
Packing sizes (LxWxH)	27,5 x 19 x 5,5 cm (10,82 x 7,48 x 3,25")
Shipping weight	1,5 kg (3,30 lb)

Recommended Baykon Weighing Indicators

LDS-04 Smart Connection Box is used with the following Baykon digital load cell weighing indicators.
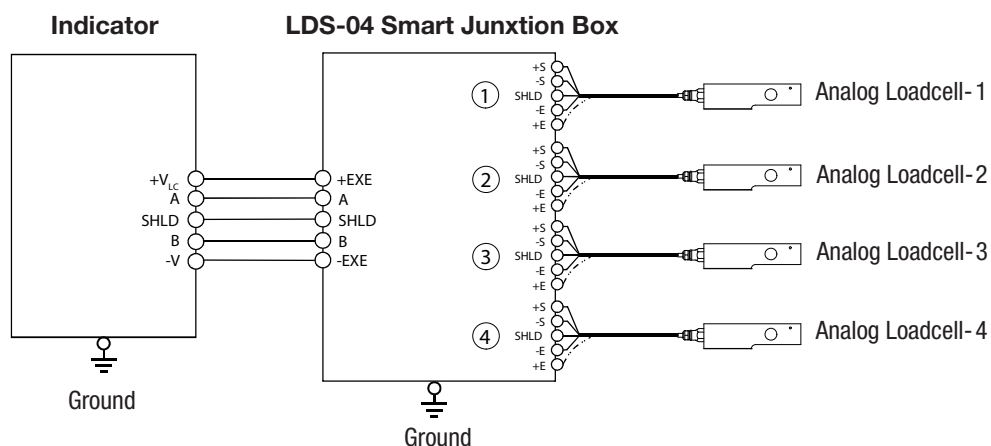
BX23D	BX24D / BX25D	BX30D	BX30D Plus

Connection Diagram

A typical wiring connection of the LDS-04 Smart Junction Box to the Baykon weighing indicator is given below. For connector pinouts, please see the technical manuals of the LDS-04 Smart Junction Box and the weighing indicator.

LPK Lightning Protection Unit

Protects your weighing system from lightning

Complete Protection From Lightning

• Protects people and facility
• Protects Loadcells
• Protects weighing instruments
• Provides power-line surge protection

Features

• Two-stage lightning protection circuit as warning lamps and an audible alarm.
• Maximizes uptime
• Easy installation
• Audio-visual fault monitoring
• IP67 rated housing

Electronic scales in industrial environments are very sensitive to electrical disturbance as they measure very low-level signals. In addition, electronic scales in an open environment are at risk from lightning strikes and surge voltages. Espe-cially truck and silo scales are very vulnerable to lightning strike effects. Therefore, lightning protection is necessary for these weighing systems.

The cost of weighing instruments damage caused by light-ning strikes is much more than the protection system cost. Also, the product cost that doesn't get weighed should be added to the total cost.

LPK lightning protection unit, with an affordable cost, provides complete protection against all these effects and maximizes your uptime.

LPK to Scale Connection Diagrams
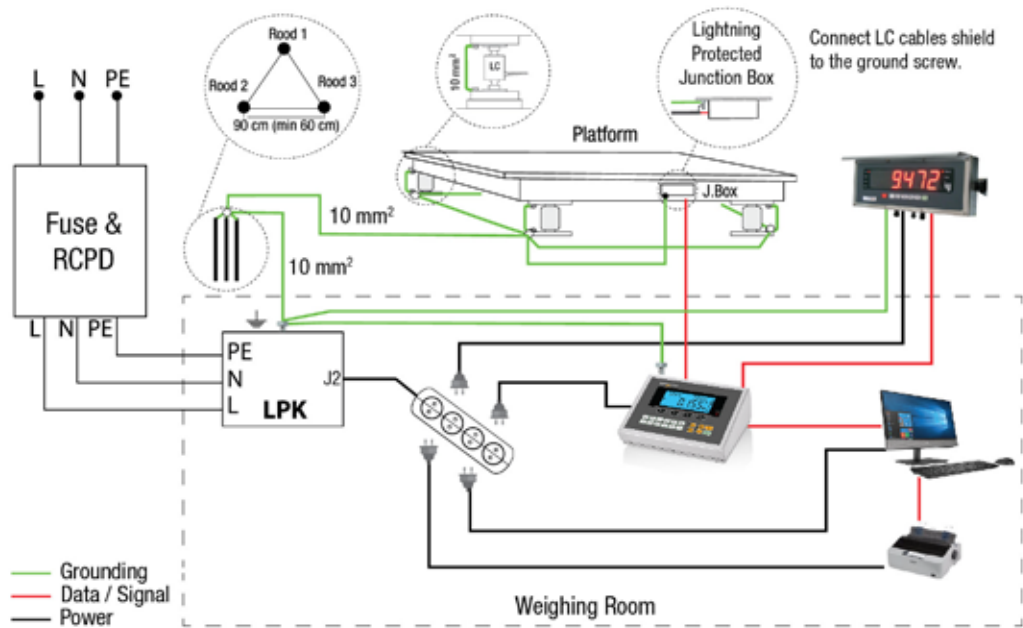
With a dedicated grounding, LPK connection to a scale with analog load cells.
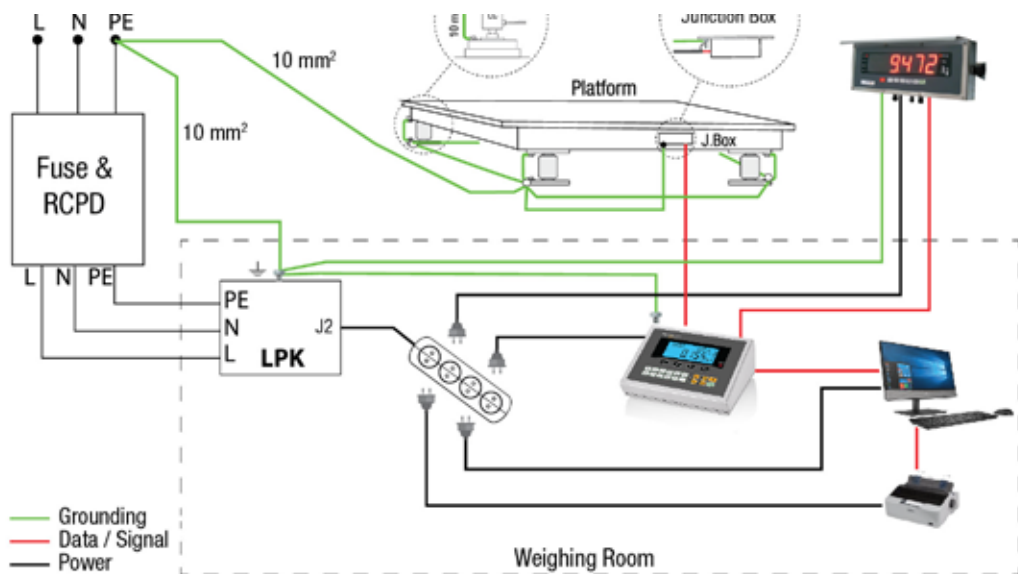
With a facility PE grounding, LPK connection to a scale with analog load cells.

Technical Specifications

Operating voltage	100 - 240 VAC
Max. output current	10 A
Max. discharge current (Imax (8/20 µS)	10kA for LPK-10 20kA for LPK-20
Voltage protection level (UP) < 1000	< 1000 volt
Operating temperature range	Between -10°C and +85°C
Enclosure protection rate	IP67
Enclosure material	ABS plastic
Dimensions (L/W/H) mm	202.5 x 80 x 58.5 mm

LPK24D Lightning Protection Unit

Protects scales with digital load cells from lightning

**Complete Protection
From Lightning**

• Protects people and facility.
• Protects weighing instruments.
• Protects Loadcells.
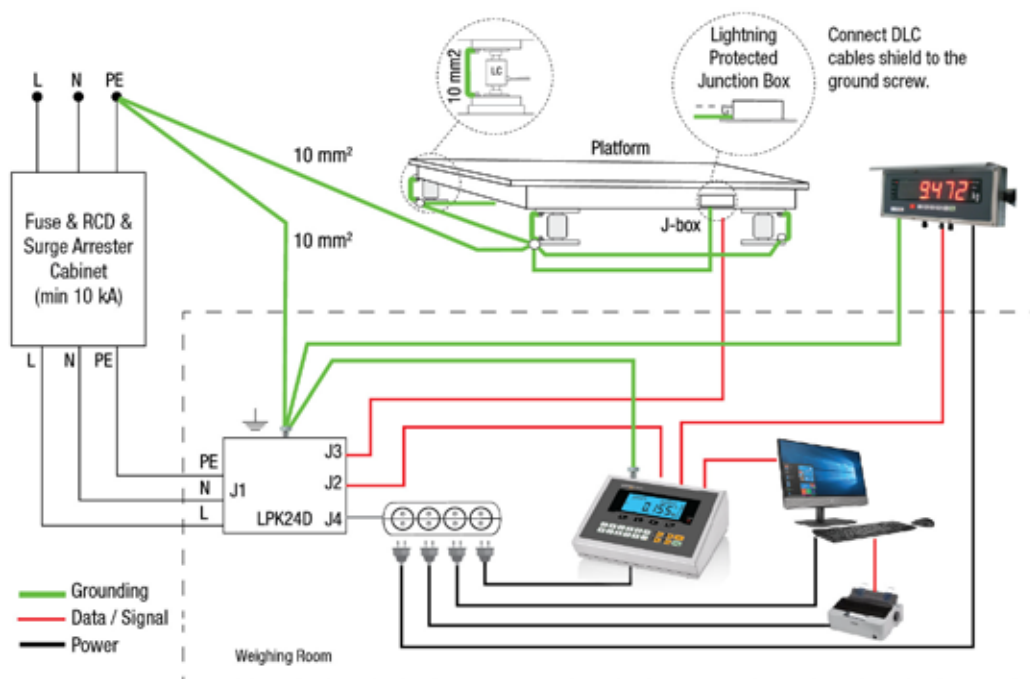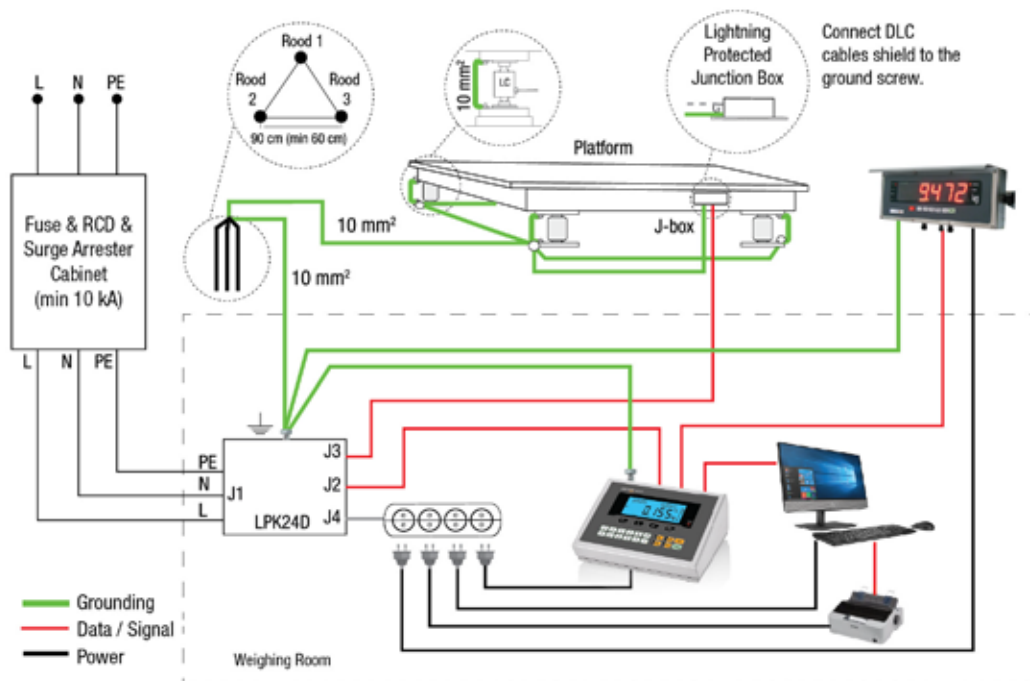• Provides power-line surge
  protection.

Features

• Maximize your uptime.
• Easy installation.
• Visual fault monitoring.
• IP67 rated enclosure.

Electronic scales, especially truck and silo scales located outdoors, break down frequently because of the lightning strikes effects. The cost of production interruption caused by lightning is too much. Therefore, lightning protection is vital for industrial electronic weighing systems operating in open environments.

LPK24D lightning protection unit, with an affordable cost, provides complete protection for your weighing system equipped with digital load cells against lightning and overvoltage effects and prevents production interruptions and logistical problems that may arise due to these reasons.

Connection Diagrams of LPK24D Lightning Protection Unit

With a dedicated grounding system, cable connection of a scale with digital load cells

With facility PE grounding, cable connection of a scale with digital load cells

Technical Specifications

Operating voltage (UN)	100 - 240 VAC
Max. output current (IL)	10 A
Supply voltage for digital load cells	12 VDC
Max. supply current for digital load cells	800 mA
Max. discharge current (Imax, 8/20 µS)	10kA : for LPK24D-10kA 20kA : for LPK24D-20kA
Voltage protection level (UP)	< 1000 volt
Operating temperature range	-10°C TO +85°C
Enclosure IP rating	IP67
Enclosure material	ABS plastic
Dimensions (L/W/H) mm	202.5 x 80 x 58.5 mm

RX series Remote Displays

for Panel and Wall Installation

RX120

RX57

RX100

RX14

RX14S

Panel type RX14 / RX14S remote displays are industrial type remote displays with aluminum body and stainless steel back panel designed for control cabinet installations. Their 13,5mm bright LED display provides easy readability from far distance. They have RS-485 and RS-232C serial interfaces.
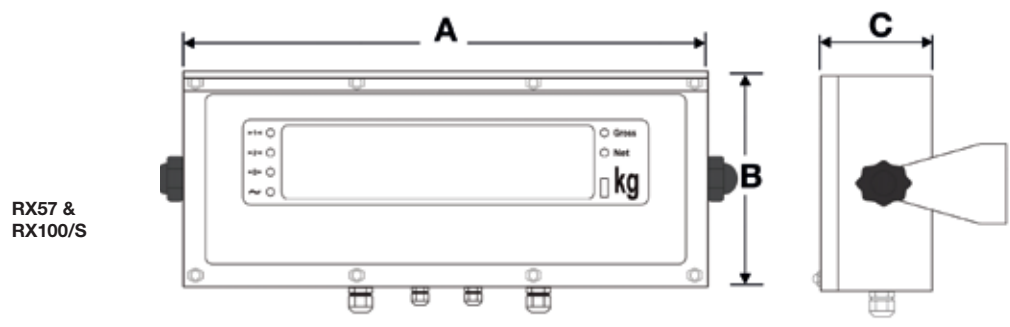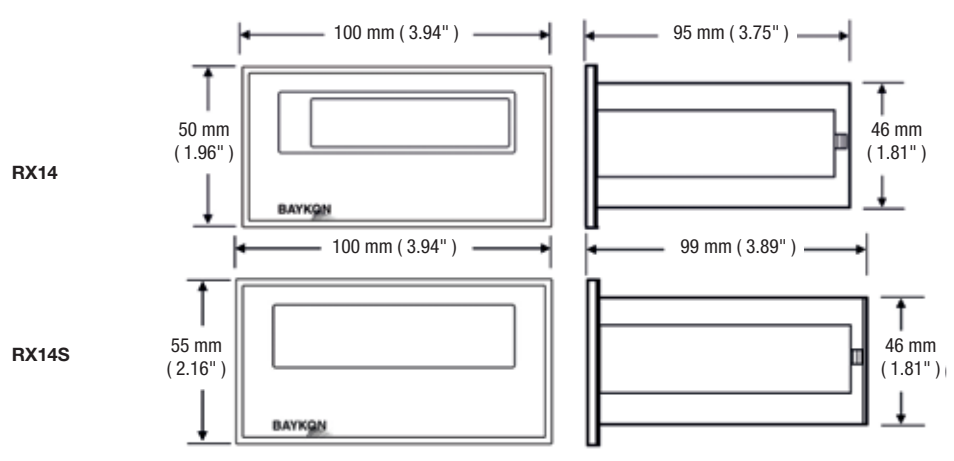
Wall type remote displays have robust industrial enclosures for outdoor usage. Their bright LED displays from 57 mm to 120 mm height are supported by sun visor to provide excellent readability. RX100S has additionally automatic brightness control. Wireless and Bluetooth interfaces are available additional to standard RS-232C, RS-485 and 20mA CL ASCII interfaces.

Additional to remote displays in this leaflet, BX21/ BX21S weighing indicators can be set to remote display operation via their RS232C serial port which provides reasonable price at high quality.
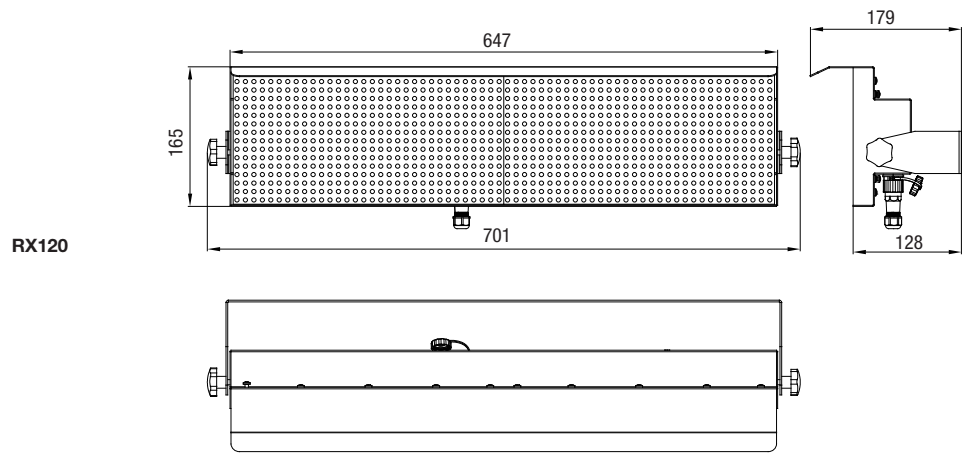
Model	RX14 / RX14S	RX57	RX100	RX100S	RX120
Technology	6 digit, red LED display				Red Led Display
LED brightness	Super bright			Ultra bright	Super bright
LED type	7 segment			Point LED	P10
Display height	14 mm	57 mm	100 mm		160 mm
Display brightness control	No			Yes	No
Announciators	zero, net, stable				No
Serial interface	RS232C, RS485	RS232C, RS485 and 20mA CL, optional Wireless or Bluetooth			RS232C, RS485
Communication	Programmable,baud rate between 1200-19600,8,N,1	Standard 9600 baud rate, 8, N, 1			
Data protocols		Baykon, Flintec and Toledo			Baykon
Usage type	Panel	Wall			
Sun shield	No	Standard			
Mounting bracket	Standard				
Operating temperature	-15 ... +55 °C				
Humidity	85% RH				
Power source	100 - 240 VAC or 24VDC (Optional)				100 - 240 VAC
Housing	RX14:ABS front and SS back panel, aluminum body,IP65 RX14S:SS front and back panel,aluminum body, IP67	Stainless stell, IP67			Powder coated, IP67
Dimensions (H x W x D)	RX14: 50 x 95 x 99 mm RX14S: 55 x 100 x 99 mm	182 x 467 x 70 mm	200 x 700 x 80 mm		165 x 701 x 179 mm
Weight (Packed)	550 g	6500 g	9600 g	8700 g	5700 g

CE

Dimensions (mm)

RX14

100 mm (3.94")
50 mm (1.96")
95 mm (3.75")
46 mm (1.81")

BAYKON

RX14S

100 mm (3.94")
55 mm (2.16")
99 mm (3.89")
46 mm (1.81")

BAYKON

RX57 & RX100/S

A

B

C

○ Gross
○ Net

kg

Model	RX57	RX100	RX100S
A	467 mm	700 mm	700 mm
B	182 mm	200 mm	200 mm
C	70 mm	80 mm	80 mm

RX120

647
165
701
179
128

Typical Applications

Truck scale

Steel industry

Tank scale

Double sided scale

Load Cell and Data Cables
## High EMC immunity at industrial weighing
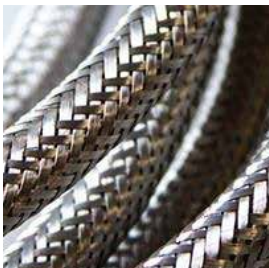
High Quality Cables For;
• Analogue load cells,
• Digital load cells,
• Weighbridges,
• Mobile scales,
• Hazardous environments,
• Against mouse gnawing,
• Halogen free and flame
  retardant requirements
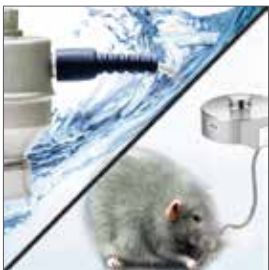
Super Cables
• Up to 3 shielding,
• Up to 90% outer screen
  coverage,
• Outer metal sheet,
• Extra fine stranded copper wire,
• High insulation resistance,
• From general to Ex-proof needs.
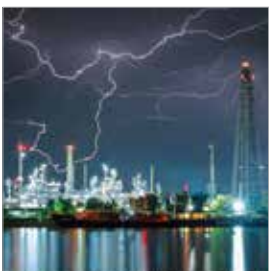
Hazardous Areas
Baykon Ex-proof load cell
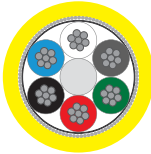and data cables are used in
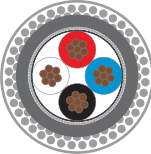Zone 1/21 and Zone 2/22 areas;
• Load cell cable: CL6.034-E
• Data Cable: CD4.034-E

Baykon cables are used to very low level analogue load cell signals, digital load cell signals, data transport and in automation systems even harsh in indoor and outdoor environments.

Multilayer and high covaraged screens of Baykon cables provide reliable connection and accurate weighing against electromagnetic disturbances in harsh conditions. Digital load cell cables are produced to have the best performance from digital weighing system in long term.

Ex-proof load cell and data cables are used at scales with analogue or digital load cells, data lines and at digital In /Out signalization like alarm signal.

Technical Specifications of Baykon Cables

Cable Code	CL6.014	CL6.034	CL6.034-E	CL6.020-S	CL4.030-SP	CD4.022	CD4.034-E
Cut view							
Type	Analogue Load cell cable		Load cell cable	Analogue load cell cable with metal sheet	Digital load cell cable with metal sheet and transparent PVC on it.Data cable	Data cable	Data cable Digital load cell cable
Usage enviroments (suggested)	General		Ex-proof Zone 1/21- Zone 2/22 Halogen free Flame redundant	Weighbridge, Heavy industrial envorinment		General	Ex-proof Zone 1/21 - Zone 2/22 Halogen free Flame redundant
Cores and cross section	6 x 0.14 mm²	6 x 0.34 mm²		6 x 0.20 mm²	4 x 0.30 mm²	4 x 0.22 mm²	4 x 0.34 mm²
Outer diameter	5.6 mm	7.5 mm	7.6 mm	6.65 mm	8.8 mm	4.3 mm	5.3 mm
Outer sheet color	Black	Yellow	Blue	Metal	Transparent on metal	Gray	Blue
Outer sheat	PVC		Halogen free Flame retardant (HFFR)	Tinned metal shield	PVC	Halogen free Flame retardent (HFFR)	
Core colors	White, Black, Red, Blue, Green, Gray			White,Black,Red, Blue,Green,Yellow	White, Red, Black, Blue	White, Brown, Green, Yellow	White, Red, Black, Blue
Conductors	Stranded tinned copper wires						
Inner screen	AL-PET tape overall screen			Tinned copper wire coverage 70%	AL-PET tape overall screen		
Middle screen	No				Tinned copper wire	No	
Outer screen	Tinned copper wire coverage 80%			Tinned copper wire coverage 90%	Aluminium Magnesium alloy wire coverage 90%	Tinned copper wire coverage 60%	
Operating voltage Max	250 V			220 V	300 V	250 V	
Conductor resistance @20°C	140 Ω/km	53 Ω/km		105 Ω/km	71.2 Ω/km	96 Ω/km	60 Ω/km
Insulation resistance Min.	200 MΩ/km			100 MΩ/km		200 MΩ/km	
Capacitance @800Hz	<100 nF/km (core-core) <190 nF/km (core-screen)			<80 nF/km	<40 nF/km	<100 nF/km (core-core) <190 nF/km (core-screen)	
Test voltage	800 V	1000 V					
Bending radius minimum	45 mm	65 mm	55 mm	60 mm	70 mm	60 mm	75 mm
Installation termperature	-15°C …. + 70°C			-5°C …. + 70°C		-15°C …. + 70°C	
Operating termperature	-30°C …. + 70°C			-25°C …. + 70°C		-30°C …. + 70°C	
CE, RoHS compliant	Yes						
Weight kg / km	55	95	95	85	100	33	42

BY-3S / BY-3SL Printers

Practical, low cost and reliable

Printing system	Line thermal dot printing
Printing width	48 mm (384 dots/line)
Dot density	8 dots/mm (Wigth, Lenght)
Paper feed pitch	0.125 mm
Printing speed	Approx. 11 lines/sec. (At maximum)
Printing columns and Character size	32 columns (12 x 24 Font A) 1.25 x 3.00 mm 42 columns (9 x 24 Font B) 0.88 x 1.92 mm
Line interval	Initial value: 4.23 mm (1/6 inch) Can be set with a command (1/360 inch at minimum)
Character types	Alphanumeric characters, symbols, international characters
Bar code type	UPC-A/E, JAN (EAN) 13-/8-column, ITF, CODE 39, CODE 128, CODABAR, PDF 417
Interface	Serial (RS-232c)
Input buffer	2 KB
Supply voltage	100 ~ 240 V 50/60 Hz
Power consumption	At non-printing: Approx. 2 W At printing: Approx. 15 W (approx. 20 W at maximum)
Weight	Main bodi: Approx. 750 g (Paper roll exculded) AC adapter: Approx. 350 g
Outer dimensions	106 (W) x 183 (D) x 126 (H) mm
Operating temperature and humidity	5 ~ 40℃, 35 ~ 85% RH (No dew condenstation)
Storage temperature and humidity	-20 ~ 60℃, 10 ~ 90% RH (No dew condenstation)
Reliability	Printing head life: (25℃) Pulse resistance: 50 million pulses or more (Print rate 12.5%) Wear resistance: 50 kg or more (With recommended) Thermal paper at normal temperature and humidity)
Emulation	ESC/POS (BY-3S) Label Printing, ELTRON compatible (ELP-2), label lenght 100 mm max (BY-3SL)

Desk / panel type, low cost and fast

CE

BY-5S Desk Type Thermal Printer

Printing method	Thermal printing
Roll size	2 inches (no more than 58mm).
Life of TPH	100 km
Communication interface	RS232 / USB
Power supply	100-240 VAC (built-in)
Label design s/w	With special software, you can design your own label.

BY-5P Panel Type Thermal Printer

Printing method	Thermal printing
Paper type	Thermal label paper / Thermal receipt paper
Resolution	203DPI, 8 dots/mm
Printing width	48 mm
Printing speed	80mm/s (maximum)
Graphics printing	Support dots printing with different densities, Support raster bitmap print, Support downloaded bit image print
Code pages	45 international character sets
UTF-8	Support
Bar codes	UPC-A; UPC-E; EAN-8; EAN13; CODE39; ITF; CODEBAR; CODE128; CODE93; QR CODE; PDF417
Paper width	57.5±0.5mm
External dimension	111mm × 89 mm × 69.3 mm (LxWxH)
Paper roll diameter	60 mm max.
Paper cutting	Manual
TPH life	50 km
Communication interface	RS232 / USB
Power supply	12 V

Industrial WiFi/UART Device Server

Serial to Ethernet & WiFi

Specifications

Class	Item	Parameters
Ethernet Port	Port Number	1
	Interface	8-Pin RJ45
	PHY Rate	10 / 100Mbps, MDI / MDIX
	Network Protocol	IP / TCP / UDP / DHCP / DNS / HTTP / ARP / ICMP / Web socket / Http Client
Wi-Fi Port	Standard	802.11 b/g/n
	Network Mode	STA/AP/STA+AP
	Max Connection	32
	Transmit Power	802.11b: +20 dBm (Max.)
		802.11g: +18 dBm (Max.)
		802.11n: +15 dBm (Max.)
	Receiver Sensitivity	802.11b: -89 dBm (@11Mbps, CCK)
		802.11 g: -81 dBm (@54Mbps. OFDM)
		802.11n: -71dBm (@HT20, MCS7)
	Antenna Option	External: 3dBi Antenna
UART Port	Port Number	2 (1 x RS232, 1 x RS485)
	Interface Standard	RS232: DB9 Pin Type RS485: 2 wire (A+, B-)
	Data Bits	5,6.7,8
	Stop Bit	1,2
	Check Bit	None, Even, Odd, Space, Mark
	Baud Rate	300 bps - 460800bps
	Flow Control	RTS / CTS
Hardware Parameters	Input Voltage	5-18V DC Input
	Operating Current	Avg:170mA Peak:400mA
	Operating Temp.	-40°C-85°C
	Storage Temp.	-45°C- 125°C / 5 - 95% **RH**
	Dimensions	84 x 84 x 25mm
	Certificate	CE/FCC/TELEC/RoHS
	Warranty	2 Years
Software Parameters	Network Type	STA / AP / STA+AP
	Security Type	WEP / WPAPSK / WPA2PSK
	Encryption	WEP64 / WEP128 / TKIP / AES
	Network Protocol	TCP / UDP / ARP / ICMP / DHCP / DNS / HTTP
	Max. TCP Connection	32
	Configure Interface	Web Server / AT Command
	Customization	Support Software Customization

BAYKON model DTU-H100 WiFi Device Server is a RS232/RS485 or Ethernet to WiFi converter and it's the best choice for transmitting weighing data across an wireless IP network.

Overview of Characteristic;
- Embedded UART to Wi-Fi device, hardware flow control(RTS/CTS) RS232 interface
- Support IEEE802.11b/g/n Wireless standards
- Support TCP/UDP/HTTP/TLS/Modbus Network Protocols
- Support RS232/RS485/Ethernet Data Interface
- RS232 RS485 automatic switching
- Support Work As STA/AP/AP+STA Mode
- Support Router/Bridge Mode Networking
- Support AT+ Instruction Set for Configuration
- Support Friendly Web Configuration Page
- Single 5~18V DC Power Supply
- 1 x RS 232, 1 x RS485 , 1 x RJ-45 and standard 802.11b/g wireless interface
- Operates as AP, Station and Gateway 54Mbps Data Rate & Max 20Mbps Effective Data Transmission
- Full-Featured Network Protocol Stack
- Built-In Web server and Wizard Program for configuration

BBT4 Serial to **Bluetooth**® Converter

For Industrial Scale Applications

For internal use

CE   FC

Specifications

Radio Features:

• Bluetooth v.2.1 + EDR
• Bluetooth class 1 radio
• Transmit power: +17 dBm
• Receiver sensitivity: -86 dBm
• Range: 350 meters line-of-sight
• Integrated chip antenna

Interface:

• RS232C serial (Bi-directional)

Power:

• Voltage 5 VDC to 8 VDC
• Current max. 60 mA , Standby 14 mA

Environmental:

• Operating: -40 °C to +85 °C

Packaging:

• Material: ABS Plastic enclosure
• Dimensions (LxWxH): 70 x 35 x 20 mm
• IP Rating: IP65
• Optional unboxed use

Management :

• Simple ASCII commands (AT)

BAYKON model BBT4 is a long range class 1, Bluetooth® 2.1 / RS232 Serial module. BBT4 is a highly integrated and sophisticated Bluetooth® module, containing all the necessary elements from Bluetooth® radio and a fully implemented protocol stack. Therefore BBT4 provides an ideal solution for developers who want to integrate Bluetooth® wireless technology into their design with limited know-ledge of Bluetooth® and RF technologies.

BBT4 is optimized for long range applications is available with an integrated chip antenna, an RF pin for a custom on-board antenna or optional external 2dBi dipole antenna.

Users to access Bluetooth® functionality with simple ASCII commands delivered to the module over serial interface - it's just like a Bluetooth® modem.

Typical APPLICATIONS:

• Crane Scales
• Mobile platform or bench scales
• Pallet truck scales
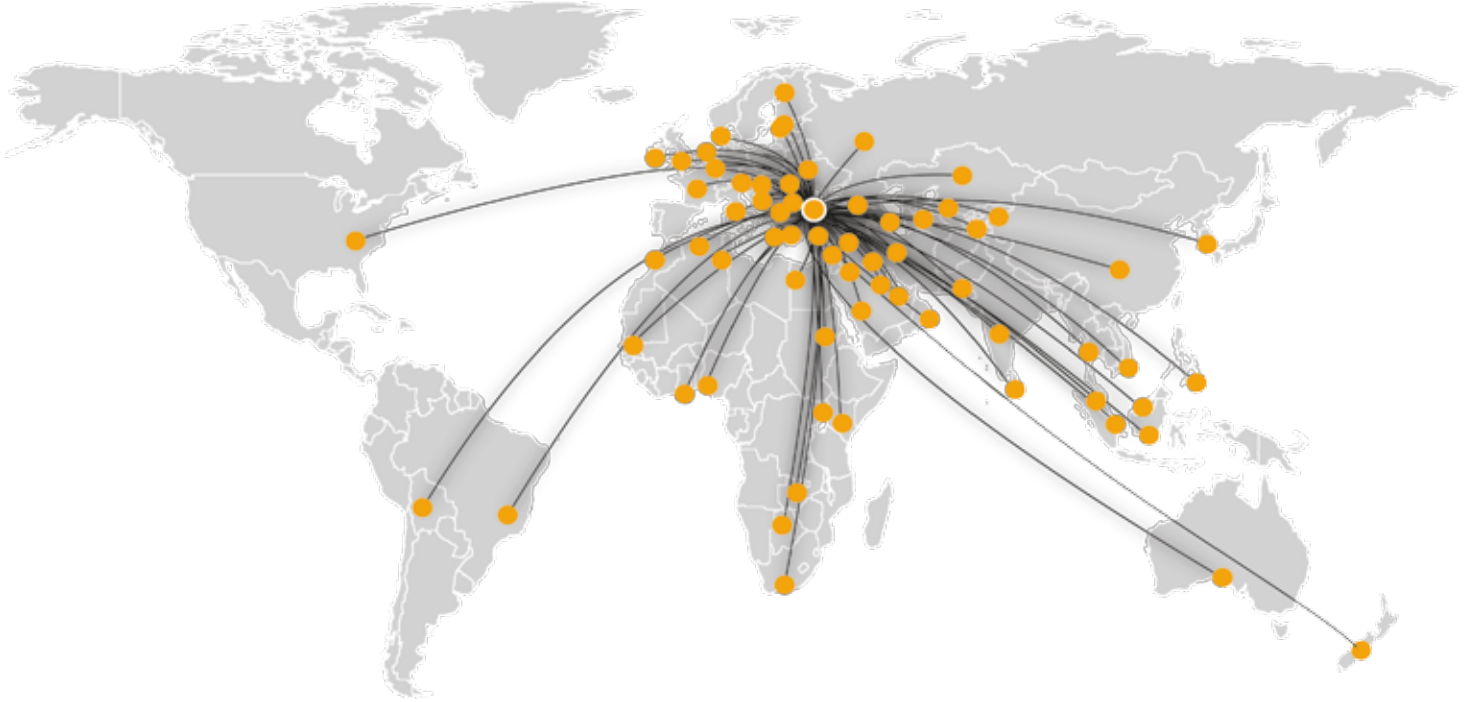• Remote displays
• Special weighing systems

Innovative Weighing Technologies

World-class weighing products & solutions...

(Specifications are subject to change without notice. 04.05.2023)

BAYKON
Industrial Weighing Systems