Transcell Group



PRODUCT CATALOG

Weighing Controller | Load Cell | Weighing Module

CONTENTS

03 Weighing Controller

10 Load Cell

13 Weighing Module

TW580 Series High-Speed Automated Weighing Instruments

Precision Measurement · Integrated Solution

The TW580 Series is a new-generation ultra-high-speed automated weighing instrument designed for industrial automation applications. It integrates precision measurement, high-speed communication, intelligent control, and simplified integration. The series offers multiple mounting options and operates across a wide range of environmental conditions. It is intended as the central weighing control unit for automated production lines and is suitable for equipment manufacturers, system integrators, and industrial end users across complete weighing processes.



Effective weighing processing rate: 960 Hz, with corresponding PLC update rate;Multiple mainstream industrial automation protocol interfaces for ease of integration;Calibration functions including weight-free calibration, multi-point nonlinear calibration, remote calibration, and step-by-step calibration.



The TW580 model delivers the highest weighing accuracy and the most comprehensive mounting configurations within the series. In addition to weighing functions, it offers enhanced data storage, data traceability, device management, and configuration maintenance capabilities to improve operational efficiency and reduce time costs.



The TW580C model provides the greatest number of local push buttons and discrete I/O points in the series. It is specifically suited for compact stand-alone controller applications in quantitative packaging and filling operations.

The TW580E model comes standard with a broader selection of basic communication interfaces and wider applicability, making it particularly effective in ultra-high-speed transmitter applications.



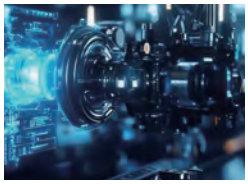
Additionally, the series is complemented by accessory modules that share the same dimensions and mounting method as the rail-mount instruments in the series, including AC/DC power conversion modules, discrete input/output expansion modules, and analog output expansion modules, to facilitate more uniform and standardized system integration.



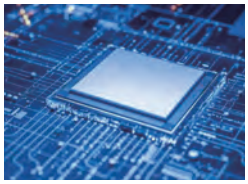
Precision Weighing QC Preferred



Full-Process Smart Weighing



Accuracy & Stability Drive Value



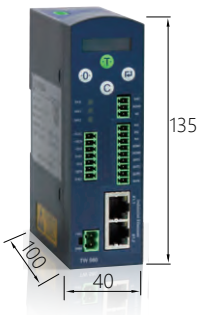
Weighing for Cost Reduction



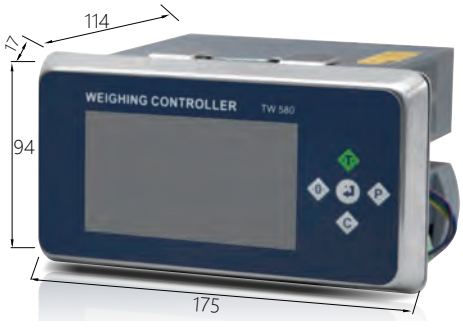
Loss Control Capacity Boost

Technical Specifications
TW580 (Rail-mounted, Panel Mount, Dust-proof Type)

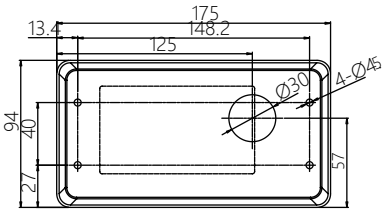
Specifications	Rail-mounted Type	Panel Mount Type	Dust-proof Type
Enclosure Type	DIN Rail Mounting with Quick Connection with Automatic Grounding	Panel Mount Installation, with Detachable Display and Weighing Processing Unit	VESA 100 Desk / Wall / Pole Mounting
Enclosure Material	ABS Plastic	Stainless Steel Front Panel	Stainless Steel, including Mounting Bracket
Protection Rating	IP20	Front Panel IP65	IP66 and IP69K
Dimensions (W x H x D)	40 x 135 x 100 mm	175 x 94 x 17 mm	275 x 87 x 200 mm
Ambient Temperature	Certified: -10°C to 40°C, Operating: -10°C to 50°C; Relative Humidity: 10% to 90%, Non-condensing		
Power Supply	20-28 VDC / 12 W; 100–240 VAC / 49–61 Hz		
Power Consumption	3-6 W (depending on option board configuration)		
Display	1.04-inch Green OLED	4.3-inch Color TFT	
Keypad	4 Membrane Keys	5 Membrane Keys	
Sensor	Up to 8 load cells of 350Ω; 1-4 mV/V sensitivity; 5 VDC excitation voltage		
Accuracy	Maximum Verification Scale Interval: 10000e		
Rate / Speed	Weight Update Rate: 960Hz; Weight Comparison Rate: 960Hz; PLC Update Rate: 960Hz		
Connectivity	**Standard:** Modbus TCP (Single Port), TCP Server (Print, Basic Communication, Configuration)		
	Optional: Industrial Ethernet (Dual Port, Built-in Switch) Profinet / EtherNet/IP / EtherCAT / Modbus TCP / CC-Link IE Field Basic		
	Optional: Profibus-DP		
	Optional: Analog Output 4-20mA / 0-10V		
	Optional: Modbus RTU		
	Optional: Isolated RS232 + Isolated RS422/RS485 (Continuous Output with CPTZ)		
Discrete Input / Output	Up to 5 Discrete Inputs, input polarity selectable, optically isolated Up to 8 Discrete Outputs, solid-state relay, max current 150mA		
Application Support	Basic Weighing, Setpoint, Comparator, Level Detection, Filling, Packaging, Checkweighing, Loss-in-Weight, etc.		



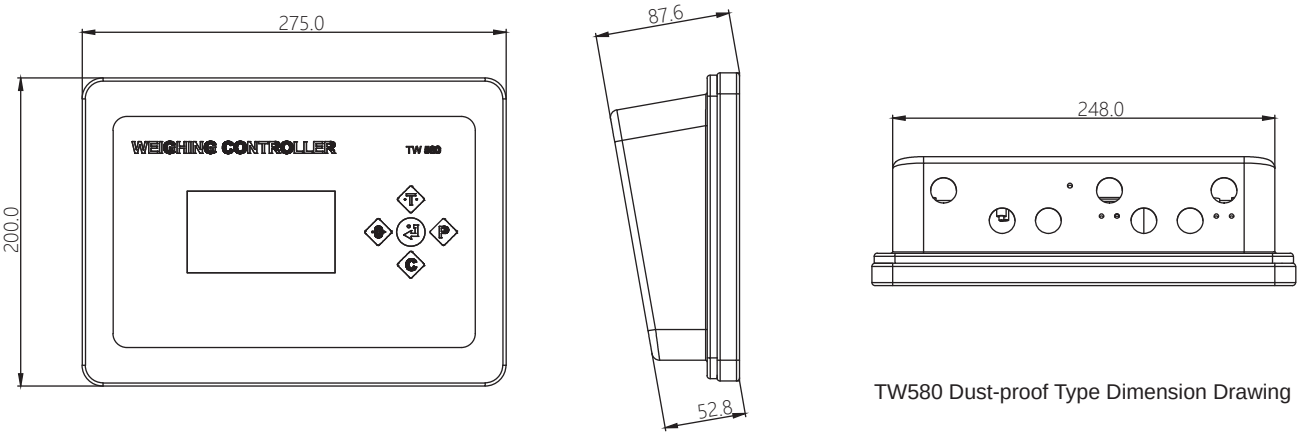
TW580 Rail-mounted Dimension Drawing



TW580 Panel Mount Dimension Drawing



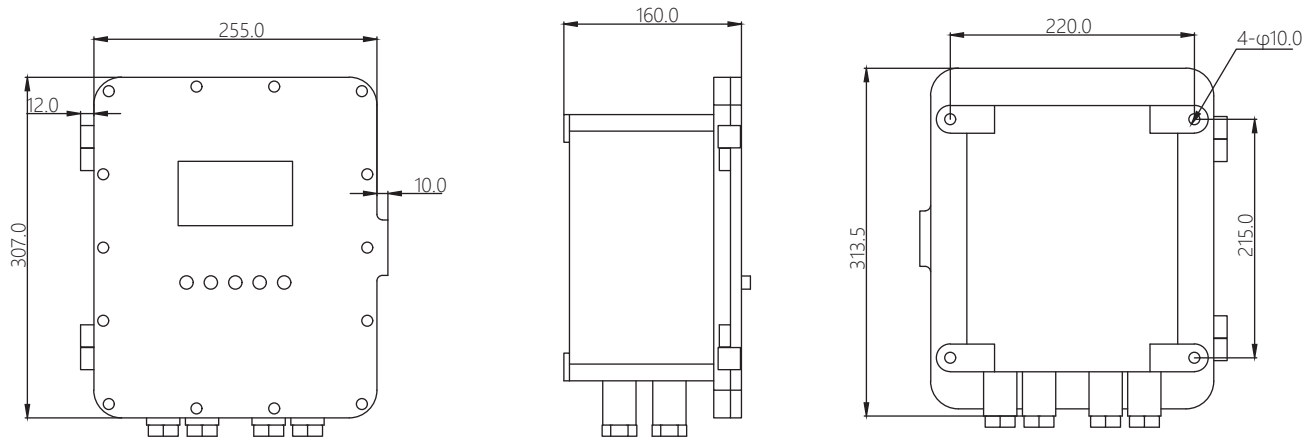
TW580 Panel Mount Cutout Drawing



TW580 Dust-proof Type Dimension Drawing

Technical Specifications
TW580 (Flameproof Type)

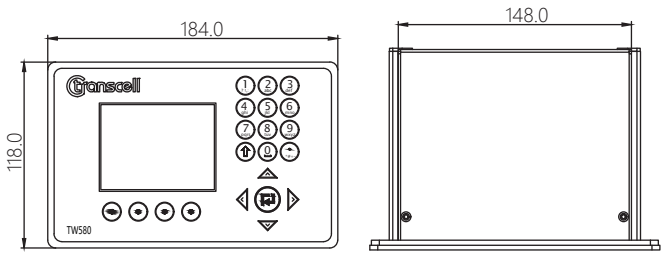
Specifications	Flameproof Type / Explosion-proof Type
Enclosure Material	Stainless Steel, Aluminum Alloy
Explosion-proof Rating	Ex db ia [ia Ga] IIc T6 Gb; Ex ia [ia Da] tb IIIc T80℃ Db
Dimensions (W x H x D)	255 x 307 x 160 mm
Cable Entry	G1/2" Explosion-proof Cable Entry, Inner Hole Diameter Ø12
Protection Rating	IP68 (1m / 1h)
Internal Structure	Membrane Keypad, LCD Backplane, Keypad Adapter, Weighing Controller, Sensor Barrier
Construction Type	Flameproof Spigot Joint Construction / Flameproof Rabbet Structure



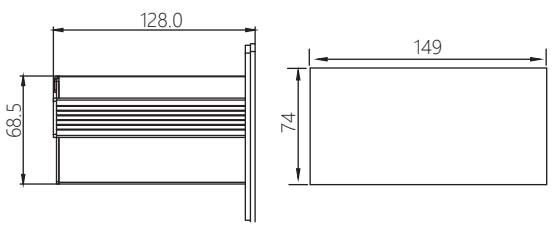
TW580 Flameproof Type Dimension Drawing

Technical Specifications
TW580C (Panel Mount)

Specifications	Panel Mount
Enclosure Type	Panel Mount Installation
Enclosure Material	Stainless Steel Front Panel
Protection Rating	Front Panel IP65
Dimensions (W x H x D)	184 x 118 x 128 mm
Ambient Temperature	Certified: -10°C to 40°C, Operating: -10°C to 50°C; Relative Humidity: 10% to 90%, Non-condensing
Power Supply	20-28 VDC / 12 W
Power Consumption	3-6 W (depending on option board configuration)
Display	3.5-inch Monochrome TFT
Keypad	21 Membrane Keys
Sensor	Up to 8 load cells of 350Ω; 1-4 mV/V sensitivity; 5 VDC excitation voltage
Accuracy	Maximum Verification Scale Interval: 6000e
Rate	Weight Update Rate: 960Hz; Weight Comparison Rate: 960Hz; PLC Update Rate: 960Hz
Connectivity	**Standard:** 1 isolated RS485 + 1 RS232 (Modbus RTU, Continuous Output with CPTZ, Print)
	Optional: Standard Ethernet (Modbus TCP, Single Port)
	Optional: Industrial Ethernet (Dual Port, Built-in Switch) Profinet/EtherNet/IP/EtherCAT/ModbusTCP/CC-Link IE Field Basic
	Optional: Profibus-DP
	Optional: Analog Output 4-20mA / 0-10V
	Optional: Modbus RTU
Discrete Input / Output	Up to 8 Discrete Inputs, input polarity selectable, optically isolated Up to 12 Discrete Outputs, solid-state relay, max current 150mA
Application Support	Basic Weighing, Setpoint, Comparator, Fixed-Value Packaging, Filling, Bulk Material, Checkweighing, etc.



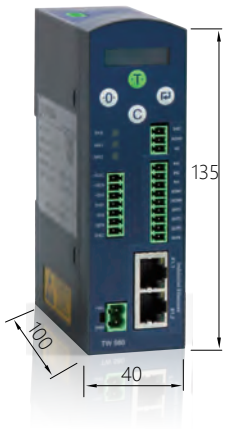
TW580C Panel Mount Dimension Drawing



TW580C Panel Mount Cutout Drawing

Technical Specifications
TW580E (Rail-mounted / DIN-rail type)

Specifications	DIN-rail mountable
Enclosure Type	DIN-rail mounting, with quick connection for auto-grounding
Enclosure Material	ABS plastic
Protection Rating	IP20
Dimensions (W x H x D)	40 x 135 x 100 mm
Ambient Temperature	Certified : -10°C to 40°C; operating -10°C to 50°C; relative humidity: 10% to 90%, non-condensing
Power Supply	20-28 VDC / 12 W
Power Consumption	3-6 W (depending on option board configuration)
Display	1.04-inch green OLED
Keypad	4 membrane keys
Sensor	Up to 8 load cells of 350Ω; 1-4 mV/V sensitivity; 5 VDC excitation voltage
Accuracy	Maximum verification scale interval: 6000e
Rate	Weight update rate: 960 Hz; weight comparison rate: 960 Hz; PLC update rate: 960 Hz
Connectivity	**Standard:** 2 isolated RS485 + 1 RS232 (Modbus RTU, continuous output with CPTZ, printing)
	Optional: Standard Ethernet (Modbus TCP, single port)
	Optional: Industrial Ethernet (dual ports with built-in switch) Profinet / EtherNet/IP / EtherCAT / Modbus TCP / CC-Link IE Field Basic
	Optional: Profibus-DP
	Optional: Analog output 4-20mA / 0-10V
	Optional: Modbus RTU
Discrete Input / Output	Up to 5 discrete inputs, polarity selectable, optically isolated Up to 8 discrete outputs, solid-state relay, max current 150mA
Application Support	Basic weighing, high-speed transmitter, set-point, comparator, level detection, filling, packaging, etc.



TW580E Rail-mounted Dimension Drawing

Product Configuration and Ordering Selection

TW580

□ – □ – □ – □ – □ – □ – □ – □ – □

Enclosure Type
D – DIN-rail mountable
P – Panel-mount
H – Dust-proof enclosure
F – Flameproof / Explosion-proof

Scale Interface
0 – Analog scale

Motherboard Type
0 – Standard
1 – Non-standard
2 – Enhanced

Option Board 1 Type
0 – None
1 – Analog output (4–20 mA / 0–10 V)
2 – Analog output (4–20 mA / 0–10 V) + 3 inputs / 4 outputs DIO (solid-state relay)
3 – Analog output (4–20 mA / 0–10 V) + 5 inputs / 8 outputs DIO (solid-state relay)
4 – 5 inputs / 8 outputs DIO (solid-state relay)
5 – RS232 + RS422/RS485 + 4 inputs / 4 outputs DIO (solid-state relay)

Option Board 2 Type
0 – None
1 – Industrial Ethernet (Profinet / EtherNet /IP / EtherCAT / Modbus TCP / CC-Link IE Field Basic)
2 – Profibus-DP
3 – Modbus RTU

Application Software
0 – Basic weighing
1 – Customized
2 – Level monitoring
3 – Dynamic checkweighing
4 – Filling / batching
5 – Loss-in-weight control
6 – Set-point batching / packaging

Power Supply Type
0 – 24 VDC
1 – 220 VAC CN
2 – 110 VAC US
3 – 220 VAC EU
4 – 220 VAC UK
5 – 220 VAC ANZ (Australia/New Zealand)

Language
C – Chinese
E – English
G – German
F – French

TW580C

□ – □ – □ – □ – □ – □ – □ – □ – □

Enclosure Type
P – Panel-mount

Scale Interface
0 – Analog scale

Motherboard Type
0 – Standard
1 – Non-standard

Option Board 1 Type
0 – None
1 – Analog output (4–20 mA / 0–10 V)
2 – Analog output (4–20 mA / 0–10 V) + 3 inputs / 4 outputs DIO (solid-state relay)
3 – 8 inputs / 12 outputs DIO (solid-state relay)

Option Board 2 Type
0 – None
1 – Industrial Ethernet (Profinet / EtherNet /IP / EtherCAT / Modbus TCP / CC-Link IE Field Basic)
2 – Profibus-DP
3 – Modbus RTU
4 – Standard Ethernet (Modbus TCP)

Application Software
0 – Basic weighing
1 – Customized
2 – Level monitoring
3 – Dynamic checkweighing
4 – Filling / batching
5 – Loss-in-weight control
6 – Set-point batching / packaging

Power Supply Type
0 – 24 VDC

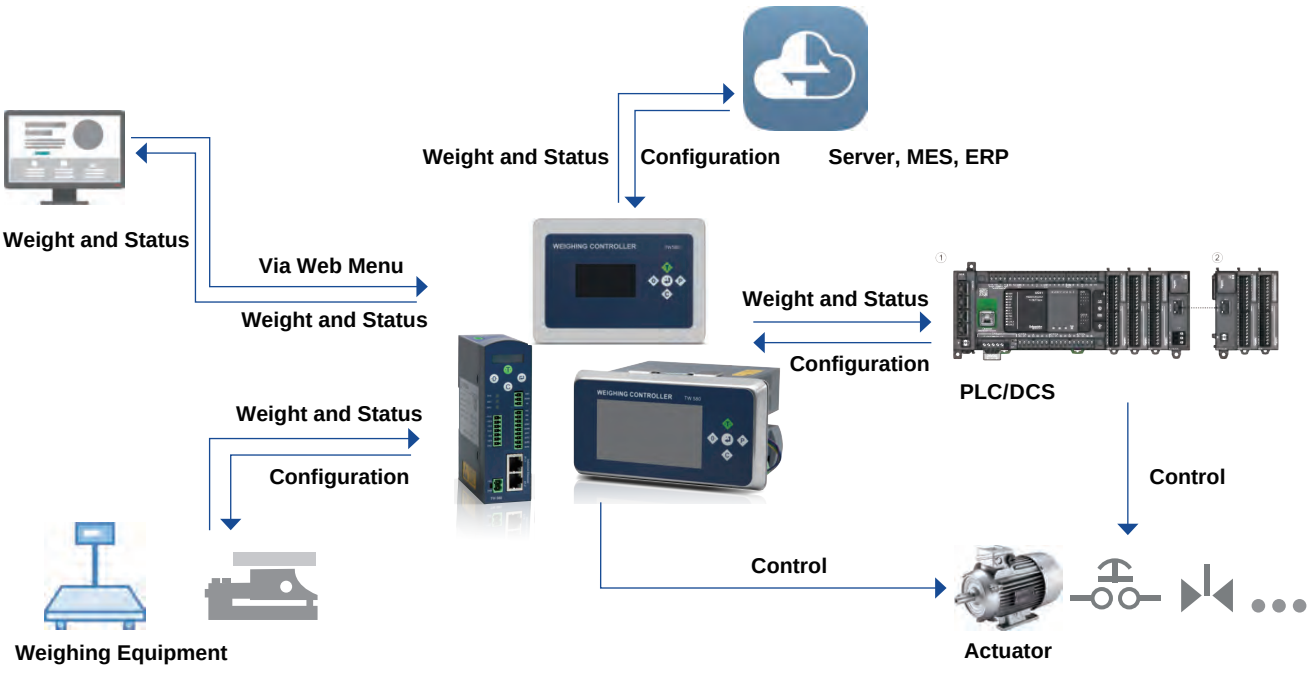
Language
C – Chinese
E – English

TW580E

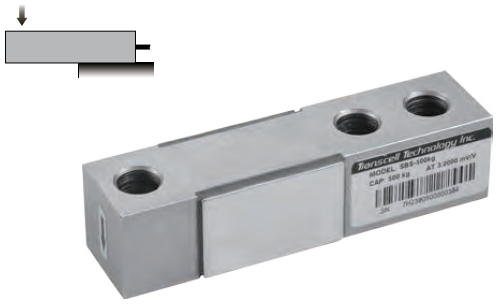
□ – □ – □ – □ – □ – □ – □ – □ – □

- **Enclosure Type**
  D-Rail mountable
- **Scale Interface**
  0-Analog scale
- **Motherboard Type**
  0 – Standard
  1 – Non-standard
- **Option Board 1 Type**
  0 – None
  1 – Analog output (4–20 mA / 0–10 V);
  2 – Analog output (4–20 mA / 0–10 V) + 3 inputs / 4 outputs DIO (solid-state relay)
  3 – Analog output (4–20 mA / 0–10 V) + 5 inputs / 8 outputs DIO (solid-state relay)
  4 – 5 inputs / 8 outputs DIO (solid-state relay)
- **Option Board 2 Type**
  0 – None
  1 – Industrial Ethernet (Profinet / EtherNet /IP / EtherCAT / Modbus TCP / CC-Link IE Field Basic)
  2 – Profibus-DP
  3 – Modbus RTU
  4 – Standard Ethernet (Modbus TCP)
- **Application Software**
  0 – Basic weighing
  1 – Customized
  2 – Level monitoring
  3 – Dynamic checkweighing
  4 – Filling / batching
  5 – Loss-in-weight control
  6 – Set-point batching / packaging
- **Power Supply Type**
  0 – 24 VDC
- **Language**
  C – Chinese
  E – English

Application Example



SBS / SBS(FB) / Single Cantilever Beam Load Cell

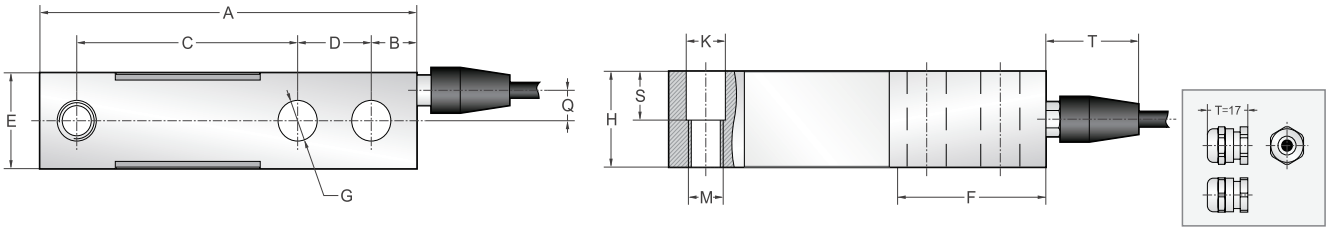


Capacity

250lb, 250kg, 500kg, 1000kg, 1500kg,
2000kg, 5000kg, 7500kg, 10000kg

Key Features

- Cantilever beam type
- High-quality alloy steel material
- High accuracy
- High stability
- Easy and quick installation
- Nickel-plated surface for corrosion resistance
- Suitable for platform scales, batching plants, belt scales, and dosing scales, etc.



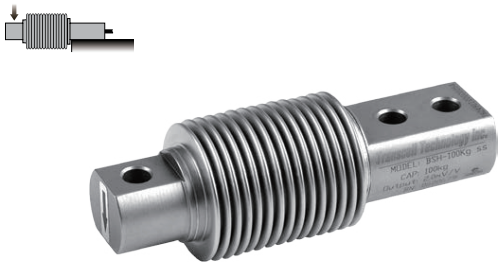
Capacity	A	B	C	D	E	F	G	H	M	K	S	T	Q
250lb	130	15.7	76.2	25.4	31.8	57	2×Ø13.5	31.8	1/2"-20 UNF	Ø13.5	16.2	32	10.1
250kg~2.5ts	130	15.7	76.2	25.4	31.8	57	2×Ø13.5	31.8	M12×1.75	Ø13.5	16.2	32	10.1
2.5t~5t	171.4	19	95.2	38.1	37.4	76	2×Ø19.8	37.4	M18×1.5	Ø19.8	17.8	32	13
7.5t~10t	222.2	25.4	120.6	50.8	50	102	2×Ø26.2	50	M24×2	Ø26.2	25	17	17

Unit: mm

Technical Specifications

Rated Output	2.0mV/V ±0.1% or 3.0mV/V ±0.1%	**Operating temperature range**	-35 ℃ to +70 ℃
Zero Balance	±1% of rated output	**Compensated temperature range**	-10 ℃ to +40 ℃
Creep	±0.03% of rated output	**Safe load limit**	150%
Nonlinearity	±0.03% of rated output	**Input Impedance**	387 ohm ± 20 ohm
Hysteresis	±0.03% of rated output	**Output Impedance**	350 ohm ± 5 ohm
Repeatability	±0.03% of rated output	**Insulation Resistance**	≥5000 M ohm (50V DC)
Sensitivity Temperature	≤0.002% of applied output / ℃	**Recommended excitation voltage**	10V DC/AC
Zero Temperature	≤0.002% of rated output / ℃	**Maximum excitation voltage**	15V DC/AC
Cable Length	6m	**Cable color**	Red (+E) Black (-E) White (-S) Green (+S)

BSH / BSH(FB) Bellow-Type Load Cell

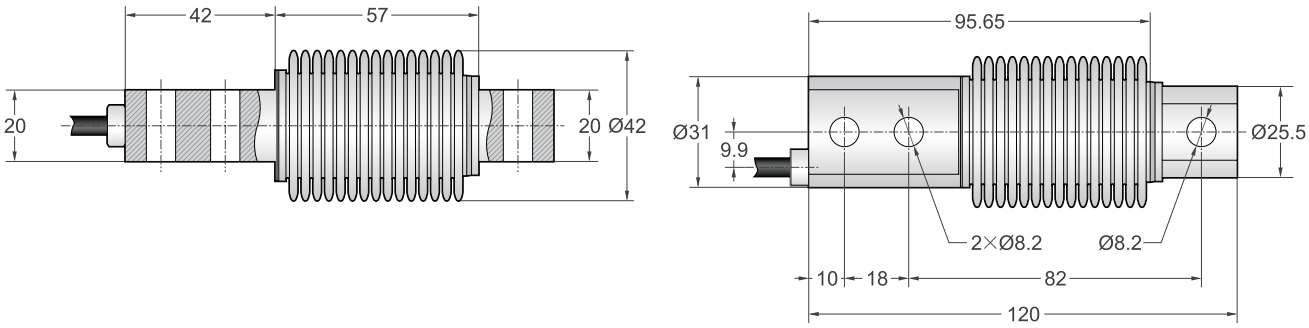


Capacity

10kg, 20kg, 30kg， 40kg, 50kg, 75kg, 100kg, 150kg, 200kg, 300kg, 500kg

Key Features

- Cantilever beam type
- High-quality stainless steel material
- Fully sealed welding / Hermetically sealed
- High accuracy
- High stability
- High protection rating (IP rating)
- Easy and quick installation
- Suitable for harsh industrial environments
- Applicable to filling scales, belt scales, batching scales, etc.

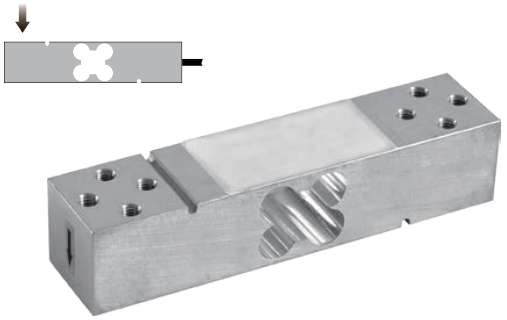


Unit：mm

Technical Specifications

Rated Output	2.0mV/V ±0.1%	**Operating temperature range**	-35 ℃ to +70 ℃
Zero Balance	±1% of rated output	**Compensated temperature range**	-10 ℃ to +40 ℃
Creep	±0.03% of rated output	**Safe load limit**	150%
Nonlinearity	±0.03% of rated output	**Input Impedance**	387 ohm ± 20 ohm
Hysteresis	±0.03% of rated output	**Output Impedance**	350 ohm ± 5 ohm
Repeatability	±0.03% of rated output	**Insulation Resistance**	≥5000 M ohm (50V DC)
Sensitivity Temperature	≤0.002% of applied output/ ℃	**Recommended excitation voltage**	10V DC/AC
Zero Temperature	≤0.002% of rated output/ ℃	**Maximum excitation voltage**	15V DC/AC
Cable Length	3m	**Cable color**	Red(+E) Black(-E) White(-S) Green(+S)

FATS / Single-point load cell

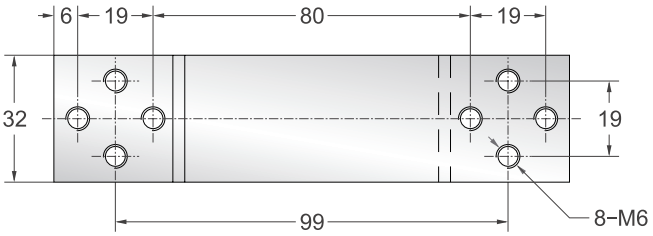


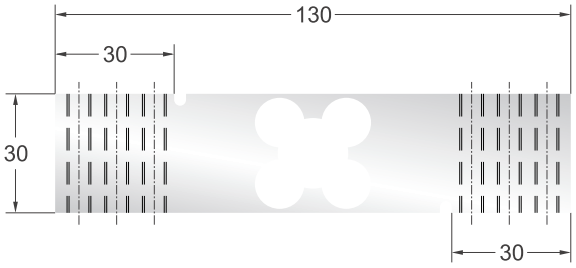
Capacity

5kg, 7.5kg, 10kg, 15kg, 25kg, 45kg, 60kg

Key Features

- Single-point type
- High-quality aluminum alloy construction
- High accuracy
- High stability
- Easy and quick installation
- Suitable for postal scales, packaging scales, small hopper scales, platform scales, etc.



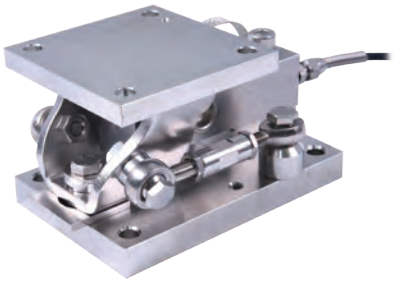


Unit: mm

Technical Specifications

Rated Output	2.0mV/V ±10%	**Operating temperature range**	-35 ℃ to +70 ℃
Zero Balance	±3% of rated output	**Compensated temperature range**	-10 ℃ to +40 ℃
Creep	±0.02% of rated output	**Safe load limit**	150%
Nonlinearity	±0.02% of rated output	**Input Impedance**	410 ohm ± 20 ohm
Hysteresis	±0.02% of rated output	**Output Impedance**	350 ohm ± 5 ohm
Repeatability	±0.02% of rated output	**Insulation Resistance**	≥5000 M ohm (50V DC)
Sensitivity Temperature	≤0.002% of applied output / ℃	**Recommended excitation voltage**	10V DC/AC
Zero Temperature	≤0.002% of rated output / ℃	**Maximum excitation voltage**	15V DC/AC
Cable Length	2m	**Cable color**	Red(+E) Black(-E) White (-S) Green (+S)

MM module / MM (FB) module

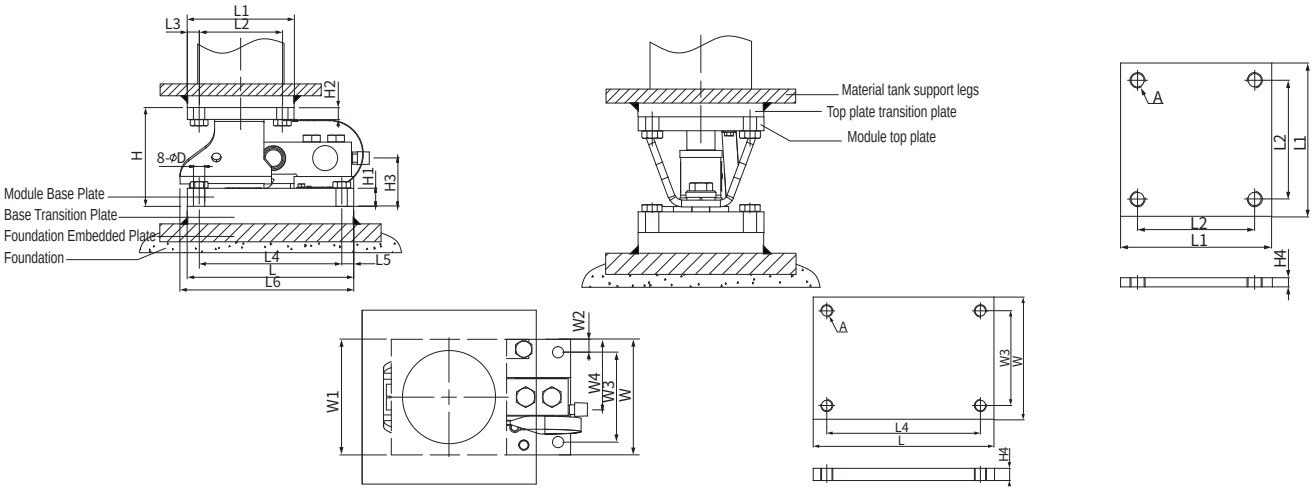


Capacity

10kg, 30kg, 50kg, 100kg, 200kg, 250kg, 500kg, 1000kg, 2000kg, 3000kg, 5000kg

Key Features

- All stainless steel structure
- Dynamic load module
- Uses SBSZ stainless steel cantilever beam load cells
- Equipped with adjustable horizontal limit bolts
- Suitable for platform scales, mixing plants, batching scales, roller table scales, and process control applications



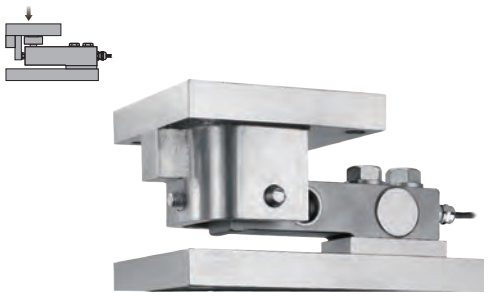
Specs	Rated Load	D	H	H1	H2	H3	H4	L	L1	L2	L3	L4	L5	L6	W	W1	W2	W3	W4	A
Size 1	10kg-100kg	10	83	12.7	8	41.0	10	165	102	82	10	145	10	-	102	102	10	82	60.0	M8
Size 2	220kg-1.1t	11.2	105.2	19.1	12.7	50.9	15	177.9	114.4	89.0	12.7	152.4	12.7	185.6	114.4	114.4	12.7	89.0	66.6	M10
	2.2t					51.3													69.7	
Size 3	4.4t	17.5	136.6	25.4	19.1	70.3	20	235.0	152.4	101.6	25.4	184.2	25.4	-	152.4	152.4	25.4	101.6	91.7	M16

Unit: mm

Technical Specifications

Rated Output	2.0mV/V ±0.1%	**Operating Temperature Range**	-35 ℃ to +70 ℃
Zero Balance	±1% of rated output	**Compensated Temperature Range**	-10 ℃ to +40 ℃
Creep	±0.03% of rated output	**Safe Overload**	150%
Non-linearity	±0.03% of rated output	**Input Impedance**	387 ohm ± 20 ohm
Hysteresis	±0.03% of rated output	**Output Impedance**	350 ohm ± 5 ohm
Repeatability	±0.03% of rated output	**Insulation Resistance**	≥5000 M ohm (50V DC)
Sensitivity Temperature Drift	≤0.002% of applied output/ ℃	**Recommended Excitation Voltage**	10V DC/AC
Zero Temperature	≤0.002% of rated output/ ℃	**Maximum Excitation Voltage**	15V DC/AC
Cable Length	6m(0.25t~5t)/9.5m(10t~13.5t)/13m(20t)	**Cable Color**	Red(+E) Black(-E) White(-S) Green(+S)

SBSZ-CWC Module / SBSZ(FB)-CWC Module

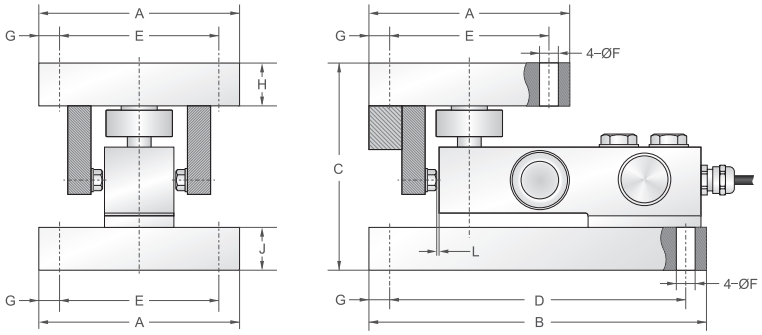


Capacity

250kg, 500kg, 1000kg, 2000kg, 3000kg, 5000kg, 10000kg,13500kg, 20000kg

Key Features

- All stainless steel construction
- Dynamic load module
- Utilizes SBSZ cantilever-type stainless steel load cell
- Equipped with adjustable horizontal limit bolts
- Suitable for platform scales, mixing stations, batching scales, roller track scales, and process control applications



Capacity	A	B	C	D	E	F	G	H	J	L
0.25t~1t	114.3	177.8	104.8	152.4	88.9	11	12.7	19	19	1.6
2t	114.3	177.8	104.8	152.4	88.9	11	12.7	19	19	1.6
3t	114.3	177.8	104.8	152.4	88.9	11	12.7	19	19	1.6
5t	152.4	235	136.5	184.2	101.6	17.5	25.4	31.8	25.4	1.6
10t/13.5t	203.2	355.6	190.5	304.8	152.4	20.6	25.4	44.5	44.5	3
20t	228.6	406.4	228.6	342.9	165.1	28.5	31.8	50.8	50.8	3

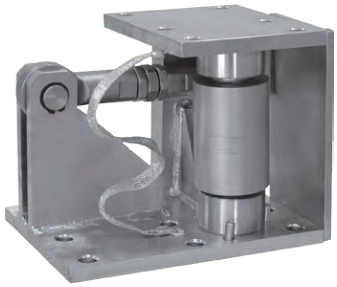
Unit：mm

Technical Specifications

Rated Output	2.0mV/V ±0.1%	**Usable Temperature Range**	-35 ℃ to +70 ℃
Zero Balance	±1% of rated output	**Compensated Temperature Range**	-10 ℃ to +40 ℃
Creep	±0.03% of rated output	**Safe Load Limit**	150%
Nonlinearity	±0.03% of rated output	**Input Impedance**	387 ohm ± 20 ohm
Hysteresis	±0.03% of rated output	**Output Impedance**	350 ohm ± 5 ohm
Repeatability	±0.03% of rated output	**Insulation Resistance**	≥5000 M ohm (50V DC)
Sensitivity Temperature	≤0.002% of applied output/ ℃	**Recommended Excitation Voltage**	10V DC/AC
Zero Temperature	≤0.002% of rated output/ ℃	**Maximum Excitation Voltage**	15V DC/AC
Cable Length	6m(0.25t~5t)/9.5m(10t~13.5t)/13m(20t)	**Cable Color**	Red(+E) Black(-E) White(-S) Green(+S)

CD-GD-GW Module / CD(FB)-GD-GW Module



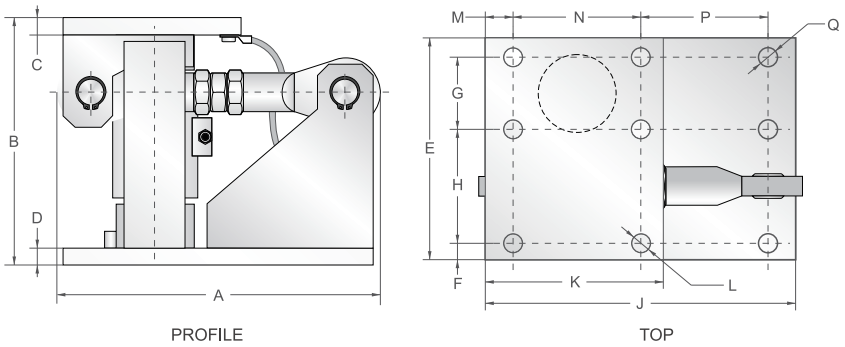


Capacity

15t, 20t, 30t, 50t

Key Features

- All stainless steel construction
- High capacity with low deadweight
- Utilizes CD-GD column-type load cell
- Equipped with safety support block markings for overload protection
- Suitable for batching weighing control of large-capacity tanks in harsh environments



Capacity	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
15t~50t	292	222.5	15	15	200	17.5	65	102.5	280	160	6xØ18	25	115	115	9xØ18

Unit: mm

Technical Specifications

Rated Output	2.0mV/V ±0.1%	**Usable Temperature Range**	-35 ℃ to +70 ℃
Zero Balance	±1% of rated output	**Compensated Temperature Range**	-10 ℃ to +40 ℃
Creep	±0.03% of rated output	**Safe Load Limit**	150%
Nonlinearity	±0.03% of rated output	**Input Impedance**	1120 ohm ± 20 ohm
Hysteresis	±0.03% of rated output	**Output Impedance**	1000 ohm ± 5 ohm
Repeatability	±0.03% of rated output	**Insulation Resistance**	≥5000 M ohm (50V DC)
Sensitivity Temperature	≤0.002% of applied output / ℃	**Recommended Excitation Voltage**	10V DC/AC
Zero Temperature	≤0.002% of rated output / ℃	**Maximum Excitation Voltage**	15V DC/AC
Cable Length	13m	**Cable Color**	GN(+E) BK(-E) WT(+S) RD(-S) BN(+SEN) BU(-SEN)



+86 400-068-3777

Transcell Intelligent Machinery (Changzhou) Co., Ltd.
Address: Building 9, No.9 Caoxi Road, Niutang Town, Wujin District,
Changzhou City, Jiangsu Province, China
Website:www.transcellgroup.com
E-mail:info@transcellgroup.com