

LOAD CELLS



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A&D Company, Limited
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Load Cell Terminology

Each country has its own standard for the performance and quality of load cells.

In Japan, there is no standard stipulated uniquely for load cells, although JIS (Load Cell - Test Method JIS B7602) and JMIF (Japan Measuring Instruments Federation) prescribe methods for performance tests.

Meanwhile, the OIML (International Organization of Legal Metrology) sets the international recommendation titled "Metrological Regulation for Load Cells," with which each member country tries to make their local regulation consistent. The terms described below are commonly used by the OIML and its member countries.

Rated Capacity (RC)

The maximum load that a load cell can measure while meeting its specifications.

Rated Output (RO)

The difference when there is no load and when there is a load of rated capacity. It is generally expressed in output per excitation voltage (mV/V). Alternatively called "Span."

Safe load limit

The maximum load that can be applied beyond the rated capacity without causing any permanent damage. Expressed as a percentage of rated capacity.

Compensated temperature range

The temperature range within which the rated output and the zero balance are compensated to meet the specifications.

Temperature effect on zero balance

Drifting of the zero balance caused by changes in the ambient temperature. Expressed as a percentage of rated output.

Temperature effect on rated output

Drifting of the rated output caused by changes in the ambient temperature.

Nonlinearity

The maximum deviation in output from the linear calibration curve linking the zero balance and the rated output, which is measured only when the load increases. Expressed as a percentage of rated output.

Hysteresis error

The maximum difference in output between when the load increases and when the load decreases.

Combined error

The maximum deviation of output from the linear calibration curve linking the zero balance and the rated output, including when the load increases and decreases.

Recommended/maximum excitation voltage

The voltage applied to the input terminals of load cell.

Zero balance

The electrical output when the rated excitation voltage is applied without any load on the cell. Generally expressed as a percentage of rated output.

Input terminal resistance

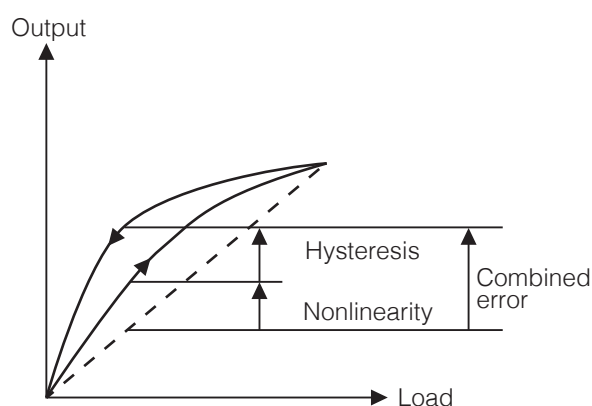
Measured while the output terminals are open, with no load on the cell.

Output terminal resistance

Measured while the input terminals are open, with no load on the cell.

Insulation resistance

The direct current resistance between the load cell unit and its circuit.



Single Point

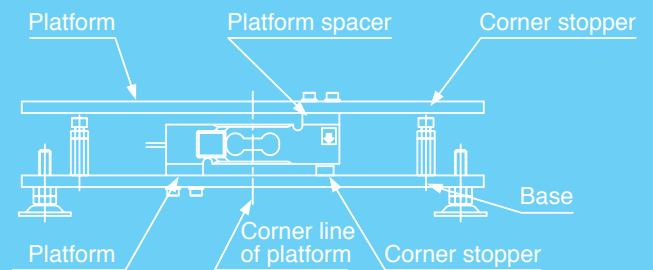
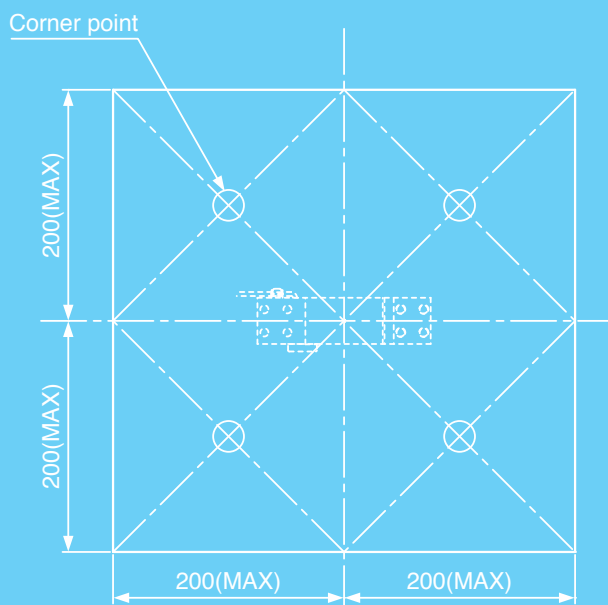
Single-point load cells are ideal to be used alone and for relatively small loading. They are already adjusted to correct four-corner errors.

Example Applications

- Electronic balances
- Desktop scales
- Small/medium-sized platform scales
- Conveyor scales, etc.

Example of Installation

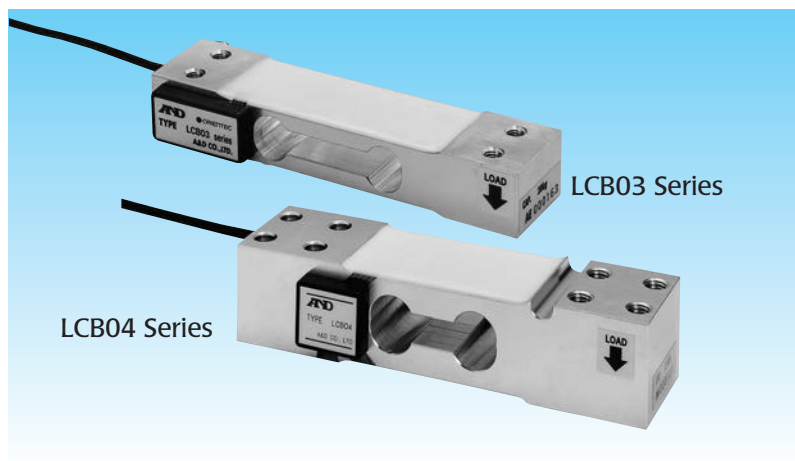
The LCB04



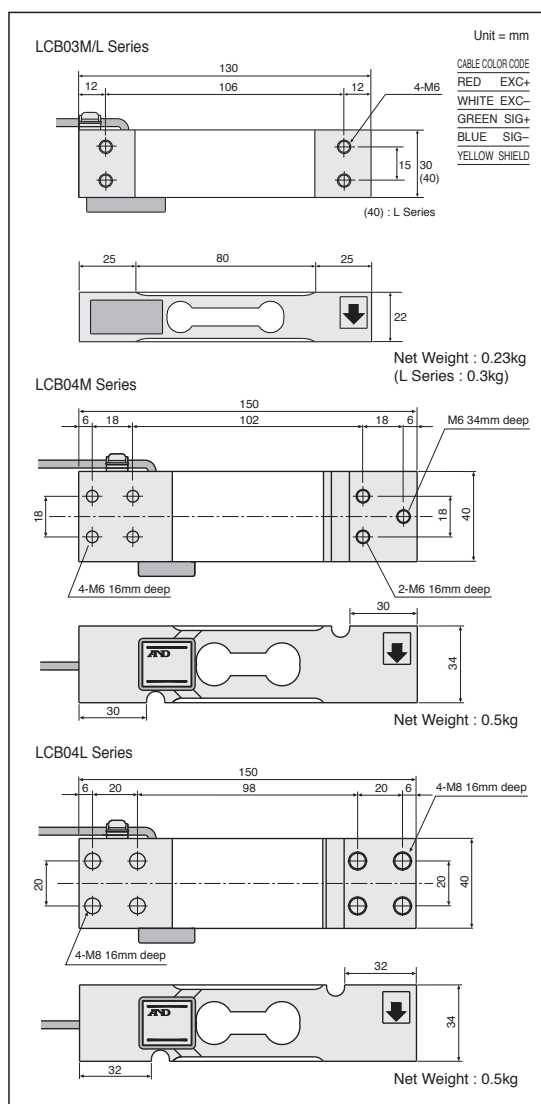
Unit = mm

LCB03/04 Series

Single-point Aluminum Load Cell



Model No.	Capacity
LCB03K003M	3.059kg (30N)
LCB03K006M	6.118kg (60N)
LCB03K010M	10.20kg (100N)
LCB03K015M	15.30kg (150N)
LCB03K020M	20.39kg (200N)
LCB03K025L	25.49kg (250N)
LCB03K030L	30.59kg (300N)
LCB03K035L	35.69kg (350N)
LCB03K060L	61.18kg (600N)
LCB04K060M	61.18kg (600N)
LCB04K100M	102.0kg (1kN)
LCB04K150L	153.0kg (1.5kN)
LCB04K250L	254.9kg (2.5kN)

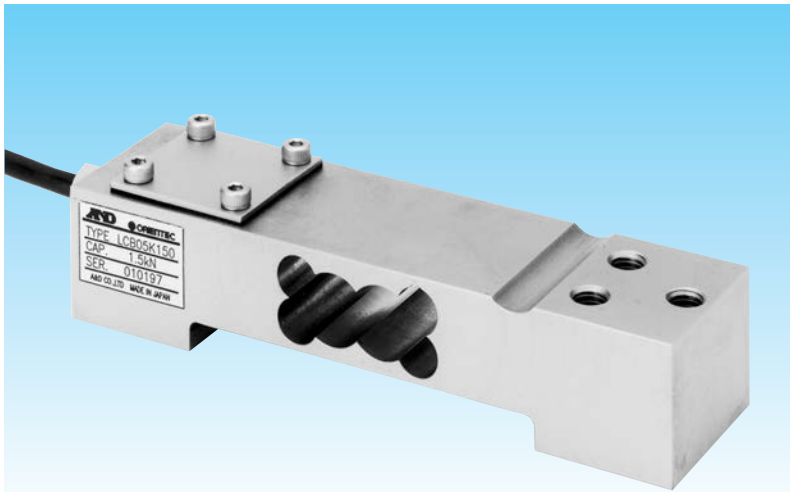


Specifications

Rated output	2mV/V \pm 10%
Safe load limit	150% of R.C.
Combined error	0.02% of R.O.
Recommended excitation voltage	DC5 to 12V
Maximum excitation voltage	DC15V
Zero balance	\pm 5% of R.O.
Input terminal resistance	420 \pm 30 Ω
Output terminal resistance	350 \pm 5 Ω
Insulation resistance	2000M Ω /DC50V(B/E)
Compensated temperature range	-10 $^{\circ}$ C to 40 $^{\circ}$ C
Temperature effect on	
Zero balance	0.023% of R.O./10 $^{\circ}$ C
Span	0.014% of Load/10 $^{\circ}$ C Typ.
Cable diameter/length	ϕ 3.5/0.4m (LCB03) ϕ 3.5/1.5m (LCB04)
Maximum platform size	300 \times 300mm (LCB03) 400 \times 400mm (LCB04)
Dustproof/waterproof	IP54

LCB05 Series

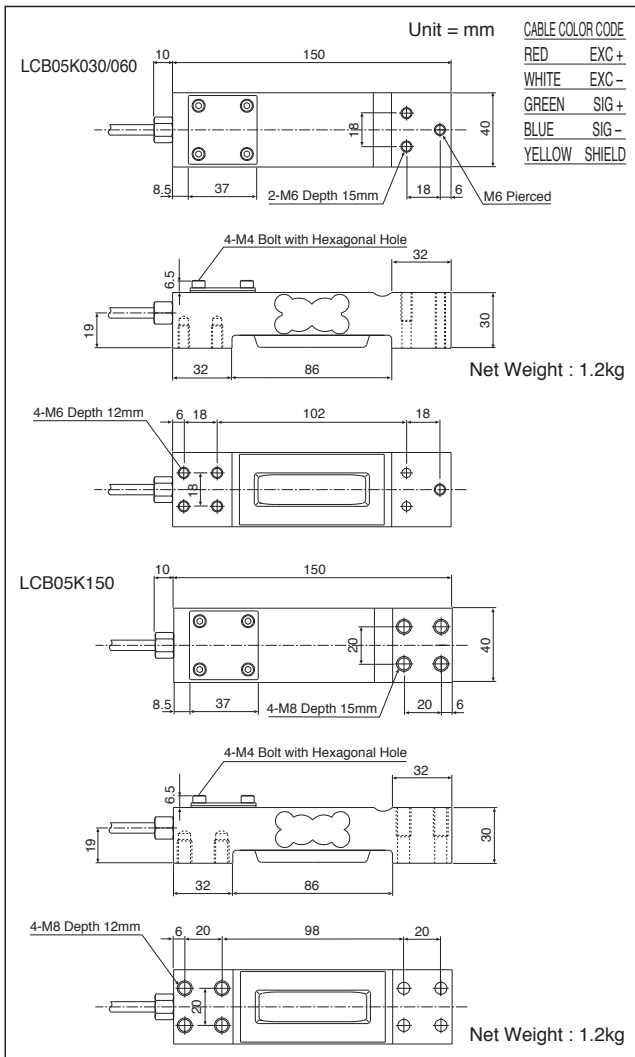
Hermetically Sealed Single-point Stainless Steel Load Cell
Ideal for measurements in harsh environments



Model No.	Capacity
LCB05K030	30.59kg (300N)
LCB05K060	61.18kg (600N)
LCB05K150	153.0kg (1.5kN)

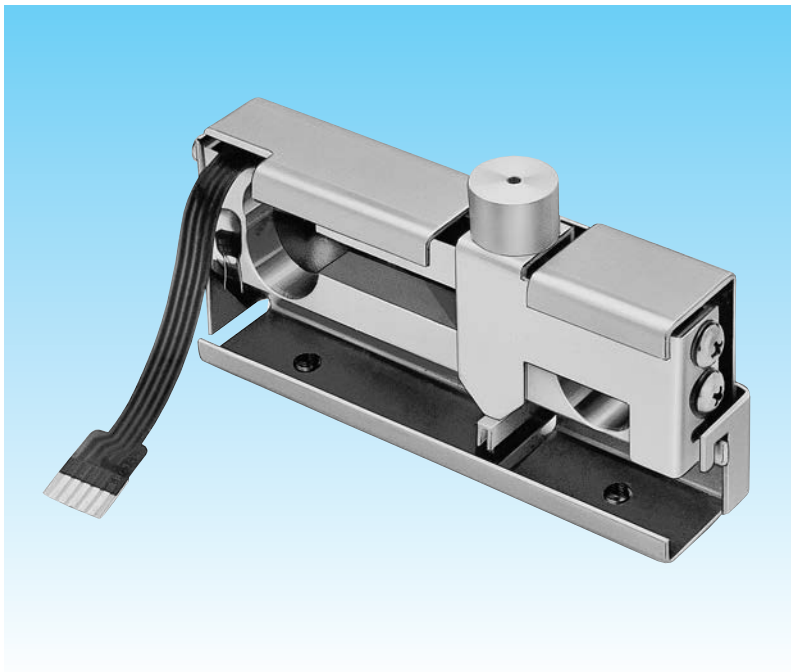
Specifications

- Rated output ————— 2mV/V+15% -0%
- Safe load limit ————— 150% of R.C.
- Combined error ————— 0.03% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V
- Zero balance ————— ±5% of R.O.
- Input terminal resistance — Approximately 390Ω
- Output terminal resistance — 350±5Ω
- Insulation resistance — 500MΩ/DC50V
- Compensated temperature range — -10°C to 40°C
- Temperature effect on
 - Zero balance ————— 0.04% of R.O./10°C
 - Span ————— 0.014% of Load/10°C Typ.
- Cable diameter/length — ø5.6/3m
- Maximum platform size — 400×400mm
- Dustproof/waterproof — IP67



LC-4001

Single-point Aluminum Load Cell with Ultra-high Sensitivity
Resolution as high as 10mg
Built-in metal overload stopper



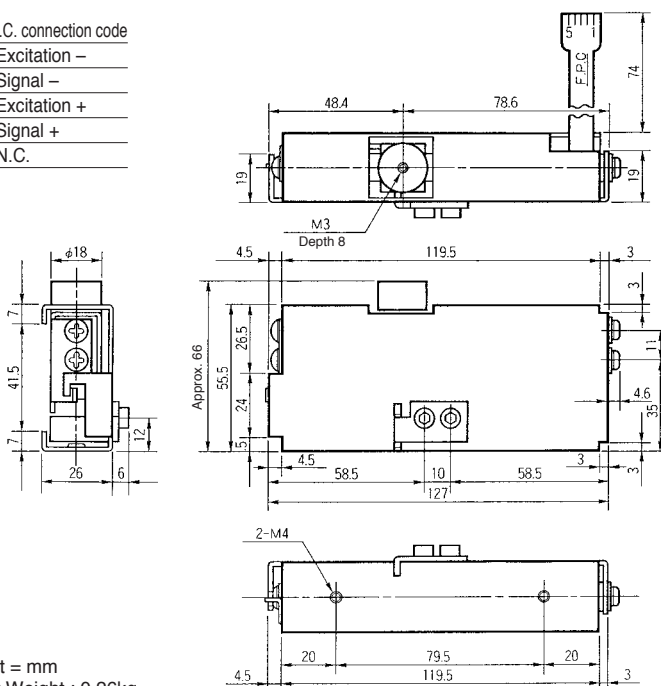
Model No.	Capacity
LC-4001-G120	122.4g (1.2N)

Specifications

Rated output	0.4079mV/V or greater
Safe load limit	300% of R.C.
Combined error	0.015% of R.O.
Recommended excitation voltage	DC5 to 12V
Maximum excitation voltage	DC15V
Zero balance	40±25% of R.O.
Input terminal resistance	Approximately 400Ω
Output terminal resistance	350±5Ω
Insulation resistance	500MΩ/DC50V
Compensated temperature range	-5°C to 35°C
Temperature effect on	
Zero balance	0.14% of R.O./10°C
Span	0.02% of Load/10°C Typ.
Cable diameter/length	F.P.C.75mm
Maximum platform size	120×120mm
Dustproof/waterproof	IP22

F.P.C. connection code

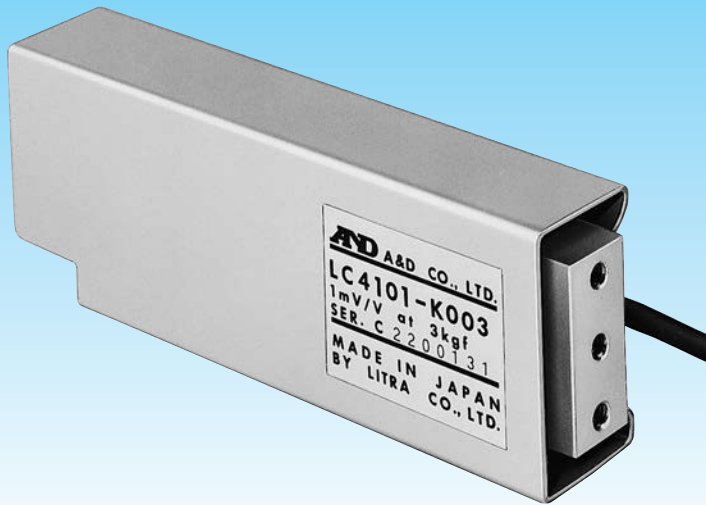
1. Excitation -
2. Signal -
3. Excitation +
4. Signal +
5. N.C.



Included connector

LC-4101 Series

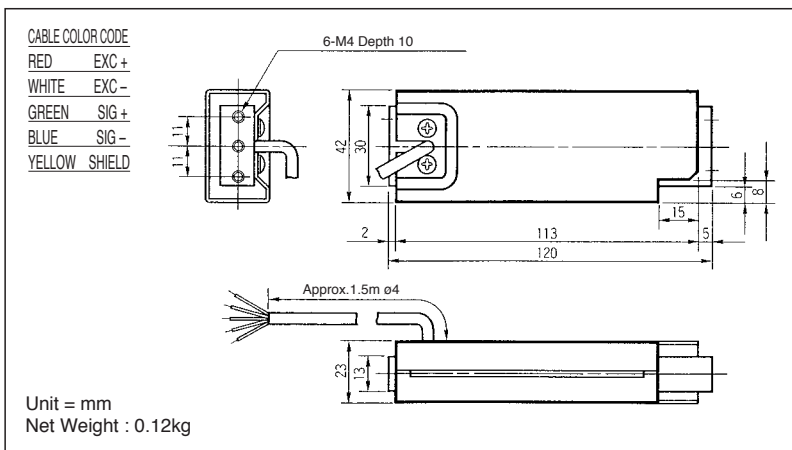
Single-point Aluminum Load Cell Ideal for Small Capacity Weighing



Model No.	Capacity
LC-4101-G600	611.8g (6N)
LC-4101-K1.5	1.530kg (15N)
LC-4101-K003	3.059kg (30N)
LC-4101-K006	6.118kg (60N)
LC-4101-K015	15.30kg (150N)

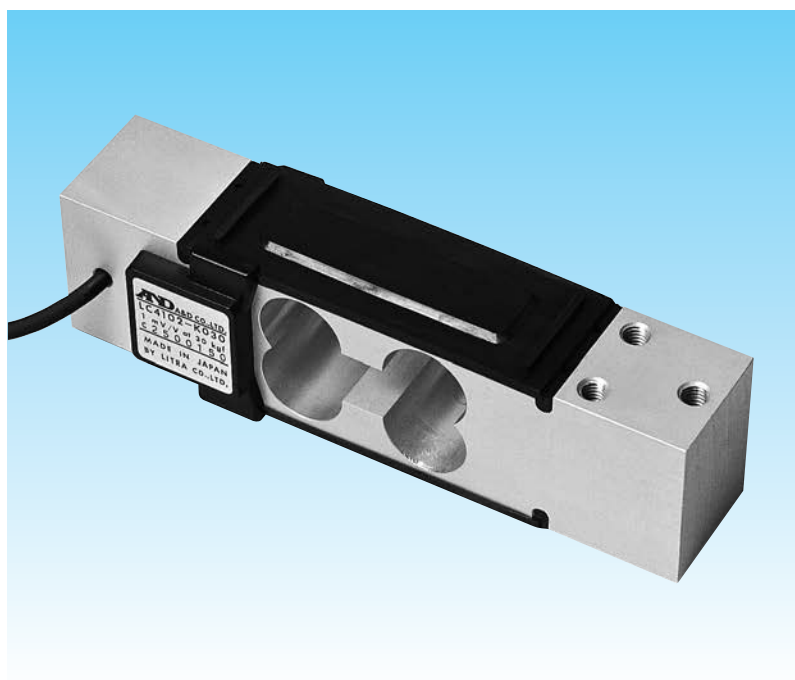
Specifications

- Rated output ————— 1.0197mV/V+15% -0%
- Safe load limit ————— 300% of R.C.
- Combined error ————— 0.015% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V
- Zero balance ————— 20±5% of R.O.
- Input terminal resistance — Approximately 400Ω
- Output terminal resistance — 350±5Ω
- Insulation resistance — 500MΩ/DC50V
- Compensated temperature range — -10°C to 40°C
- Temperature effect on
 - Zero balance ————— 0.04% of R.O./10°C
 - Span ————— 0.014% of Load/10°C Typ.
- Cable diameter/length — ø4/1.5m
- Maximum platform size — 300×300mm
- Dustproof/waterproof — IP22



LC-4102 Series

Single-point Aluminum Load Cell Ideal for Small/Medium Capacity Weighing



Model No.	Capacity
LC-4102-K010	10.20kg (100N)
LC-4102-K015	15.30kg (150N)
LC-4102-K030	30.59kg (300N)
LC-4102-K060	61.18kg (600N)
LC-4102-K150	153.0kg (1.5kN)

Specifications

Rated output ————— 1.0197mV/V+15% -0%

Safe load limit ————— 300% of R.C.

Combined error ————— 0.015% of R.O.

Recommended excitation voltage — DC5 to 12V

Maximum excitation voltage — DC15V

Zero balance ————— 20±5% of R.O.

Input terminal resistance — Approximately 400Ω

Output terminal resistance — 350±5Ω

Insulation resistance — 500MΩ/DC50V

Compensated temperature range — -10°C to 40°C

Temperature effect on

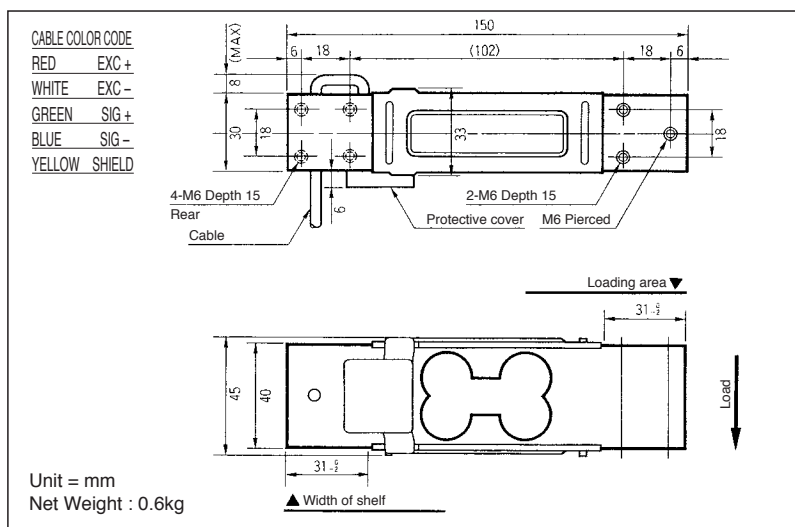
Zero balance ————— 0.04% of R.O./10°C

Span ————— 0.014% of Load/10°C Typ.

Cable diameter/length — ø4/1.5m

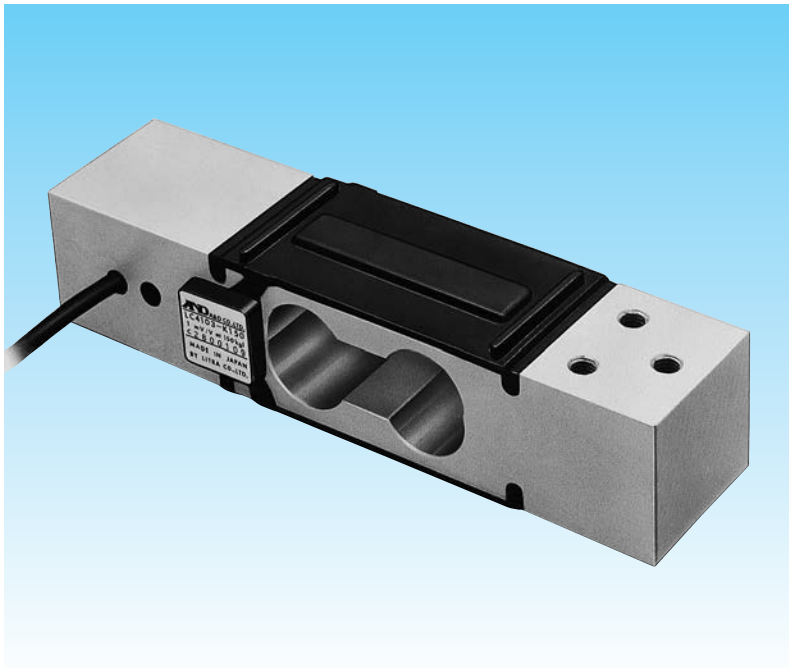
Maximum platform size — 400×400mm

Dustproof/waterproof — IP54



LC-4103 Series

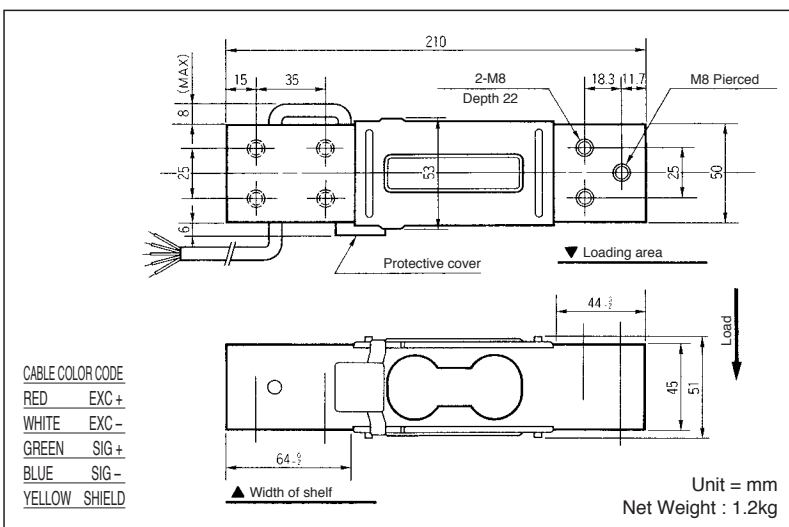
Single-point Aluminum Load Cell Ideal for Medium Capacity Weighing



Model No.	Capacity
LC-4103-K060	61.18kg (600N)
LC-4103-K100	102.0kg (1kN)
LC-4103-K150	153.0kg (1.5kN)

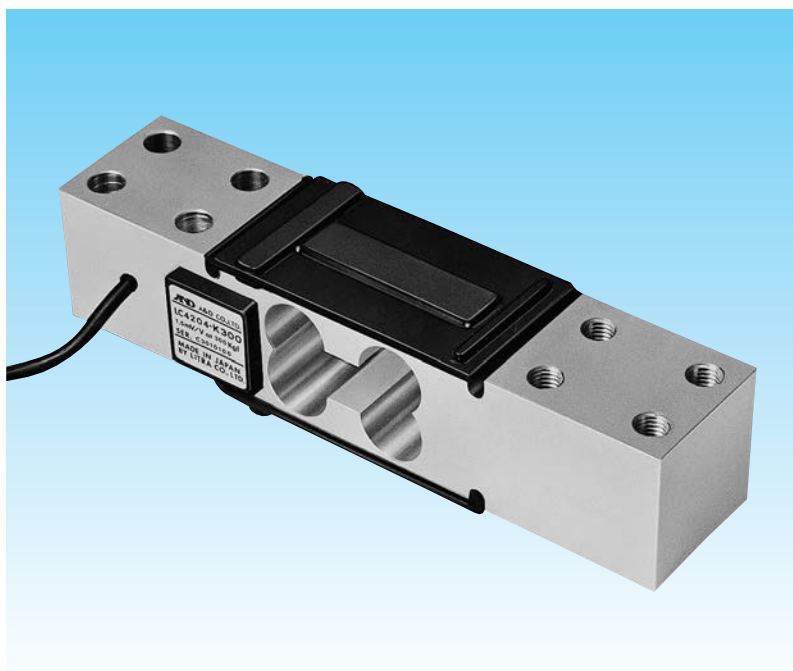
Specifications

- Rated output ————— 1.0197mV/V+15% -0%
- Safe load limit ————— 300% of R.C.
- Combined error ————— 0.015% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V
- Zero balance ————— 20±5% of R.O.
- Input terminal resistance — Approximately 400Ω
- Output terminal resistance — 350±5Ω
- Insulation resistance — 500MΩ/DC50V
- Compensated temperature range — -10°C to 40°C
- Temperature effect on
 - Zero balance ————— 0.04% of R.O./10°C
 - Span ————— 0.014% of Load/10°C Typ.
- Cable diameter/length — ∅6/2m
- Maximum platform size — 400×600mm
- Dustproof/waterproof — IP54



LC-4204 Series

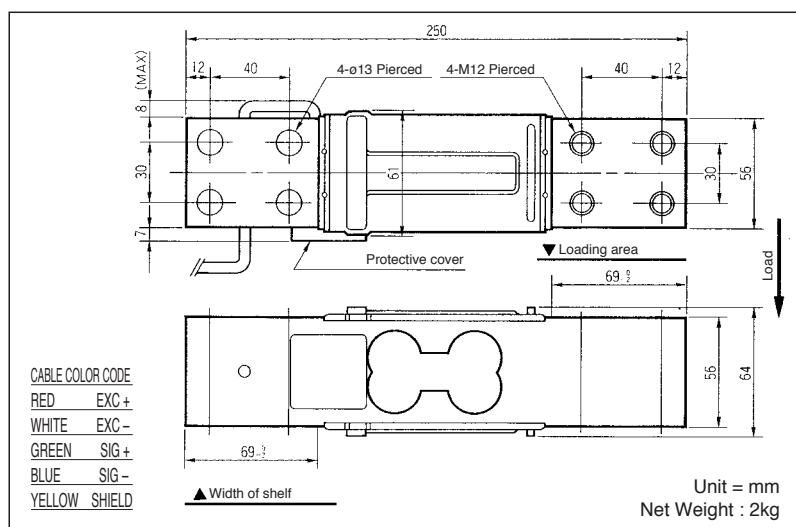
Single-point / Multi-point Aluminum Load Cell



Model No.	Capacity
LC-4204-K300	305.9kg (3kN)
LC-4204-K600	611.8kg (6kN)

Specifications

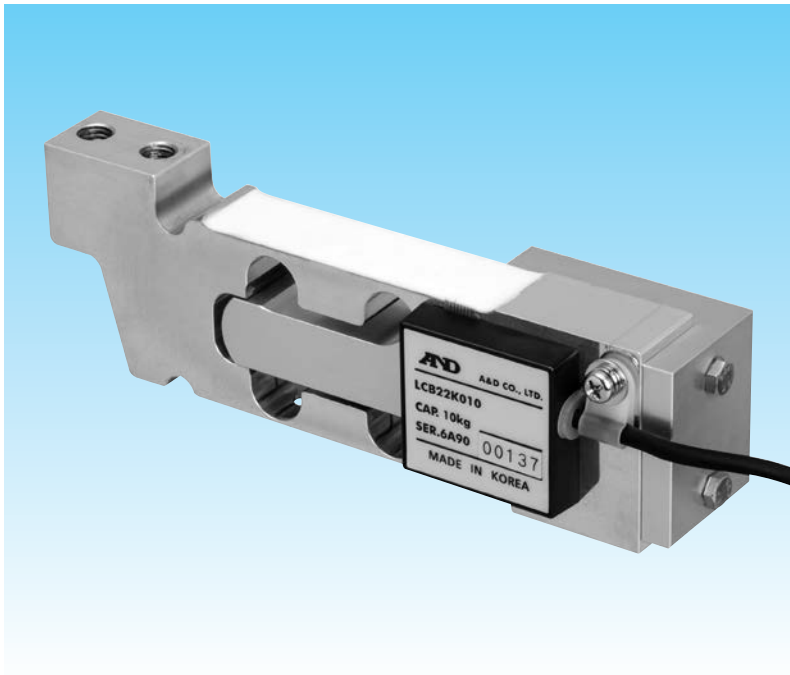
Rated output	1.5296mV/V \pm 0.2%
Safe load limit	200% of R.C.
Combined error	0.015% of R.O.
Recommended excitation voltage	DC5 to 12V
Maximum excitation voltage	DC15V
Zero balance	20 \pm 5% of R.O.
Input terminal resistance	Approximately 400 Ω
Output terminal resistance	350 \pm 5 Ω
Insulation resistance	500M Ω /DC50V
Compensated temperature range	-10 $^{\circ}$ C to 40 $^{\circ}$ C
Temperature effect on	
Zero balance	0.04% of R.O./10 $^{\circ}$ C
Span	0.014% of Load/10 $^{\circ}$ C Typ.
Cable diameter/length	ϕ 6/5m
Maximum platform size	600 \times 700mm
Dustproof/waterproof	IP54



LCB22 Series

Single-point Aluminum Load Cell with Built-in Overload Stopper

Extremely durable structure built to withstand excessive loads and impacts without the need for additional stoppers

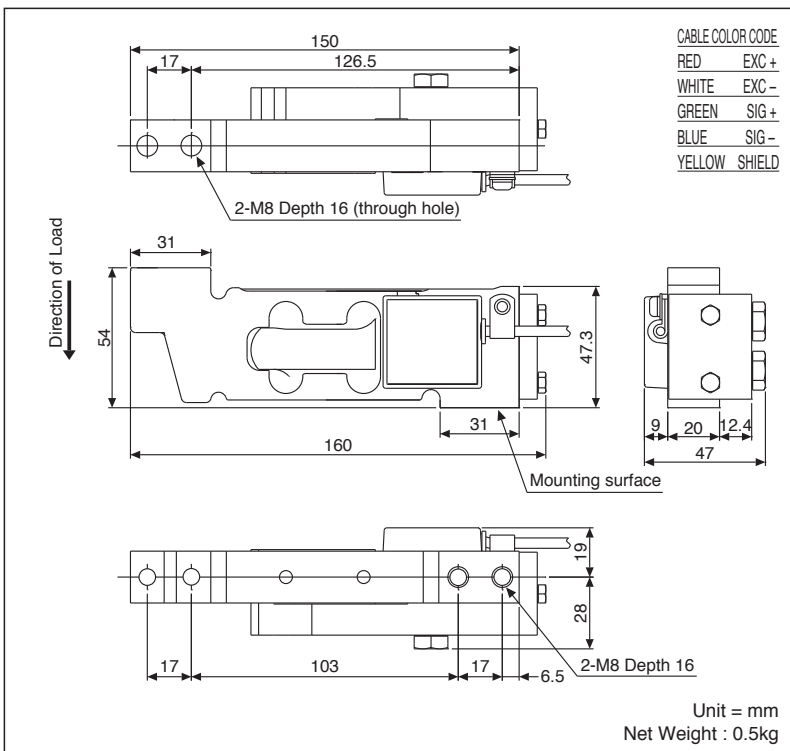


Model No.	Capacity
LCB22K006	6kg (58.84N)
LCB22K010	10kg (98.07N)
LCB22K015	15kg (147.1N)
LCB22K020	20kg (196.1N)
LCB22K030	30kg (294.2N)

Specifications

- Rated output ————— 1.5mV/V±5%
- Safe load limit ————— 500% of R.C.
- Ultimate safe overload — 1000% of R.C.
- Combined error ————— 0.02% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V
- Zero balance ————— ±5% of R.O.
- Input terminal resistance — 1.13kΩ±100Ω
- Output terminal resistance — 1kΩ±10Ω
- Insulation resistance — 2000MΩ/DC50V
- Compensated temperature range — -10°C to 40°C
- Temperature effect on
 - Zero balance ————— 0.014% of R.O./10°C Typ.
 - Span ————— 0.011% of Load/10°C Typ.
- Cable diameter/length — ø4/1.5m
- Maximum platform size — 400×400mm
- Dustproof/waterproof — IP65 *

* Although this load cell is rated IP65 it can be submerged up to 1m in water for up to 30 minutes similar to the IP67 rating.



Beam Type

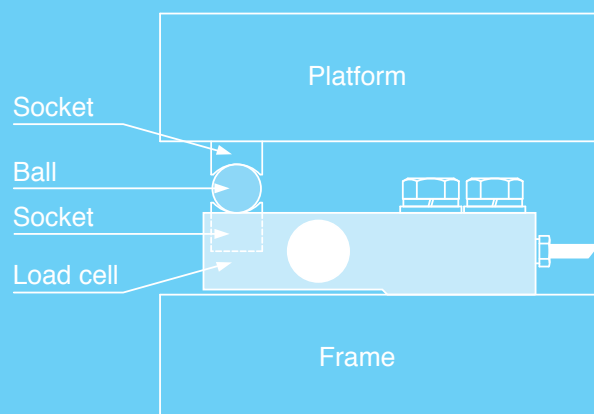
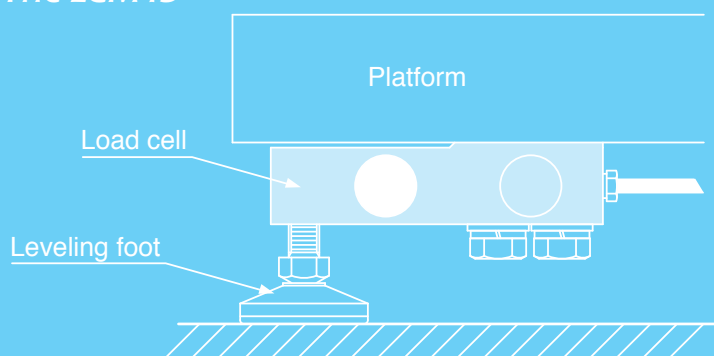
Beam type (multi-point) load cells are suitable for large capacity weighing, and ideal for low-profile scales.

Example Applications

- Platform scales
- Hopper scales
- Tank scales
- Conveyor scales, etc.

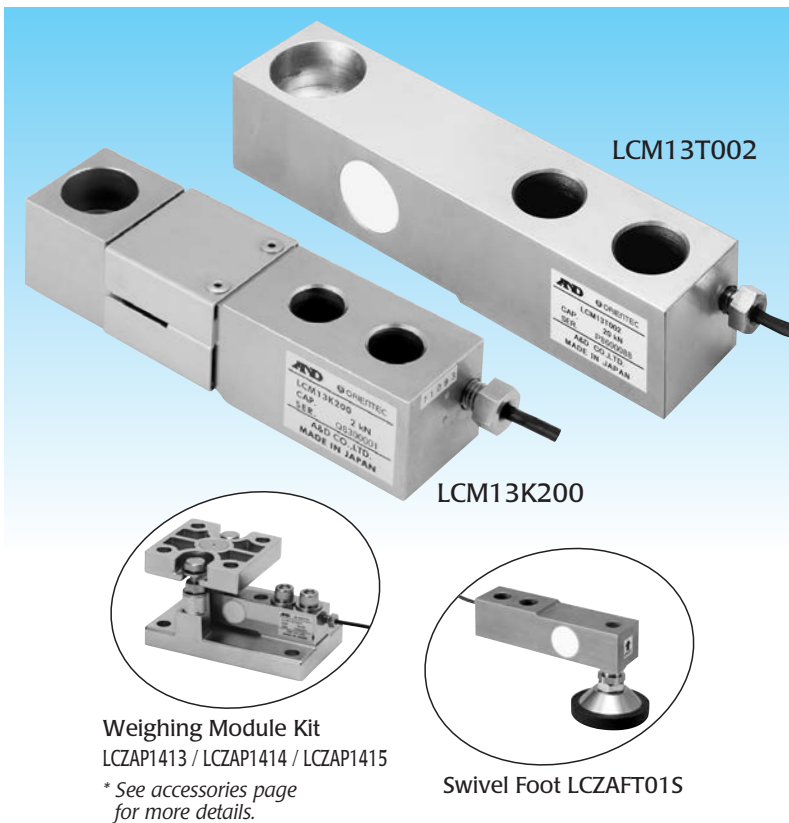
Example of Installation

The LCM13



LCM13 Series

Beam Type Stainless Steel Load Cell



Model No.	Capacity
LCM13K100	102.0kg (1kN)
LCM13K200	203.9kg (2kN)
LCM13K300	305.9kg (3kN)
LCM13K500	509.9kg (5kN)
LCM13T001	1.020t (10kN)
LCM13T1.5	1.530t (15kN)
LCM13T002	2.039t (20kN)
LCM13T003	3.059t (30kN)
LCM13T005	5.099t (50kN)

Specifications

- Rated output ————— 2mV/V±0.1%
- Safe load limit ————— 150% of R.C.
- Combined error ————— 0.03% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V
- Zero balance ————— ±1% of R.O.
- Input terminal resistance — 380±20Ω
- Output terminal resistance — 350±3.5Ω
- Insulation resistance — Greater than 5000MΩ at DC50V
- Compensated temperature range — -10°C to 40°C
- Temperature effect on
 - Zero balance ————— 0.016% of R.O./10°C Typ.
 - Span ————— 0.013% of Load/10°C Typ.
- Cable diameter/length — ∅4/3m
- Dustproof/waterproof — IP67

LCM13K100 / LCM13K200 / LCM13K300

LCM13K500 / LCM13T001 / LCM13T1.5 / LCM13T002 / LCM13T003

Model No.	A	B	C	D	E	F	G	H	I	J	K	L	M	Net Weight
LCM13K100	130	16	25	76	13	32	2-ø14	M12	ø21	32	15	2	58	1
LCM13K200	130	16	25	76	13	32	2-ø14	M12	ø21	32	15	2	58	1
LCM13K300	130	16	25	76	13	32	2-ø14	M12	ø21	32	15	2	58	1
LCM13K500	130	16	25	76	13	32	2-ø14	M12	ø21	32	15	2	58	1
LCM13T001	171	19	38	95	19	38	2-ø21	M20	ø30.2	38	18	2	76	1.5
LCM13T002	171	19	38	95	19	43	2-ø21	M20	ø30.2	43	20.5	2	76	2
LCM13T003	171	19	38	95	19	43	2-ø21	M20	ø30.2	43	20.5	2	76	2
LCM13T005	171	19	38	95	19	43	2-ø21	M20	ø30.2	43	20.5	2	76	2

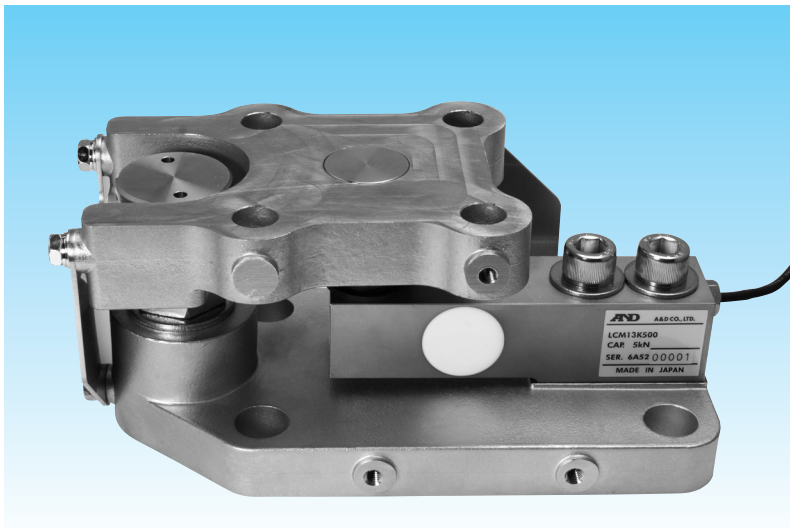
Unit = mm
Net Weight = kg

CABLE COLOR CODE
 RED EXC+
 WHITE EXC-
 GREEN SIG+
 BLUE SIG-
 YELLOW SHIELD

LCM13-M Series

Stainless Steel Beam Load Cell with Built-in Vibration Controllers for Lift Prevention

Ideal for tank and hopper scales when corrosion resistance is required
Built-in stopper with pre-adjusted stop cap for easy installation

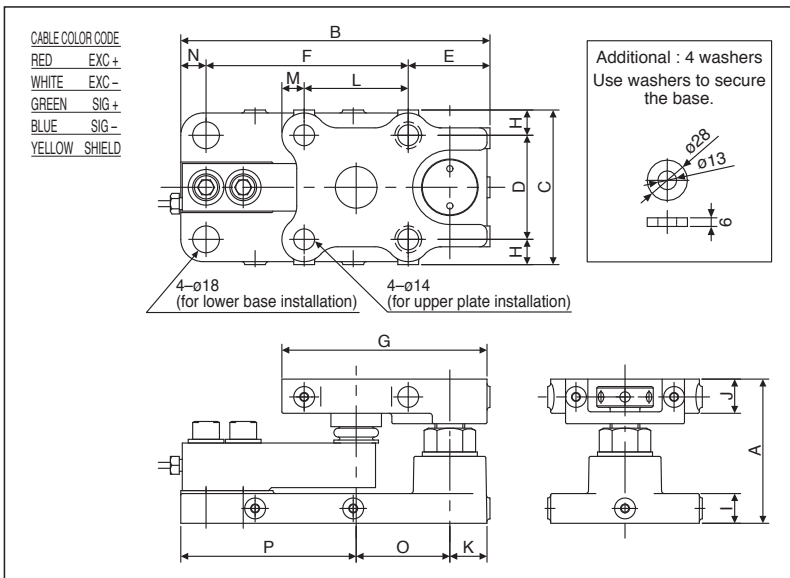


Model No.	Capacity
LCM13K100-M	102.0kg (1kN)
LCM13K200-M	203.9kg (2kN)
LCM13K300-M	305.9kg (3kN)
LCM13K500-M	509.9kg (5kN)
LCM13T001-M	1.020t (10kN)
LCM13T1.5-M	1.530t (15kN)
LCM13T002-M	2.039t (20kN)
LCM13T003-M	3.059t (30kN)

Specifications

- Rated output ————— 2mV/V±0.1%
- Safe load limit ————— 150% of R.C.
- Permissible horizontal force — Maximum 6kN (611kg)
LCM13K100-M ~ T1.5-M
Maximum 12kN (1223kg)
LCM13T002-M ~ T003-M
- Permissible lifting force — Maximum 20kN (2039kg)
LCM13K100-M ~ T1.5-M
Maximum 30kN (3059kg)
LCM13T002-M ~ T003-M

- Combined error ————— 0.03% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V
- Zero balance ————— ±1% of R.O.
- Input terminal resistance — 380±20Ω
- Output terminal resistance — 350±3.5Ω
- Insulation resistance — Greater than 5000MΩ
at DC50V
- Compensated temperature range — -10°C to 40°C
- Temperature effect on
 - Zero balance ————— 0.016% of R.O./10°C Typ.
 - Span ————— 0.013% of Load/10°C Typ.
- Cable diameter/length — ø4/3m
- Dustproof/waterproof — IP67



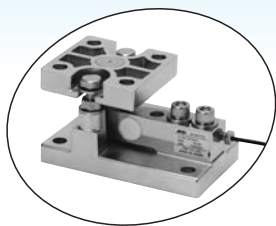
Model No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Net Weight
LCM13K100-M																	
LCM13K200-M																	
LCM13K300-M	97	208	104	70	55	136	138	17	20	23	25	70	15	17	63	118	5.6
LCM13K500-M																	
LCM13T001-M																	
LCM13T1.5-M																	
LCM13T002-M	116	242	118	84	48	175	145	17	24	26	25	84	15	19	63	152	8.6
LCM13T003-M																	

Unit = mm

Net Weight = kg

LCM19 Series

Beam Load Cells for Tank and Floor Scales



Weighing Module Kit
LCZAP1413 / LCZAP1414 / LCZAP1415

* See accessories page for more details.

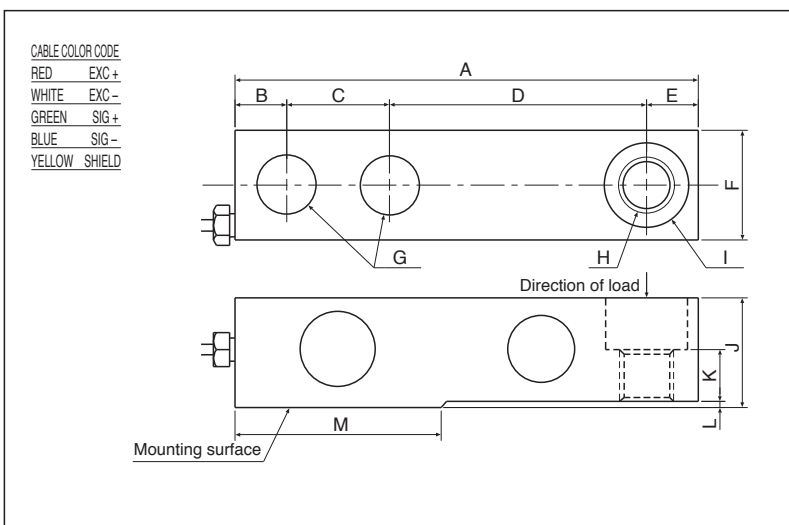


Swivel Foot LCZAFT01S

Model No.	Capacity
LCM19K500	509.9kg (5kN)
LCM19T001	1.020t (10kN)
LCM19T1.5	1.530t (15kN)
LCM19T002	2.039t (20kN)

Specifications

- Rated output ————— 2.0394mV/V±0.1%
- Safe load limit ————— 150% of R.C.
- Combined error ————— 0.03% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V
- Zero balance ————— ±1% of R.O.
- Input terminal resistance — 380±20Ω
- Output terminal resistance — 350±3.5Ω
- Insulation resistance — Greater than 5000MΩ at DC50V
- Compensated temperature range — -10°C to 40°C
- Temperature effect on
 - Zero balance ————— 0.011% of R.O./10°C Typ.
 - Span ————— 0.013% of Load/10°C Typ.
- Cable diameter/length — ∅4/3m
- Dustproof/waterproof — IP67



CABLE COLOR CODE

RED	EXC +
WHITE	EXC -
GREEN	SIG +
BLUE	SIG -
YELLOW	SHIELD

Model No.	A	B	C	D	E	F	G	H	I	J	K	L	M	Net Weight
LCM19K500														1
LCM19T001	130	16	25	76	13	32	2-∅14	M12	∅21	32	15	2	58	
LCM19T1.5														
LCM19T002	171	19	38	95	19	38	2-∅21	M20	∅30.2	38	18	2	76	1.5

Unit = mm

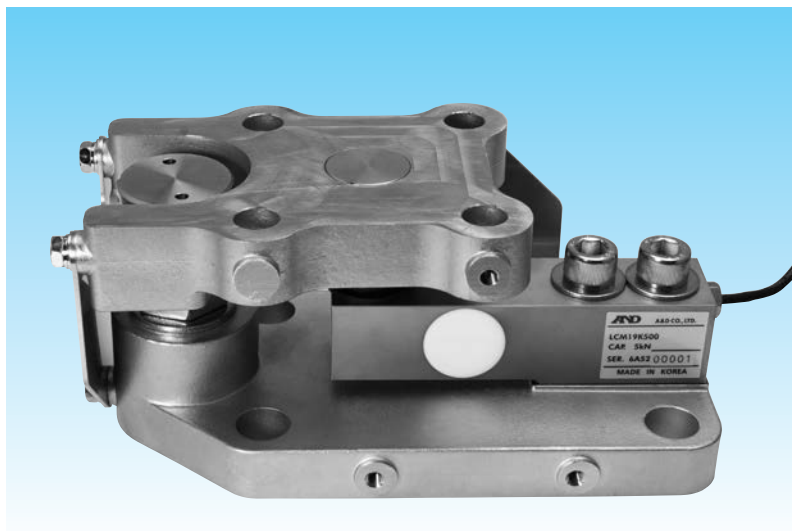
Net Weight = kg

LCM19-M Series

Beam Load Cell with Built-in Vibration Controllers for Lift Prevention

Excellent for tank and hopper scales

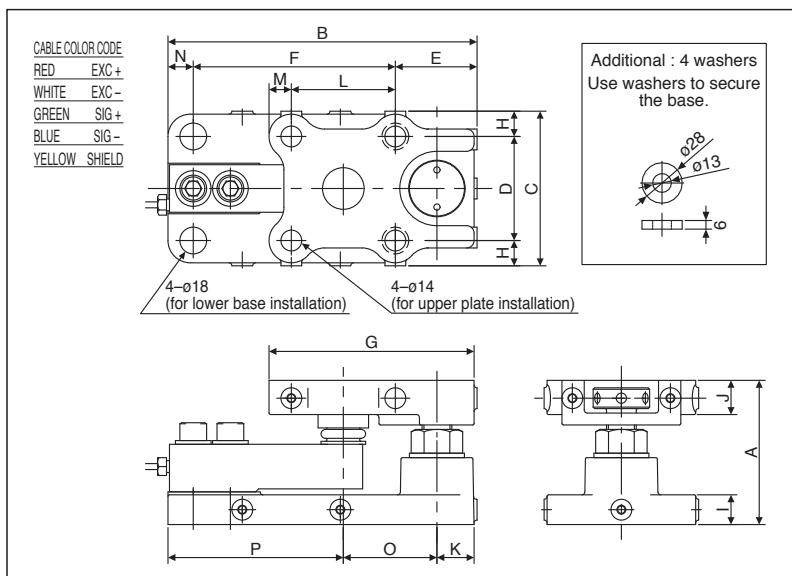
Built-in stopper with pre-adjusted stop cap for easy installation



Model No.	Capacity
LCM19K500-M	509.9kg (5kN)
LCM19T001-M	1.020t (10kN)
LCM19T1.5-M	1.530t (15kN)
LCM19T002-M	2.039t (20kN)

Specifications

- Rated output ————— 2.0394mV/V±0.1%
- Safe load limit ————— 150% of R.C.
- Permissible horizontal force — Maximum 6kN (611kg)
LCM19K500-M ~ T1.5-M
Maximum 12kN (1223kg)
LCM19T002-M
- Permissible lifting force — Maximum 20kN (2039kg)
LCM19K500M ~ T1.5-M
Maximum 30kN (3059kg)
LCM19T002-M
- Combined error ————— 0.03% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V
- Zero balance ————— ±1% of R.O.
- Input terminal resistance — 380±20Ω
- Output terminal resistance — 350±3.5Ω
- Insulation resistance — Greater than 5000MΩ
at DC50V
- Compensated temperature range — -10°C to 40°C
- Temperature effect on
Zero balance ————— 0.011% of R.O./10°C Typ.
Span ————— 0.013% of Load/10°C Typ.
- Cable diameter/length — ∅4/3m
- Dustproof/waterproof — IP67



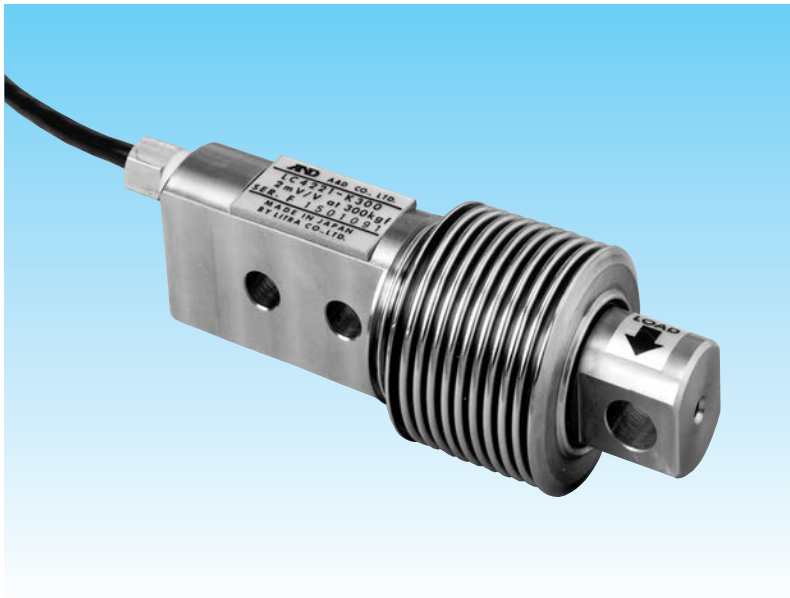
Model No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Net Weight
LCM19K500-M																	
LCM19T001-M	97	208	104	70	55	136	138	17	20	23	25	70	15	17	63	118	5.6
LCM19T1.5-M																	
LCM19T002	116	242	118	84	48	175	145	17	24	26	25	84	15	19	63	152	8.6

Unit = mm

Net Weight = kg

LC-4221 Series

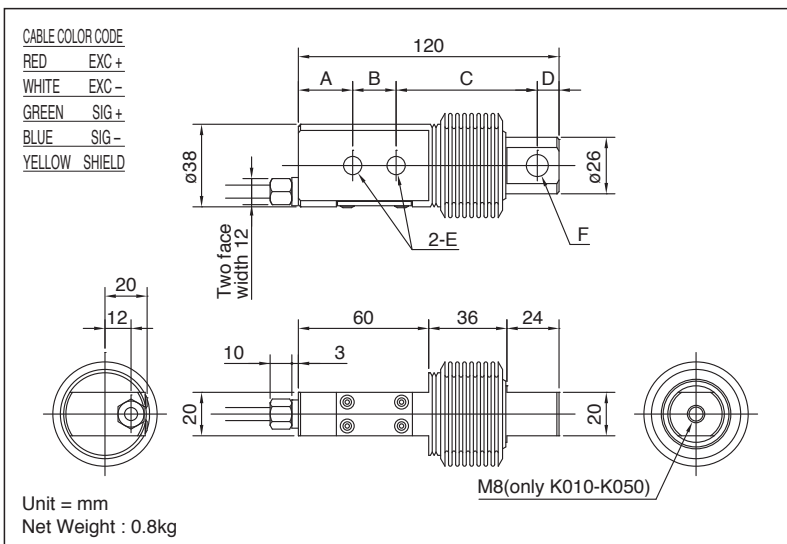
Hermetically Sealed, Beam Type Stainless Steel Load Cell
Ideal for measurements in harsh environments



Model No.	Capacity
LC-4221-K010	10.20kg (100N)
LC-4221-K020	20.39kg (200N)
LC-4221-K050	50.99kg (500N)
LC-4221-K100	102.0kg (1 kN)
LC-4221-K200	203.9kg (2kN)
LC-4221-K300	305.9kg (3kN)

Specifications

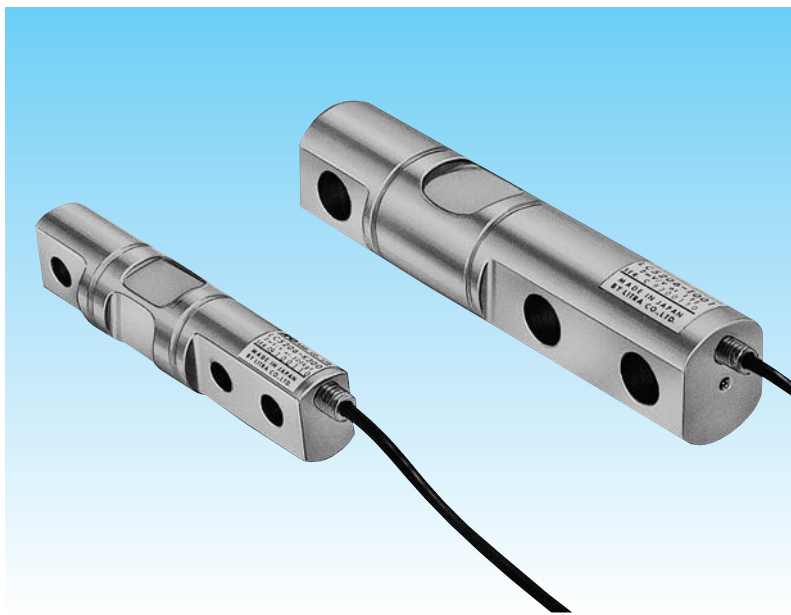
- Rated output ————— 2.0394mV/V±0.2%
- Safe load limit ————— 200% of R.C.
- Combined error ————— 0.05% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V
- Zero balance ————— ±1% of R.O.
- Input terminal resistance — Approximately 400Ω
- Output terminal resistance — 350±3.5Ω
- Insulation resistance — Greater than 5000MΩ at DC50V
- Compensated temperature range — -10°C to 60°C
- Temperature effect on
 - Zero balance ————— 0.07% of R.O./10°C
 - Span ————— 0.02% of Load/10°C Typ.
- Cable diameter/length — ø6/5m
- Dustproof/waterproof — IP67



Model No.	A	B	C	D	E	F
LC4221-K010/020/050	27	18	65	10	ø6.6	ø8.1
LC4221-K100/200/300	25	20	65	10	ø8.4	ø10.1

LC-5206 Series

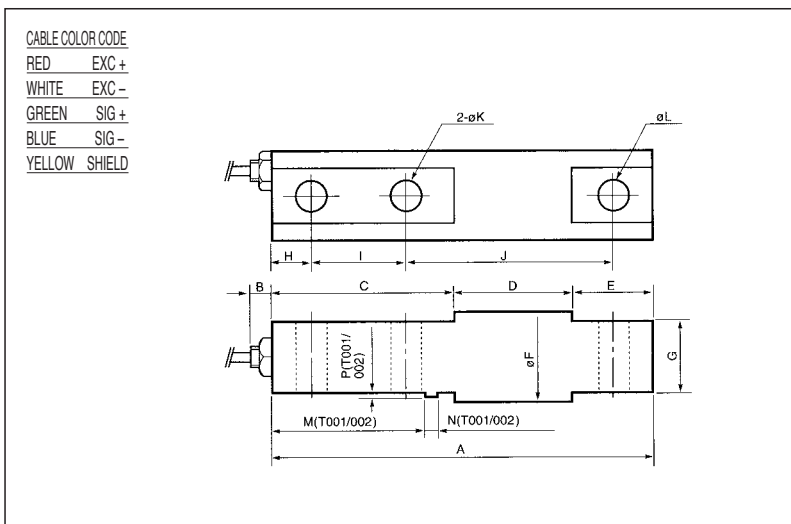
Beam Type Tool Steel Load Cell



Model No.	Capacity
LC-5206-K300	305.9kg (3kN)
LC-5206-K500	509.9kg (5kN)
LC-5206-T001	1.020t (10kN)
LC-5206-T002	2.039t (20kN)

Specifications

- Rated output ————— 2.0394mV/V±0.2%
- Safe load limit ————— 200% of R.C.
- Combined error ————— 0.02% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V
- Zero balance ————— ±1% of R.O.
- Input terminal resistance — Approximately 400Ω
- Output terminal resistance — 350±3.5Ω
- Insulation resistance — Greater than 5000MΩ at DC50V
- Compensated temperature range — -10°C to 60°C
- Temperature effect on
 - Zero balance ————— 0.07% of R.O./10°C
 - Span ————— 0.02% of Load/10°C Typ.
- Cable diameter/length — ø6/3m (K300/K500)
ø6/5m (T001/T002)
- Dustproof/waterproof — IP67

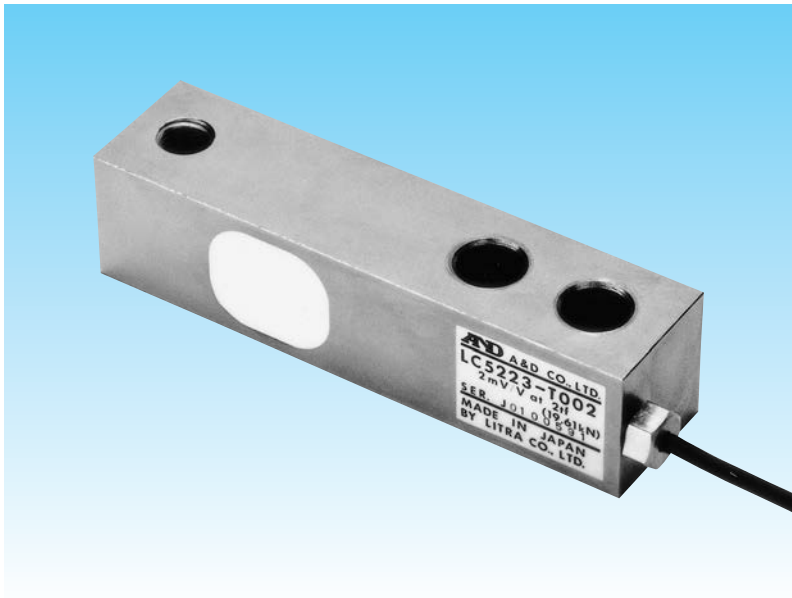


Model No.	A	B*	C	D	E	F	G	H	I	J	K	L	M	N	P	Net Weight (kg)
LC5206-K300/K500	137	10	52	55	30	31	19	16	25	83	10.5	105	-	-	-	0.7
LC5206-T001/T002	185	10	88	57.5	39.5	43.2	35	19	44.5	102.5	17	17	72.5	5.5	0.8	1.7

Unit = mm B* : Approximately

LC-5223 Series

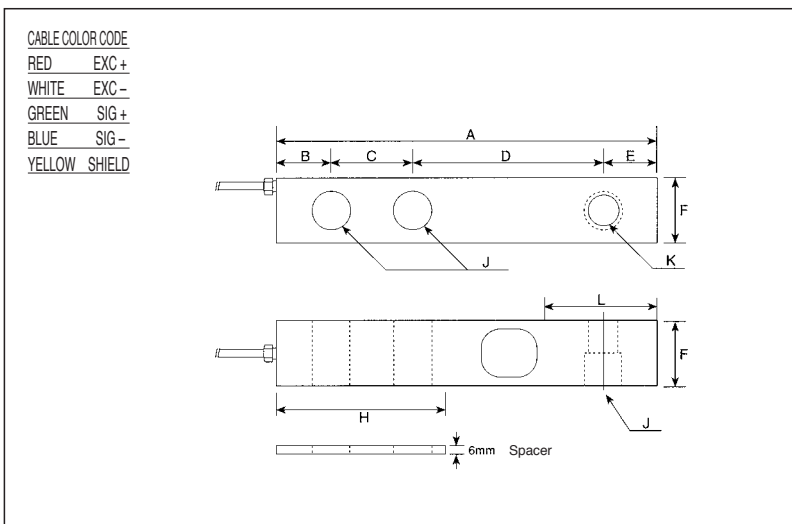
Beam Type Tool Steel Load Cell



Model No.	Capacity
LC-5223-K500	509.9kg (5kN)
LC-5223-T001	1.020t (10kN)
LC-5223-T1.5	1.530t (15kN)
LC-5223-T002	2.039t (20kN)
LC-5223-T003	3.059t (30kN)
LC-5223-T005	5.099t (50kN)

Specifications

- Rated output ————— 2.0394mV/V±0.2%
- Safe load limit ————— 150% of R.C.
- Combined error ————— 0.03% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V
- Zero balance ————— ±1% of R.O.
- Input terminal resistance — Approximately 400Ω
- Output terminal resistance — 350±3.5Ω
- Insulation resistance — 5000MΩ/DC50V
- Compensated temperature range — -10°C to 60°C
- Temperature effect on
 - Zero balance ————— 0.07% of R.O./10°C
 - Span ————— 0.02% of Load/10°C
- Cable diameter/length — ø4/3m
- Dustproof/waterproof — IP67

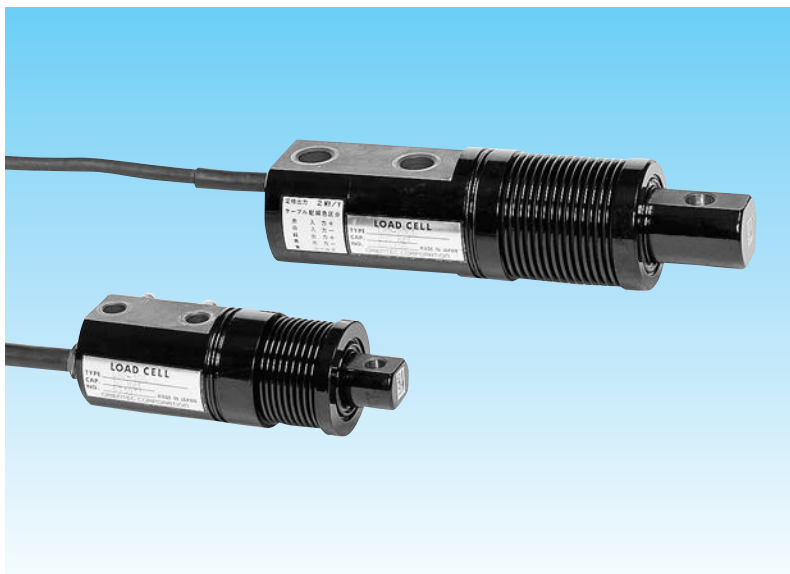


Model No.	A	B	C	D	E	F	H	J	K	L	Net Weight (kg)
LC5223-K500											
LC5223-T001									M12		
LC5223-T1.5	130	16	25	76	13	32	52	ø14	P=1.75	26	1
LC5223-T002									Depth16		
LC5223-T003									M20		
LC5223-T005	171	19	38	95	19	38	76	ø21	P=1.5	38	1.5
									Depth19		

Unit = mm

LBP Series

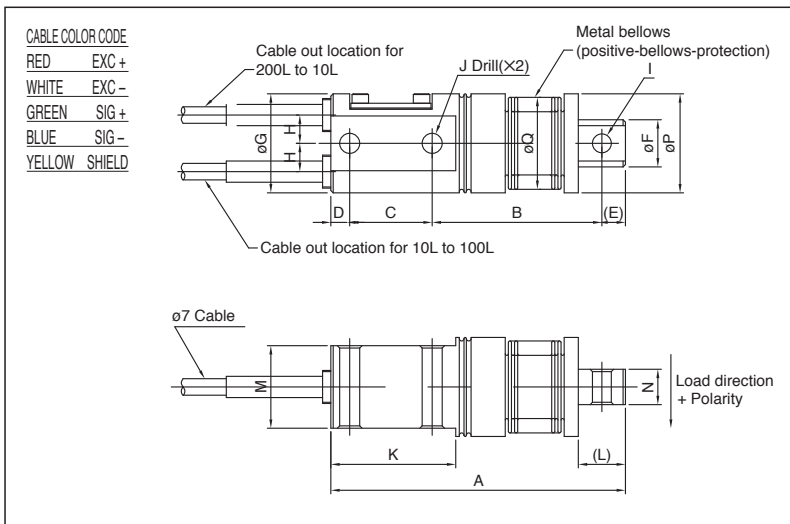
Hermetically Sealed Beam Type Load Cell



Model No.	Capacity
LBP-10L	10.20kg (100N)
LBP-20L	20.39kg (200N)
LBP-30L	30.59kg (300N)
LBP-50L	50.99kg (500N)
LBP-100L	102.0kg (1kN)
LBP-200L	203.9kg (2kN)
LBP-300L	305.9kg (3kN)
LBP-500L	509.9kg (5kN)
LBP-1	1.020t (10kN)
LBP-2	2.039t (20kN)
LBP-5	5.099t (50kN)
LBP-10	10.20t (100kN)

Specifications

- Rated output ————— 2.0394mV/V+0.2% -0%
- Safe load limit ————— 150% of R.C.
- Combined error ————— 0.04% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC20V
- Zero balance ————— ±1% of R.O.
- Input terminal resistance — 420±40Ω
- Output terminal resistance — 347.5±3Ω
- Insulation resistance — 2000MΩ/DC50V
- Compensated temperature range — -10°C to 75°C
- Temperature effect on
 - Zero balance ————— 0.02% of R.O./10°C
 - Span ————— 0.02% of Load/10°C
- Cable diameter/length — ø7/3m
- Dustproof/waterproof — IP67



Unit = mm

Model No.	A	B	C	D	E	øF	øG	H	I	J	K	L	M	N	øP	øQ	Net Weight (kg)
LBP-10L ~ 100L	125	72	35	8	10	20	42	12	8 Reamer	8.5 Drill(x2)	53	20	35	15	42	38.5	0.9
LBP-200L ~ 500L	200	120	45	15	20	30	52	14	12 Reamer	14 Drill(x2)	80	40	40	25	52	50.5	2
LBP-1	210	125	50	15	20	40	52	15	16 Reamer	18 Drill(x2)	90	40	40	30	68	65	2.8
LBP-2	215	125	50	20	20	43	58	16	20 Drill ø26 Spotface 3 Depth	22 Drill(x2)	95	40	50	34	68	65	4
LBP-5	300	135	120	20	25	61	72	20	26 Drill ø32 Spotface 3 Depth	22 Drill(x2)	170	50	60	50	92	90	8
LBP-10	300	118	135	22	25	68	82	25	20 Reamer ø38 Spotface 10 Depth	32 Drill(x2)	187	52	70	56	108	90	12

Tension Type

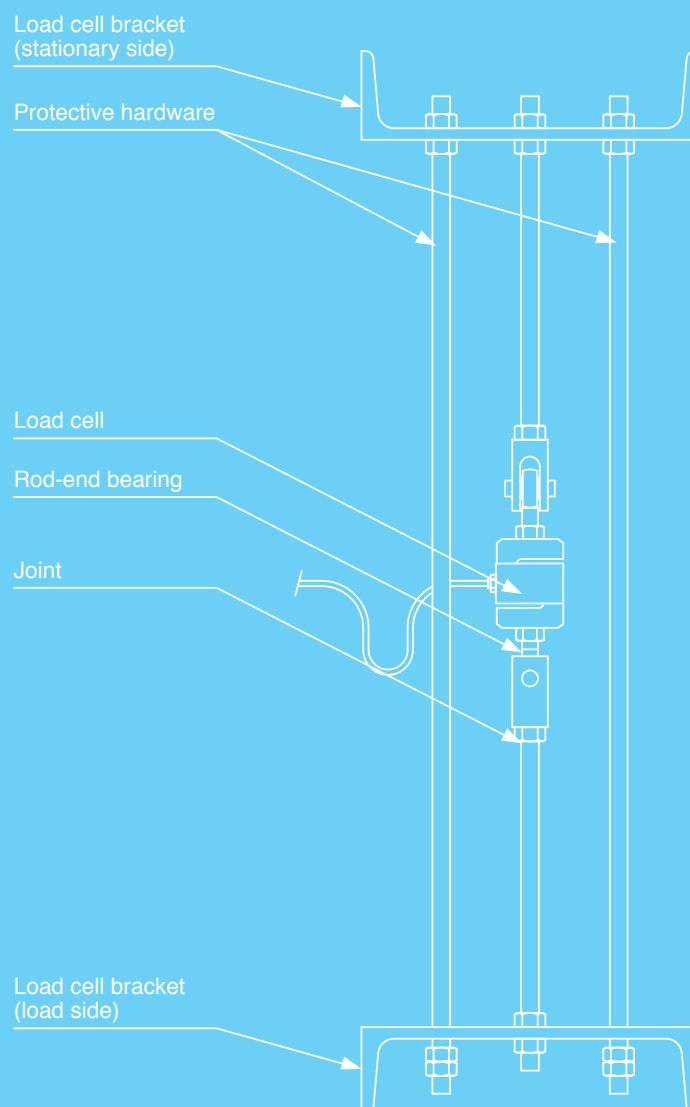
Tension type load cells are ideal for tensile measurements (compression measurements are also possible). Installation is easy (although safety precautions must be observed). The structure is less susceptible to biased loading.

Example Applications

- Hopper scales
- Tension measurements, etc.

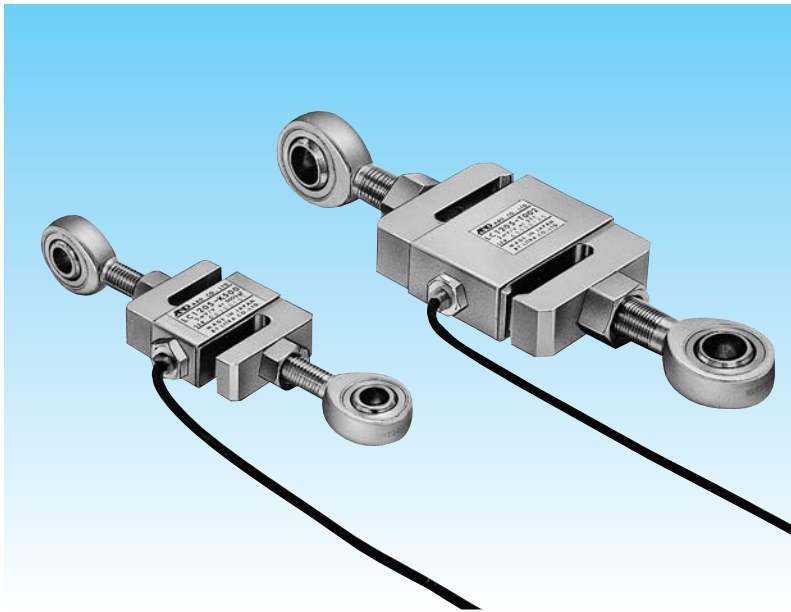
Example of Installation

The LC-1205



LC-1205 Series

S-Type Tool Steel Load Cell

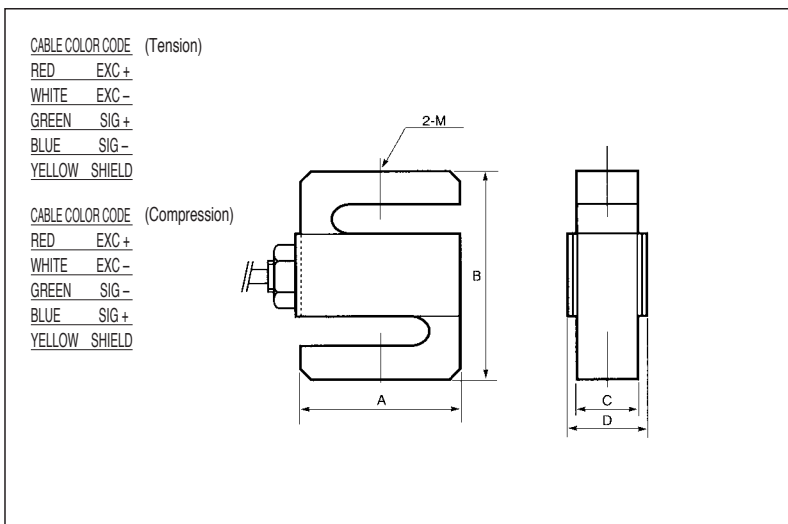


Rod-end bearings are sold separately.

Model No.	Capacity
LC1205-K020	20.39kg (200N)
LC1205-K050	50.99kg (500N)
LC1205-K100	102.0kg (1kN)
LC1205-K200	203.9kg (2kN)
LC1205-K500	509.9kg (5kN)
LC1205-T001A	1.020t (10kN)
LC1205-T002	2.039t (20kN)
LC1205-T005	5.099t (50kN)

Specifications

Rated output	2.0394mV/V \pm 0.5%
	1.5296mV/V \pm 0.5% (K020/K050)
Safe load limit	200% of R.C.
	250% of R.C. (K020/K050)
Combined error	0.02% of R.O.
Recommended excitation voltage	DC5 to 12V
Maximum excitation voltage	DC15V
Zero balance	\pm 2% of R.O.
Input terminal resistance	Approximately 400 Ω
Output terminal resistance	350 \pm 3.5 Ω
Insulation resistance	5000M Ω /DC50V
Compensated temperature range	-10 $^{\circ}$ C to 60 $^{\circ}$ C
Temperature effect on	
Zero balance	0.07% of R.O./10 $^{\circ}$ C
Span	0.02% of Load/10 $^{\circ}$ C Typ.
Cable diameter/length	ϕ 6/3m
	ϕ 6/5m (T001A/T002/T005)
Dustproof/waterproof	IP54



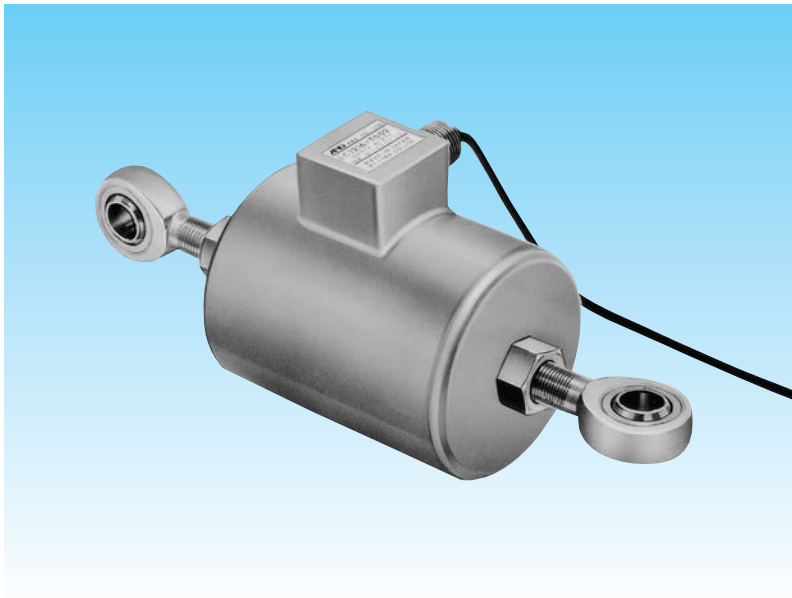
Model No.	A	B	C	D	M \times P \times Depth	Net Weight (kg)
LC1205-K020/K050	50	64	19	23	M6 \times 1 \times 11	0.3
LC1205-K100	50	64	12	16	M6 \times 1 \times 10	0.4
LC1205-K200/K500	50	64	19	23	M12 \times 1.75 \times 10	0.5
LC1205-T001A	75	100	24	28	M18 \times 1.5 \times 25	1.3
LC1205-T002	75	100	24	28	M18 \times 1.5 \times 22.5	1.3
LC1205-T005	75	100	36	40	M24 \times 2 \times 21	1.9

Unit = mm

LC-1216 Series

Hermetically Sealed Tool Steel Load Cell

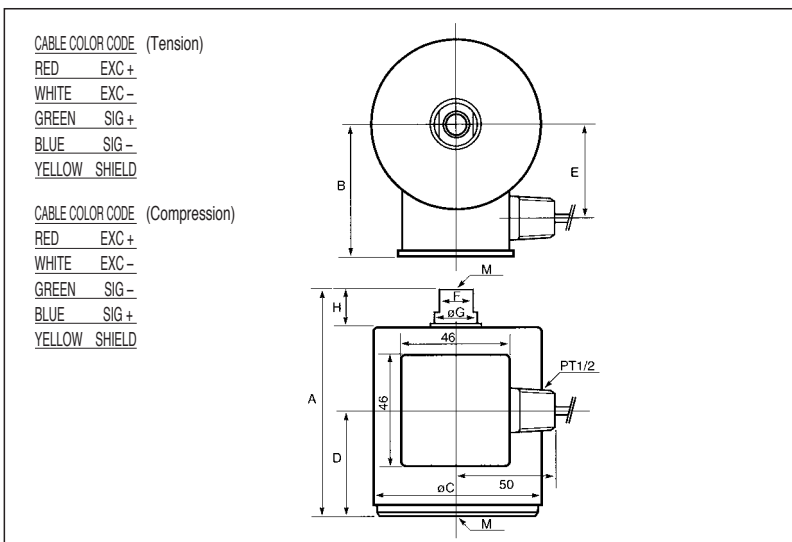
Ideal for measurements in harsh environments



Model No.	Capacity
LC1216-K100	102.0kg (1kN)
LC1216-K200	203.9kg (2kN)
LC1216-K500	509.9kg (5kN)
LC1216-T001A	1.020t (10kN)
LC1216-T002A	2.039t (20kN)
LC1216-T005	5.099t (50kN)

Specifications

- Rated output ————— 2.0394mV/V±0.5%
- Safe load limit ————— 200% of R.C.
- Combined error ————— 0.05% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V
- Zero balance ————— ±2% of R.O.
- Input terminal resistance — Approximately 400Ω
- Output terminal resistance — 350±3.5Ω
- Insulation resistance — 5000MΩ/DC50V
- Compensated temperature range — -10°C to 60°C
- Temperature effect on
 - Zero balance ————— 0.07% of R.O./10°C
 - Span ————— 0.02% of Load/10°C Typ.
- Cable diameter/length — ø6/3m
ø6/5m (T001A/T002A/T005)
- Dustproof/waterproof — IP67

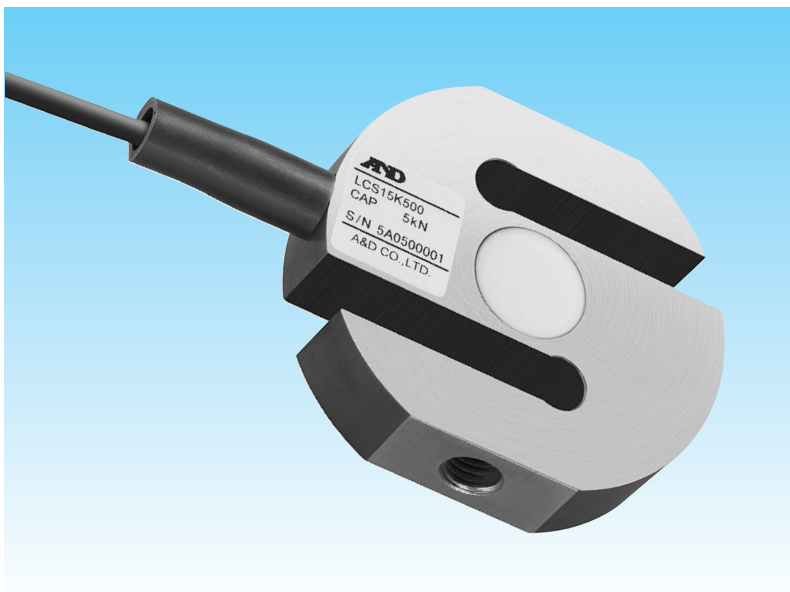


Model No.	A	B	øC	D	E	F	G	H	MXP×Depth	Net Weight (kg)
LC1216-K100	104	62	77	50	45	16	19	16	M6×1×9	1.7
LC1216-K200/K500	104	62	77	50	45	16	19	16	M12×1.75×10	1.8
LC1216-T001A	150	80	102	75	63	27	31	20	M18×1.5×13	4.0
(LC1216-T002)	150	80	102	75	63	27	31	20	M18×1.5×13	4.0
LC1216-T002A/005	180	80	102	90	63	36	41	34	M24×2×25	5.6

Unit = mm

LCS15 Series

S-Type Stainless Steel Load Cell

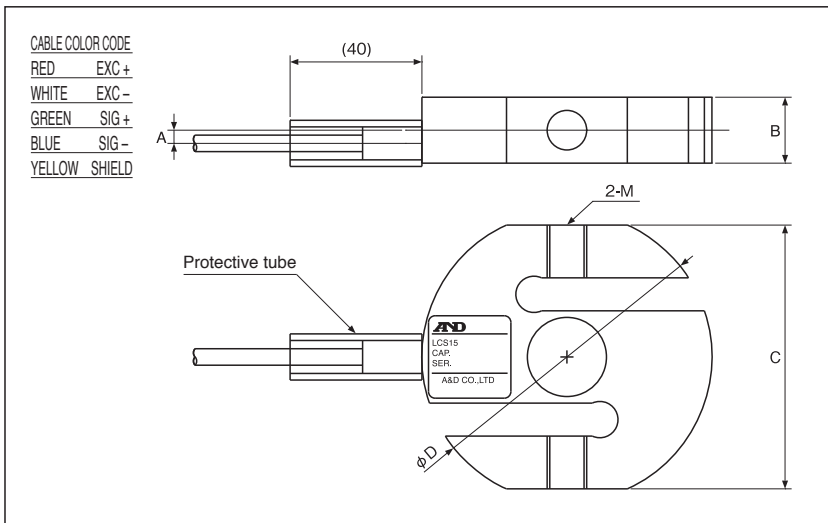


Model No.	Capacity
LCS15K500	509.9kg (5kN)
LCS15T001	1.020t (10kN)
LCS15T002	2.039t (20kN)

Specifications

- Rated output ————— 2mV/V±0.1%
- Safe load limit ————— 150% of R.C.
- Combined error ————— 0.03% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC 15V
- Zero balance ————— ±1% of R.O.
- Input terminal resistance — 380±20Ω
- Output terminal resistance — 350±3.5Ω
- Insulation resistance — 5000MΩ/DC50V
- Compensated temperature range — -10°C to 40°C
- Temperature effect on
 - Zero balance ————— 0.016% of R.O./10°C
 - Span ————— 0.013% of Load/10°C Typ.
- Cable diameter/length — ø5/4.5m
- Dustproof/waterproof — IP67

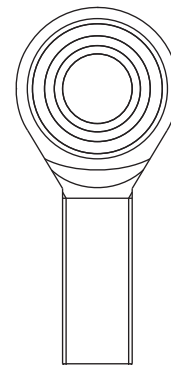
**When using a stainless steel rod end bearing, set the normal load to 1/2 of the rated capacity.*



Model No.	A	B	C	øD	MXPXDepth	Net Weight (kg)
LCS15K500	4	20	80	88	M12X1.75X16	0.8
LCS15T001	4.5	25	80	88	M18X1.5X15	1
LCS15T002	5.5	35	100	108	M24X2X24	2

Unit = mm

Stainless steel rod end bearing (Sold separately)



Model No.	Intended load cells	Static radial load	Static fracture load	Net Weight (g)
LCZARE12S	LCS15K500	5.88kN	23.53kN	85
LCZARE18S	LCS15T001	11.52kN	46.09kN	258
LCZARE24S	LCS15T002	17.4kN	69.62kN	730

Compression Type

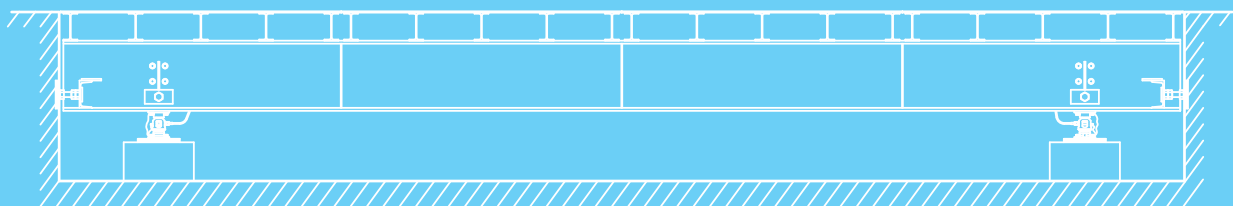
Compression type load cells are used for compression measurements and are suitable for large capacity weighing.

Example Applications

- Truck scales
- Weigh bridges
- Hopper scales
- Tank scales
- Compression measurements, etc.

Example of Installation

Truck scale



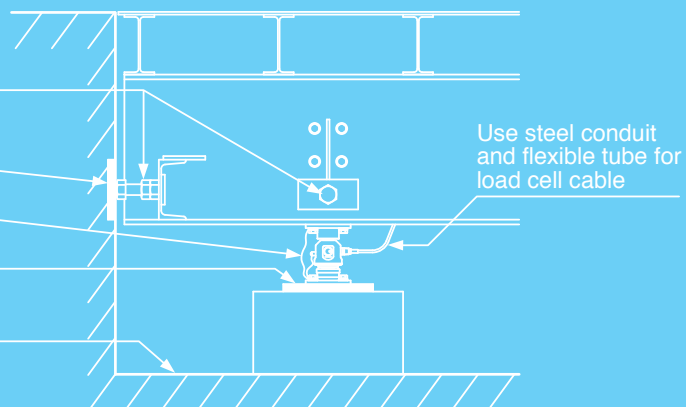
Stopper
Maximum clearance : 5mm
Recommended clearance : 2 to 3mm

Reinforced plate

Shunt wire

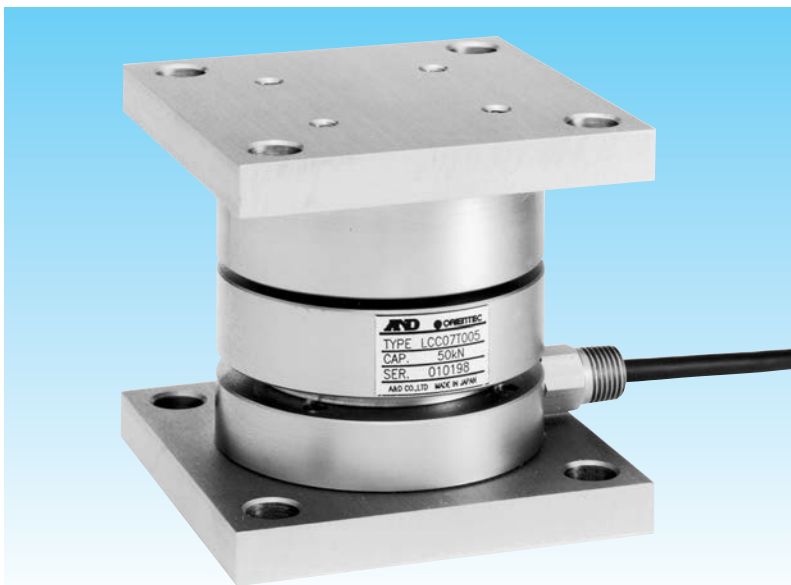
Base plate
Mutual level error : within 3mm
Self level : within 1/500

Slope of bottom : more than 1/100



LCC07 Series

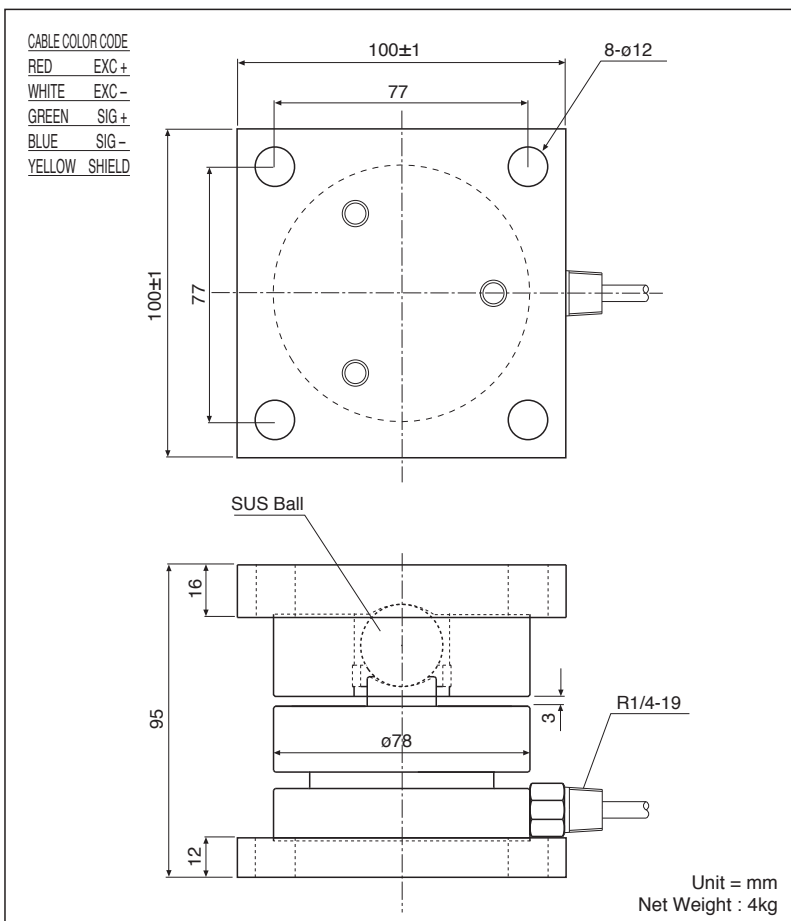
Hermetically Sealed Stainless Steel Load Cell
Equipped with a transverse load stopper



Model No.	Capacity
LCC07K500	509.9kg (5kN)
LCC07T001	1.020t (10kN)
LCC07T002	2.039t (20kN)
LCC07T003	3.059t (30kN)
LCC07T005	5.099t (50kN)

Specifications

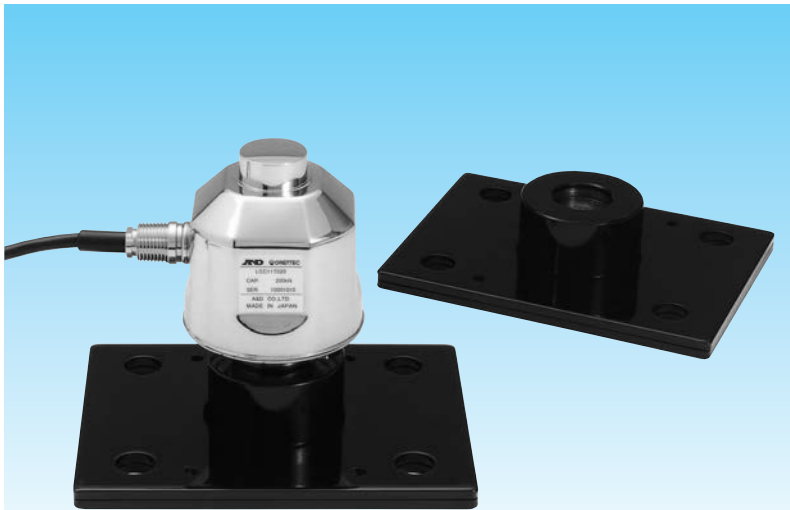
- Rated output ————— 2mV/V±0.1%
- Safe load limit ————— 150% of R.C.
- Combined error ————— 0.03% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V
- Zero balance ————— ±1% of R.O.
- Input terminal resistance — 780±20Ω
- Output terminal resistance — 700±10Ω
- Insulation resistance — 500MΩ/DC50V
- Compensated temperature range — -10°C to 40°C
- Temperature effect on
 - Zero balance ————— 0.04% of R.O./10°C
 - Span ————— 0.014% of Load/10°C Typ.
- Cable diameter/length — ø5.6/5m
- Dustproof/waterproof — IP67



LCC11/N Series

Hermetically Sealed Stainless Steel Load Cell with Very Large Weighing Capacity

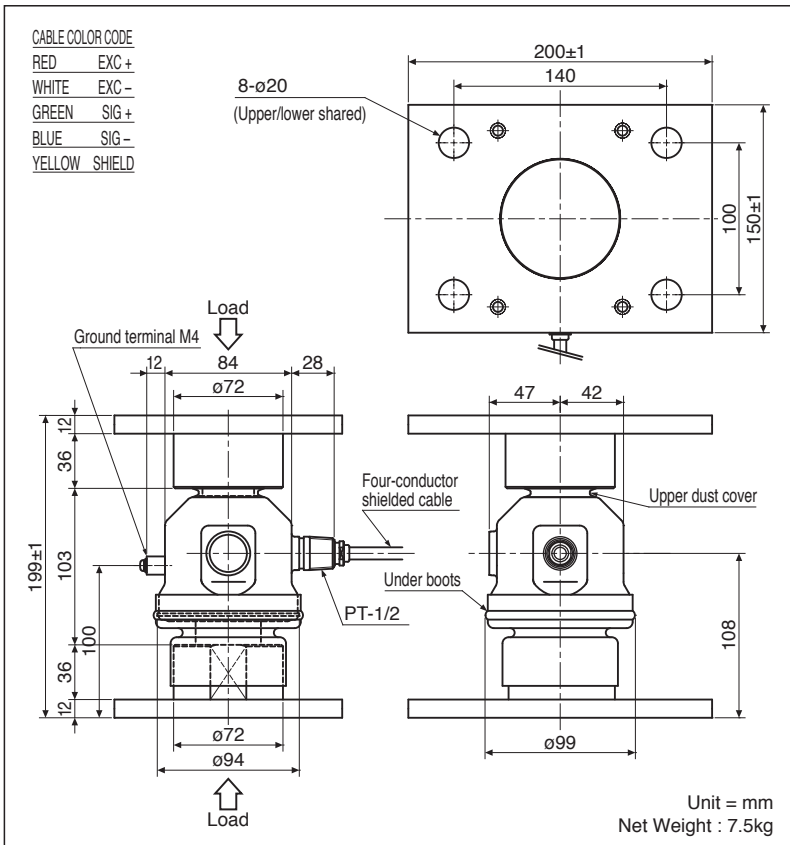
High resistance to adverse environmental conditions and corrosion (IP68)
Available with or without mounting kit



Model No.	Capacity
LCC11T010/LCC11T010N	10.20t (100kN)
LCC11T020/LCC11T020N	20.39t (200kN)
LCC11T030/LCC11T030N	30.59t (300kN)

Specifications

- Rated output ————— 2mV/V±0.1%
- Safe load limit ————— 200% of R.C.
- Combined error ————— 0.016% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V
- Zero balance ————— ±1% of R.O.
- Input terminal resistance — 800±80Ω
- Output terminal resistance — 2200±10Ω
- Insulation resistance — 5000MΩ/DC50V
- Compensated temperature range — -20°C to 60°C
- Temperature effect on
 - Zero balance ————— 0.019% of R.O./10°C Typ.
 - Span ————— 0.010% of Load/10°C Typ.
- Cable diameter/length — ø8/12m
- Dustproof/waterproof — IP68 (100h at 1.5m immersion)



LCC12 Series

Hermetically Sealed Stainless Steel Weighing Module with Very Large Weighing Capacity

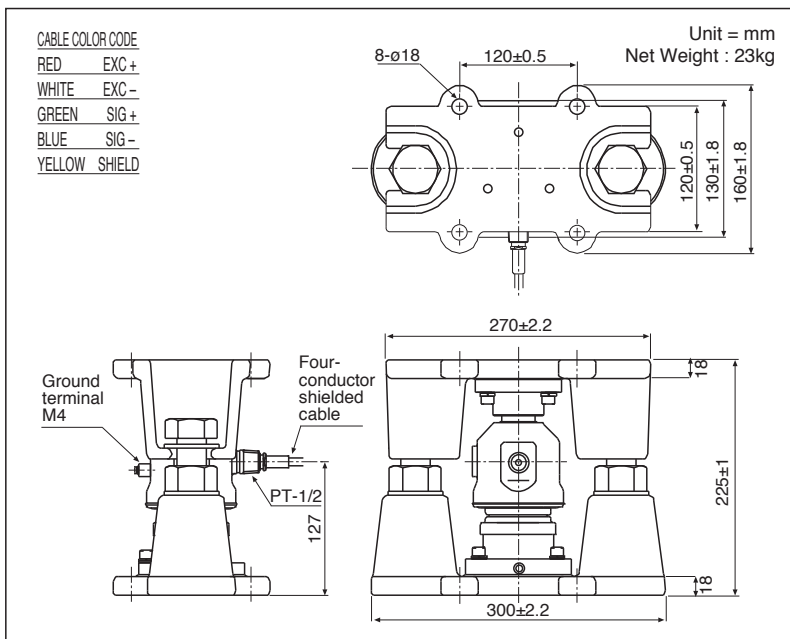
High resistance to adverse environmental conditions and corrosion (IP68)
Equipped with mount assembly (transverse movement control + lift-off prevention)



Model No.	Capacity
LCC12T010	10.20t (100kN)
LCC12T020	20.39t (200kN)
LCC12T030	30.59t (300kN)

Specifications

- Rated output ————— 2mV/V±0.1%
- Safe load limit ————— 150% of R.C.
- Combined error ————— 0.03% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V
- Zero balance ————— ±1% of R.O.
- Input terminal resistance — 800±80Ω
- Output terminal resistance — 2200±10Ω
- Insulation resistance — 5000MΩ/DC50V
- Compensated temperature range — -20°C to 60°C
- Temperature effect on
 - Zero balance ————— 0.019% of R.O./10°C Typ.
 - Span ————— 0.010% of Load/10°C Typ.
- Cable diameter/length — ø8/12m
- Dustproof/waterproof — IP68 (100h at 1.5m immersion)

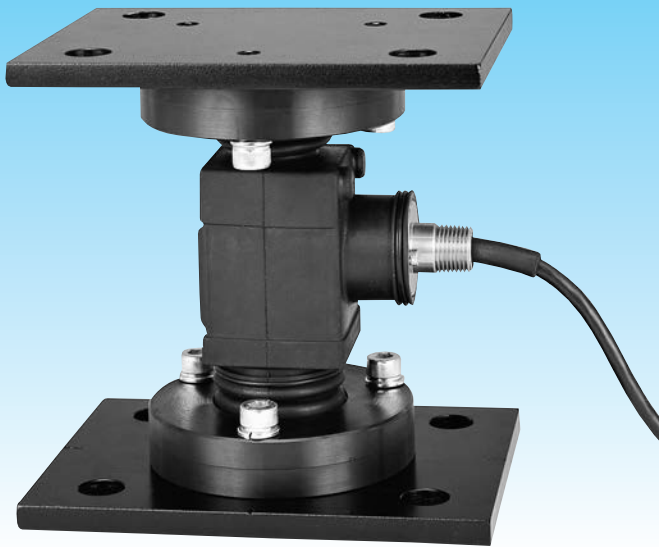


Mount fixture

	Max. transverse force	Max. force for lift
LCC12 Series	75kN	80kN

LC-2224 Series

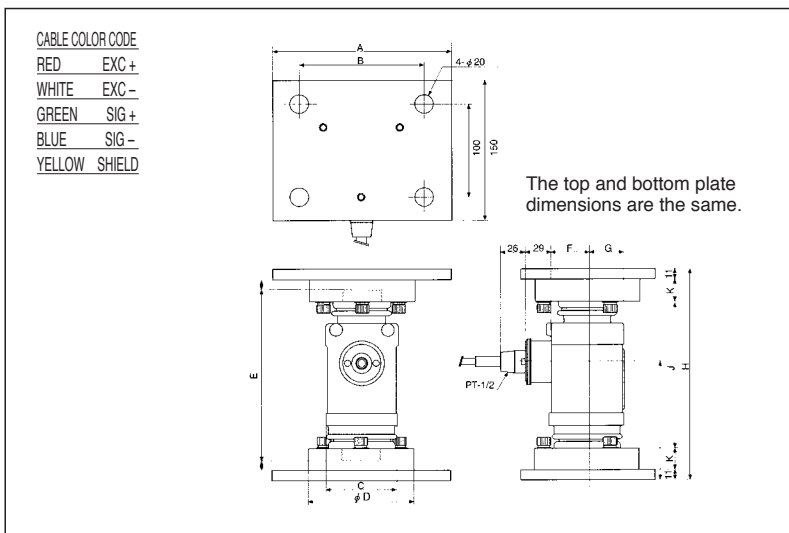
Column Type Load Cell Ideal for Truck Scales and Hoppers



Model No.	Capacity
LC2224-T010	10t (98kN)
LC2224-T020	20t (196kN)
LC2224-T030	30t (294kN)
LC2224-T040	40t (392kN)
LC2224-T050	50t (490kN)

Specifications

- Rated output ————— 2mV/V±0.1%
- Safe load limit ————— 200% of R.C.
- Combined error ————— 0.02% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V
- Zero balance ————— ±1% of R.O.
- Input terminal resistance — 410±30Ω
- Output terminal resistance — 355±3.5Ω
- Insulation resistance — 5000MΩ/DC50V
- Compensated temperature range — -20°C to 60°C
- Temperature effect on
 - Zero balance ————— 0.009% of R.O./10°C
 - Span ————— 0.012% of Load/10°C Typ.
- Cable diameter/length — ø8/10m
- Dustproof/waterproof — IP67



Model No.	A	B	C	D	E	F	G	H	J	K	L	Net Weight (kg)
LC2224-T010	200	140	58	92	157	33	29	199±1	131	22	104	12
LC2224-T020			78	92	186	43	39	228±1	158	23	126	15
LC2224-T030	200	140	78	92	186	43	39	228±1	158	23	126	15
LC2224-T040			89	112	205	49	45	247±1	171	26	138	18
LC2224-T050	220	170	89	112	205	49	45	247±1	171	26	138	18

Unit = mm

CP(Compression)/TP(Tension) Series

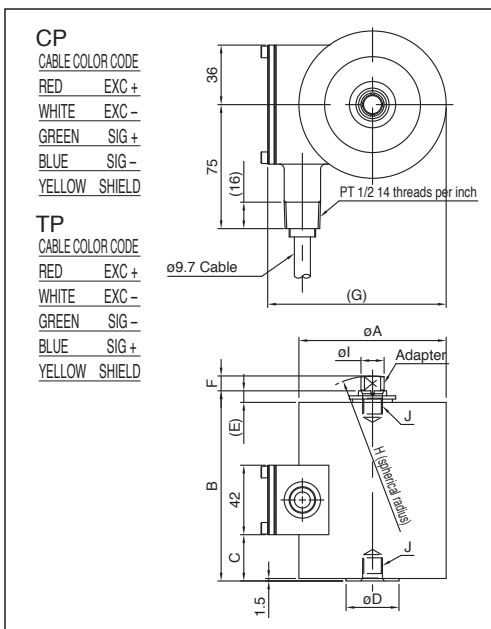
Hermetically Sealed Tension and Compression Load Cell
Ideal for measurements in harsh environments



Model No.	Capacity
TP (CP)-20L	20.39kg (200N)
TP (CP)-50L	50.99kg (500N)
TP (CP)-100L	102.0kg (1kN)
TP (CP)-200L	203.9kg (2kN)
TP (CP)-300L	305.9kg (3kN)
TP (CP)-500L	509.9kg (5kN)
TP (CP)-1	1.020t (10kN)
TP (CP)-2	2.039t (20kN)
TP (CP)-3	3.059t (30kN)
TP (CP)-5	5.099t (50kN)
TP (CP)-10	10.20t (100kN)
TP (CP)-20	20.39t (200kN)
TP (CP)-30	30.59t (300kN)
TP (CP)-50	50.99t (500kN)
TP (CP)-100	102.0t (1MN)

Specifications

- Rated output ————— 3.0592mV/V±0.1%
- Safe load limit ————— 150% of R.C.
500% of R.C.(20L to 100L)
- Combined error ————— 0.05% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC20V
- Zero balance ————— ±1% of R.O.
- Input terminal resistance — 350±3.5Ω
- Output terminal resistance — 350±5Ω
- Insulation resistance — 5000MΩ/DC50V
- Compensated temperature range — -10°C to 75°C
- Temperature effect on
 - Zero balance ————— 0.03% of R.O./10°C
 - Span ————— 0.03% of Load/10°C
- Cable diameter/length — ø9.7/3m
- Dustproof/waterproof — IP67



For the 200L model and higher, we can also manufacture two-bridge, low-temperature, and high-temperature models.

Unit = mm

Model No.	øA	B	C	øD	E	F	(G)	Spherical Radius H	øI	J	Net Weight (kg)
TP-20L ~ 100L CP-20L ~ 100L	89	115	18	32	6	7	108	50	12	M10X1.25 Depth 14	3.1
TP-200L ~ 1 CP-200L ~ 1	89	115	23 28	32	7	9	108	50	14	M12X1.25 Depth 14	3.2
TP-2 ~ 5 CP-2 ~ 5	89	150	44	65	10	17	108	100	26	M24X2 Depth 30	4.8
TP-10 CP-10	125	215	88	100	12	28	150	200	42	M39X2 Depth 50	10.2
TP-20 CP-20	165	290	78	145	15	28	194	200	58	M50X2 Depth 65	27.0
TP-30 CP-30	203	360	145	172	23	40	233	300	70	M64X3 Depth 90	50.0
TP-50 CP-50	232	452	145	195	30	48	263	300	82	M76X3 Depth 115	88.0
TP-100 CP-100	310	610	180	262	30	70	343	300	108	M100X3 Depth 150	200.0

C2F1/C2Z1/C2X1 Series

Hermetically Sealed Compression Load Cell
Ideal for measurements in harsh environments



Model No.	Capacity
C2F1 (C2Z1)-500L	509.9kg (5kN)
C2F1 (C2Z1)-1	1.020t (10kN)
C2F1 (C2Z1)-2	2.039t (20kN)
C2F1 (C2Z1)-5	5.099t (50kN)
C2F1 (C2Z1)-10	10.20t (100kN)
C2F1 (C2Z1)-20	20.39t (200kN)
C2X1-30	30.59t (300kN)
C2X1-50	50.99t (500kN)
C2X1-100	102.0t (1MN)
C2X1-200	203.9t (2MN)
C2X1-300	305.9t (3MN)
C2X1-500	509.9t (5MN)

C2F1 Specifications

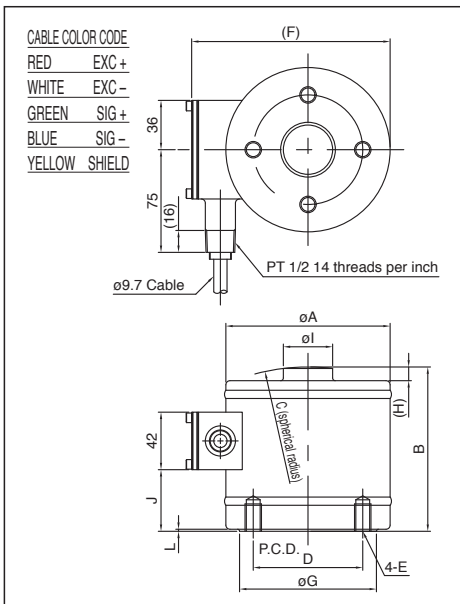
- Rated output ———— 2.0394mV/V±0.4%
- Safe load limit ———— 150% of R.C.
- Combined error ———— 0.3% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC20V
- Zero balance ———— ±1% of R.O.
- Input terminal resistance — 350±3.5Ω
- Output terminal resistance — 350±5Ω
- Insulation resistance — 1000MΩ/DC50V
- Compensated temperature range — -10°C to 75°C
- Temperature effect on
 - Zero balance ———— 0.05% of R.O./10°C
 - Span ———— 0.1% of Load/10°C
- Cable diameter/length — ø9.7/3m
- Dustproof/waterproof — IP67

C2Z1 Specifications

- Rated output ———— 2.0394mV/V±0.4%
- Safe load limit ———— 500% of R.C.
- Combined error ———— 0.2% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC20V
- Zero balance ———— ±1% of R.O.
- Input terminal resistance — 350±3.5Ω
- Output terminal resistance — 350±5Ω
- Insulation resistance — 1000MΩ/DC50V
- Compensated temperature range — -10°C to 75°C
- Temperature effect on
 - Zero balance ———— 0.05% of R.O./10°C
 - Span ———— 0.1% of Load/10°C
- Cable diameter/length — ø9.7/3m
- Dustproof/waterproof — IP67

C2X1 Specifications

- Rated output ———— 2.0394mV/V±1%
- Safe load limit ———— 150% of R.C.
- Combined error ———— 0.4% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC20V
- Zero balance ———— ±1% of R.O.
- Input terminal resistance — 350±3.5Ω
- Output terminal resistance — 350±5Ω
- Insulation resistance — 1000MΩ/DC50V
- Compensated temperature range — -10°C to 75°C
- Temperature effect on
 - Zero balance ———— 0.05% of R.O./10°C
 - Span ———— 0.1% of Load/10°C
- Cable diameter/length — ø9.7/3m
- Dustproof/waterproof — IP67



Unit = mm

Model No.	øA	B	Spherical Radius C	P.C.D. D	E	F	øG	H	øI	J	L	Net Weight (kg) Approximately
C2Z1-500L ~ 2	113	85	50	50	4-M6 Depth 10	138	80	10	M16×1.5	27	1.5	4
C2F1-500L ~ 2	98	105	50	50	4-M6 Depth 10	120	76	9	M16×1.0	36	1.5	2
C2Z1-5 ~ 10	138	110	100	60	4-M8 Depth 15	165	100	15	35	44	1.5	8
C2F1-5 ~ 10	98	100	100	60	4-M8 Depth 15	120	76	10	24	32	1.5	3
C2Z1-20	164	145	200	80	4-M12 Depth 20	193	120	20	45	66	2	14
C2F1-20	120	120	150	80	4-M12 Depth 20	145	100	10	36	45	1.5	6
C2X1-30, 50	138	160	200	80	4-M12 Depth 20	165	120	20	50	72	2	10
C2X1-100	164	190	200	100	4-M16 Depth 20	193	140	30	70	80	2	18
C2X1-200	214	230	300	130	4-M16 Depth 25	245	180	30	95	100	2	34
C2X1-300	214	320	600	130	4-M24 Depth 35	245	180	30	120	150	2	50
C2X1-500	316	400	800	200	6-M30 Depth 50	349	260	30	170	200	2	140

CMX/CM Series

Hermetically Sealed Compression Load Cells

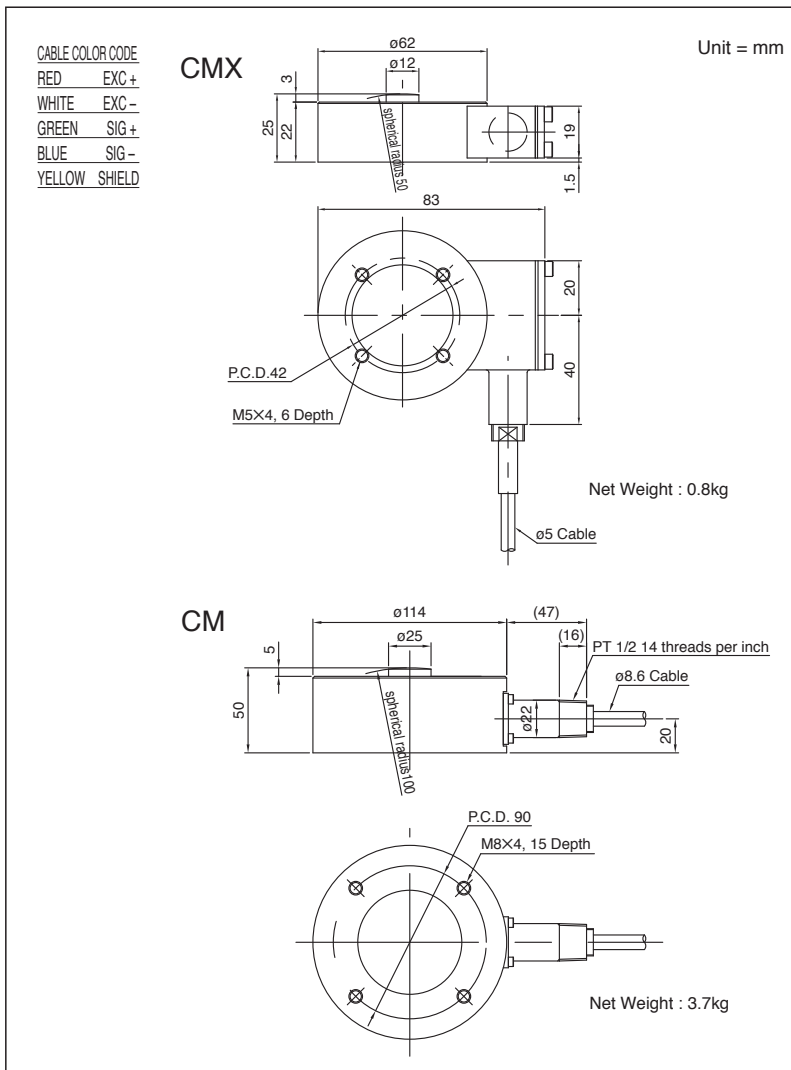
Miniature size and waterproof light weight construction



Model No.	Capacity
CMX-50L	50.99kg (500N)
CMX-100L	102.0kg (1kN)
CMX-200L	203.9kg (2kN)
CMX-500L	509.9kg (5kN)
CMX-1	1.020t (10kN)
CMX-2	2.039t (20kN)
CM-5	5.099t (50kN)
CM-10	10.20t (100kN)
CM-20	20.39t (200kN)

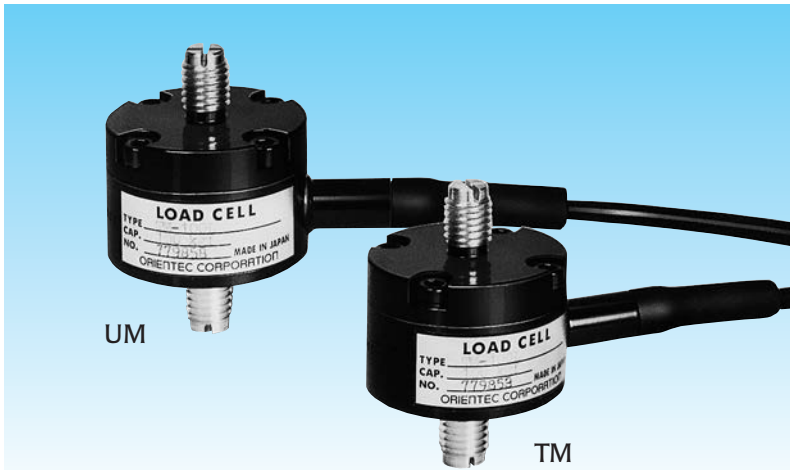
Specifications

- Rated output ————— 2.0394mV/V±0.4% (CMX)
2.0394mV/V±0.5% (CM)
- Safe load limit ————— 150% of R.C.
- Combined error ————— 0.2% of R.O. (CMX)
0.25% of R.O. (CM)
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V (CMX), 18V (CM)
- Zero balance ————— ±2% of R.O.
- Input terminal resistance — 425±50Ω
- Output terminal resistance — 350±5Ω
- Insulation resistance — 1000MΩ/DC50V
- Compensated temperature range — -10°C to 60°C
- Temperature effect on
 - Zero balance ————— 0.1% of R.O./10°C
 - Span ————— 0.1% of Load/10°C
- Cable diameter/length — ———— ø5/3m (CMX)
ø8.6/3m (CM)
- Dustproof/waterproof — IP67



TM/UM Series

Hermetically Sealed Load Cells for Multiple Applications
Tension-TM, Tension and Compression-UM



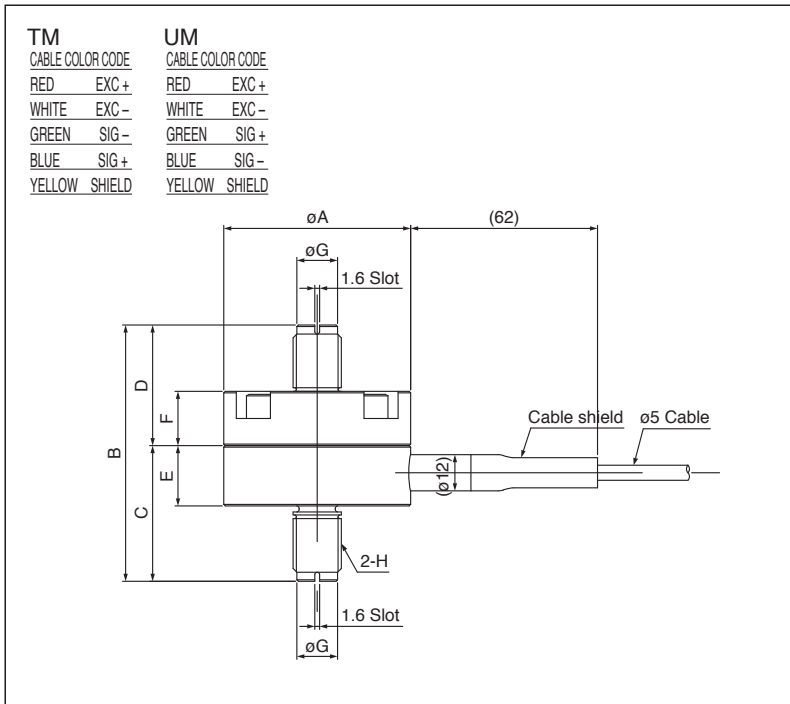
Model No.	Capacity
TM (UM)-50L-A	50.99kg (500N)
TM (UM)-100L-A	102.0kg (1kN)
TM (UM)-200L	203.9kg (2kN)
TM (UM)-500L	509.9kg (5kN)
TM (UM)-1	1.020t (10kN)
TM (UM)-2	2.039t (20kN)

TM (-A) Specifications

- Rated output ————— 2.0394mV/V±0.5%
- Safe load limit ————— 150% of R.C.
- Combined error ————— 0.2% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC18V
- Zero balance ————— ±10% of R.O.
- Input terminal resistance — 425±50Ω
- Output terminal resistance — 350±5Ω
- Insulation resistance — 1000MΩ/DC50V
- Compensated temperature range — -10°C to 60°C
- Temperature effect on
 - Zero balance ————— 0.1% of R.O./10°C
 - Span ————— 0.1% of Load/10°C
- Cable diameter/length — ø5/3m
- Dustproof/waterproof — IP67

UM (-A) Specifications

- Rated output ————— 2.0394mV/V±1% (Tension)
2.0394mV/V±3% (Compression)
- Safe load limit ————— 150% of R.C.
- Combined error ————— 0.3% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC18V
- Zero balance ————— ±10% of R.O.
- Input terminal resistance — 425±50Ω
- Output terminal resistance — 350±5Ω
- Insulation resistance — 1000MΩ/DC50V
- Compensated temperature range — -10°C to 60°C
- Temperature effect on
 - Zero balance ————— 0.1% of R.O./10°C
 - Span ————— 0.1% of Load/10°C
- Cable diameter/length — ø5/3m
- Dustproof/waterproof — IP67



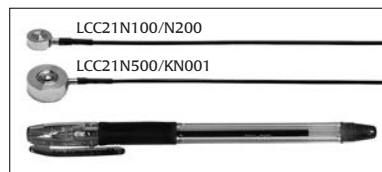
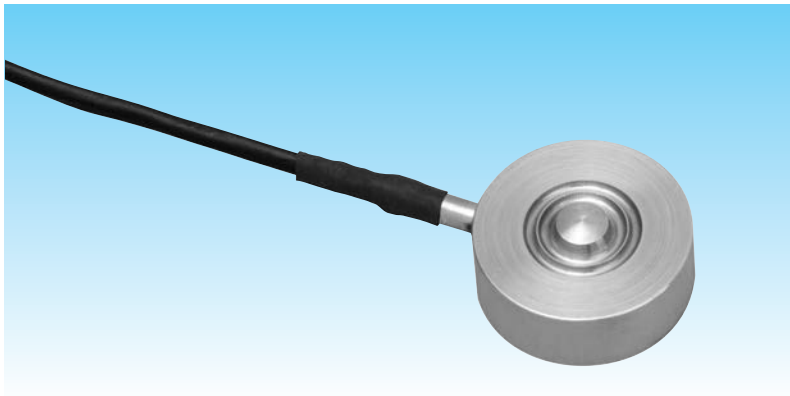
Model No.	øA	B	C	D	E	F	øG	H	Net Weight (kg)
TM-50L-A, 100L-A UM-50L-A, 100L-A	50	70	43	27	23	10	10	M12X1.75	0.3
TM-200L UM-200L	50	70	40	30	20	13	10	M12X1.75	0.5
TM-500L ~ 2 UM-500L ~ 2	62	85	45	40	20	18	13.5	M16X2	0.9

Unit = mm

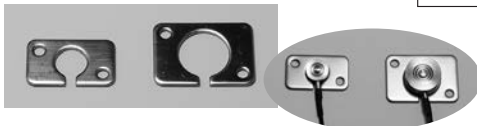
LCC21 Series

Stainless Steel Compact Compression Load Cell

Can be used for load distribution and press pressure measurement



Standard attachment holder



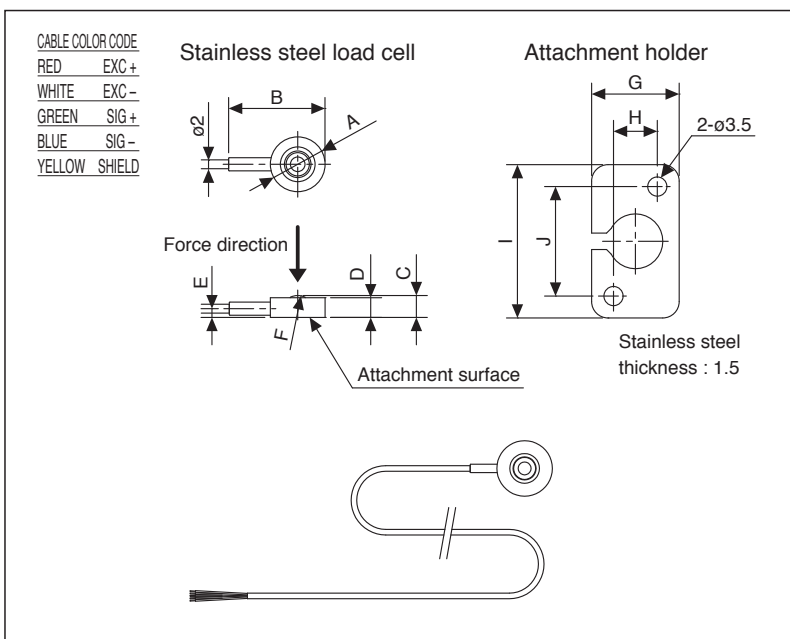
Model No.	Capacity
LCC21N100	10.20kg (100N)
LCC21N200	20.39kg (200N)
LCC21N500	50.99kg (500N)
LCC21KN001	102.0kg (1 kN)

Specifications

- Rated output ————— 1 mV/V or more
- Safe load limit ————— 150% of R.C.
- Combined error ————— 0.5% of R.O.
- Recommended excitation voltage — DC5V
- Maximum excitation voltage — DC5V
- Zero balance ————— ±100% of R.O.
- Input terminal resistance — 1kΩ±0.1kΩ
- Output terminal resistance — 1kΩ±0.01kΩ
- Insulation resistance — 500MΩ/DC50V
- Compensated temperature range — 0°C to 70°C
- Permissible temperature range — -10°C to 80°C
- Temperature effect on
 - Zero balance ————— 0.5% of R.O./10°C Typ.
 - Span ————— 0.5% of Load/10°C Typ.
- Cable diameter/length — ø2mm/2m
- Dustproof/waterproof — IP64
- Include standard attachment holder 1 piece

Resonance frequency

LCC21N100	LCC21N200	LCC21N500	LCC21KN001
45kHz	55kHz	30kHz	35kHz



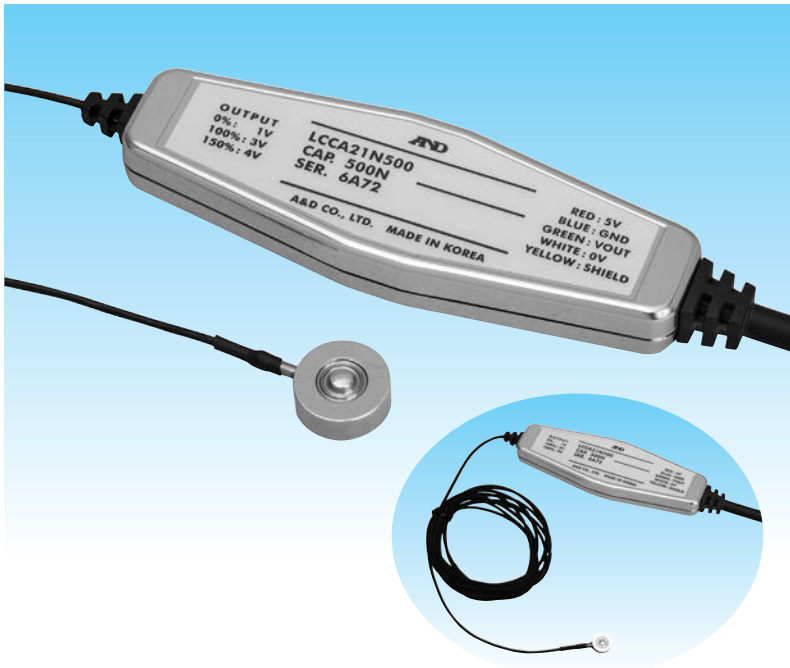
Model No.	A	B	C	D	E	F	G	H	I	J	Net Weight (g)
LCC21N100/N200	ø10	18	4	3.6	1.6	SR3	16	8	28	20	Approx. 15
LCC21N500/KN001	ø16	24	7	6	3	SR6	22	14	32	24	Approx. 20

Unit = mm

LCCA21 Series

Stainless Steel Compact Compression Load Cell

Can be used for load distribution and press pressure measurement



Model No.	Capacity
LCCA21N100	10.20kg (100N)
LCCA21N200	20.39kg (200N)
LCCA21N500	50.99kg (500N)
LCCA21KN001	102.0kg (1kN)

Specifications

- Safe load limit ————— 150% of R.C.
- Combined error ————— 0.5% of R.O.
- Supply voltage ————— DC5V±0.25V less than 16mA
- Load resistance ————— more than 5kΩ
- Output voltage ————— 1V to 4V *1
- Zero voltage ————— 1V±0.04V
- Span voltage ————— 2V±0.01V (1V to 3V)
- Insulation resistance — 500MΩ/DC50V
between signal wires and load cell
- Compensated temperature range — 0°C to 70°C
- Permissible temperature range — -10°C to 80°C
- Temperature effect on
Zero balance ————— 0.6% of R.O./10°C Typ.
Span ————— 0.6% of Load/10°C Typ.
- Frequency characteristics — 100Hz (-3dB)
- Cable diameter/length
From load cell to amplifier — ø2mm/2m
From amplifier ————— ø6mm/0.5m
- Dustproof/waterproof — Load cell IP64
- Include standard attachment holder 1 piece and amplifier case holder 1 set

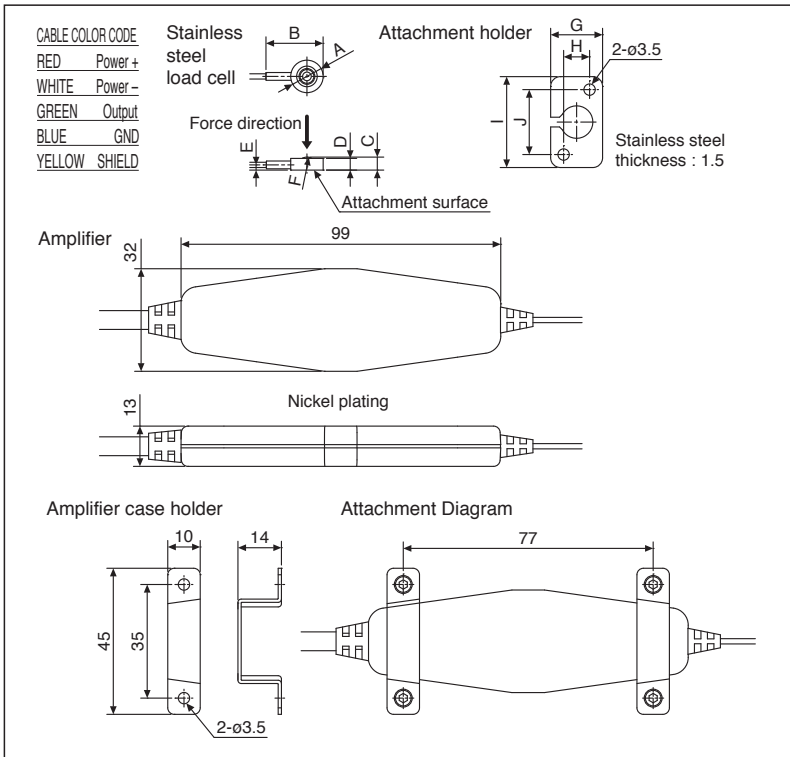
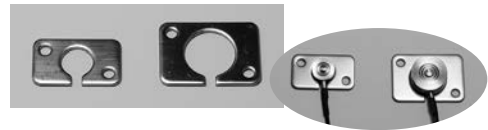
Resonance frequency

LCCA21N100	LCCA21N200	LCCA21N500	LCCA21KN001
45kHz	55kHz	30kHz	35kHz

*1

Load [% of R.C.]	0%	100%	150%
Output voltage	1V	3V	4V

Standard attachment holder



Model No.	A	B	C	D	E	F	G	H	I	J	Net Weight (g)
LCCA21N100/N200	ø10	18	4	3.6	1.6	SR3	16	8	28	20	Approx. 65
LCCA21N500/KN001	ø16	24	7	6	3	SR6	22	14	32	24	Approx. 70

Unit = mm

* Net Weight includes the amplifier and cables

Flameproof Type

Flameproof load cell series with TIIS certificates

In factories and locations where explosive fumes, oils, and other dangerous flammable items are handled, products with flameproof constructions must be used to prevent fires from electrical sparks and heat. A&D load cells have passed type approval of electrical equipment for use in explosive atmospheres by the Technology Institution of Industrial Safety (TIIS).

Flameproof and intrinsically safe flameproof enclosures

●Flameproof enclosure

This enclosure is totally enclosed. If gas or vapor enters the interior of this enclosure and causes an explosion, the enclosure withstands the force of the explosion, and thereby prevents fires caused by the explosion from igniting gas or vapor outside the enclosure.

●Intrinsically safe flameproof enclosure

This enclosure is equipped with technical measures to prevent electrical sparks and heat in the electrical circuit of the equipment from igniting fires in explosive atmospheres.

●Example of displayed ratings and their meanings

Ex d IIB T5
i 2 G4

Indicates an flameproof product

Types of flameproof constructions
(d: flameproof; i: intrinsically safe flameproof)

1. Electrical equipment group (or explosion class)
2. Temperature class (or ignition temperature)

1. Electrical equipment group in TIIS

Group I indicates flameproof equipment for coal mines, and Group II indicates equipment for other locations. Groups are further classified as A, B, or C based on applicable gases or vapors.

Types and explosion classes of gases and vapors

Range of safety gaps for gases and vapors	Class	Group	Explosion class
0.9 mm or more	A	IIA	1
More than 0.5 mm and less than 0.9 mm	B	IIB	
0.5 mm or less	C	IIC	2
			3

2. Temperature class in TIIS

In the past, ignition temperatures were classified by the gas or vapor ignition temperature, but international standards now classify them by the maximum surface temperature of the flameproof equipment and are noted in the following manner.

Temperature class	Maximum surface temperature of flameproof equipment	Temperature class	Ignition temperature of gases and vapors
T1	Items of 450°C or less	G1	Items exceeding 450°C
T2	Items of 300°C or less	G2	Items exceeding 300°C
T3	Items of 200°C or less	G3	Items exceeding 200°C
T4	Items of 135°C or less	G4	Items exceeding 135°C
T5	Items of 100°C or less	G5	Items exceeding 100°C
T6	Items of 85°C or less	G6	Items exceeding 85°C

3. Typical explosion classes and ignition temperatures

Explosion classes	Ignition temperatures	G1	G2	G3	G3
1		Acetone Ammonia Ethane Toluene Acetic acid Methane Propane	Ethanol Butanol Butane Carbon dioxide	Gasoline Hexane Pentane	Acetaldehyde Ethyl ether
2		Coal gas	Ethylene Ethylene oxide	Isoprene Hydrogen sulfide	
3		Hydrogen	Acetylene		

●Classification by location of use in TIIS

Locations (zones) that require flameproof measures are classified from 0 to 2 by the degree of hazardous atmosphere. It is necessary to select the equipment according to these location classes.

Zone 0: A location where a dangerous atmosphere is continually present or present for a long period under normal conditions.

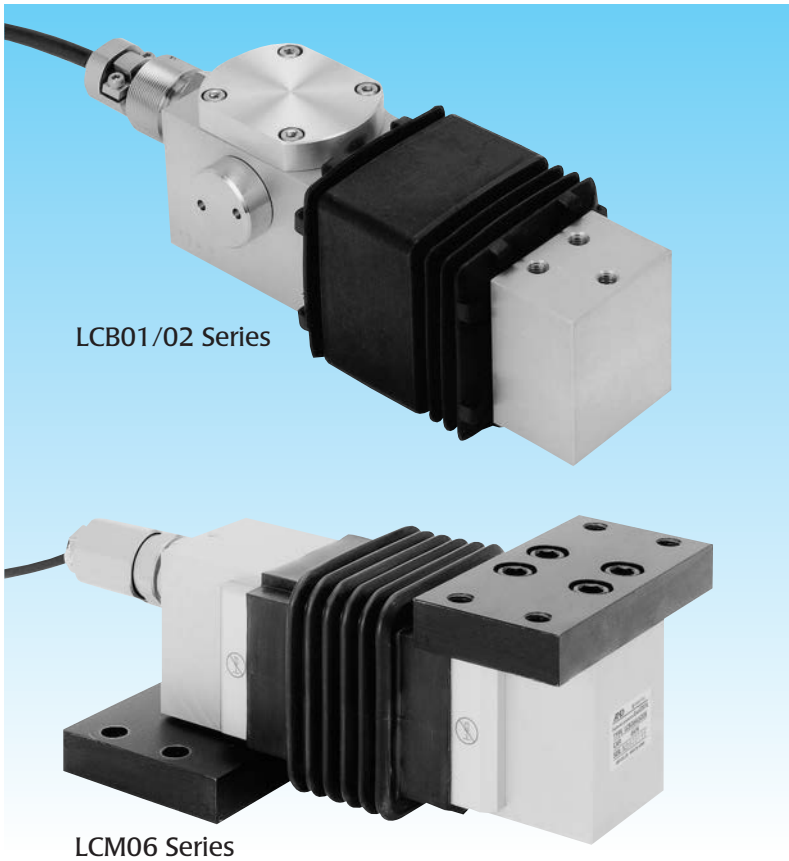
Zone 1: A location where a dangerous atmosphere may be generated under normal conditions.

Zone 2: A location where a dangerous atmosphere may be generated under abnormal conditions.

LCB01/02/06 Series

Flameproof Single-point Load Cells

Flameproof class IIIS Exd IIBT4 compliant



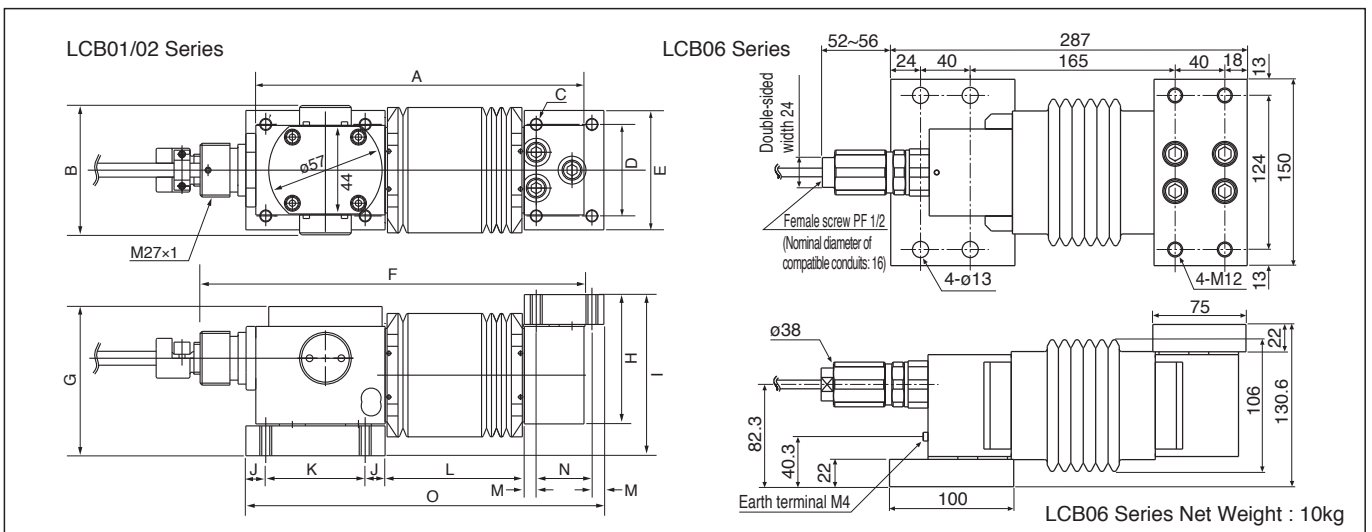
LCB01/02 Series

LCM06 Series

Model No.	Capacity
LCB01K030E	30.59kg (300N)
LCB01K060E	61.18kg (600N)
LCB02K150E	153.0kg (1.5kN)
LCB06K300E	305.9kg (3kN)
LCB06K600E	611.8kg (6kN)

Specifications

Rated output	0.3059mV/V±10% (LCB01/02) 0.55mV/V±10% (LCB06)
Safe load limit	150% of R.C.
Combined error	0.03% of R.O.
Recommended excitation voltage	DC5 to 12V
Maximum excitation voltage	DC15V
Zero balance	20±5% of R.O.
Input terminal resistance	418±20Ω (LCB01/02) 410±20Ω (LCB06)
Output terminal resistance	348.5±5Ω (LCB01/02) 350±5Ω (LCB06)
Insulation resistance	5000MΩ/DC50V
Compensated temperature range	-10°C to 40°C
Temperature effect on	
Zero balance	0.05% of R.O./10°C
Span	0.03% of Load/10°C Typ.
Maximum platform size	400×400mm (LCB01) 400×600mm (LCB02) 600×700mm (LCB06)
Cable diameter/length	ø7/6m
Dustproof/waterproof	IP54



LCB06 Series Net Weight : 10kg

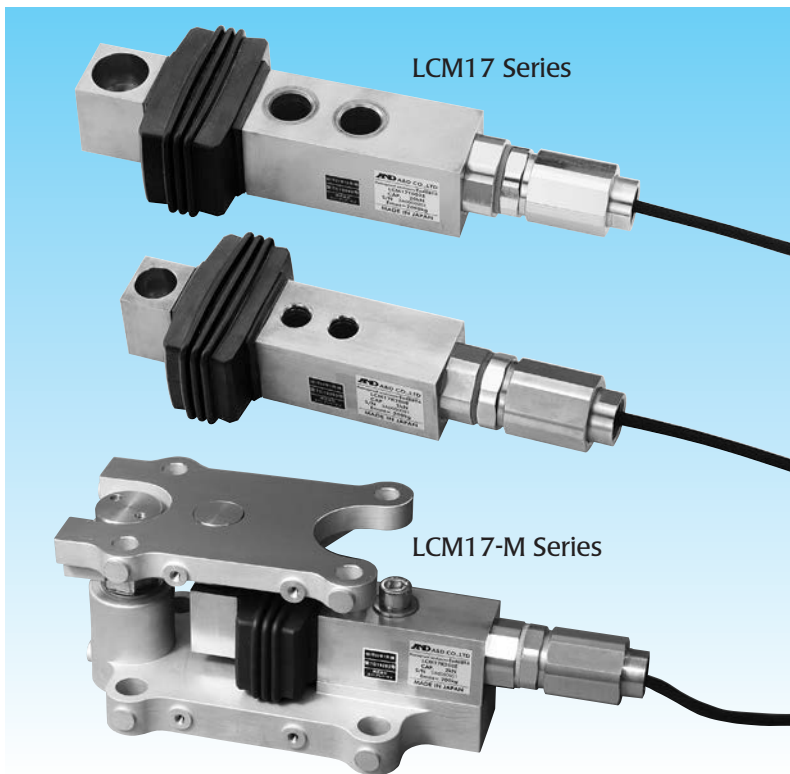
Model No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Net Weight (kg)
LCB01K030E/060E	165	65	M6	46	60	193	75	65	81	10	50	70	6	28	180	2.2
LCB02K150E	210	76	M8	56	70	238	82.5	72.5	89	7	61	80	7	61	230	4.9

CABLE COLOR CODE		
RED	EXC +	ORANGE Sensing +
WHITE	EXC -	BLACK Sensing -
GREEN	SIG +	YELLOW SHIELD
BLUE	SIG -	

Unit = mm

LCM17/LCM17-M Series

Flameproof Beam Type Stainless Steel Beam Load Cells
 Flameproof class IIIS Exd IIBT4 compliant



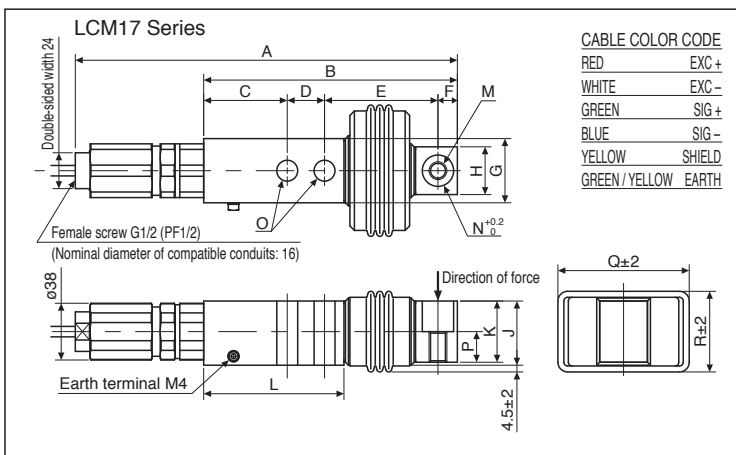
Model No.	Capacity
LCM17K100E	102.0kg (1kN)
LCM17K200E	203.9kg (2kN)
LCM17K300E	305.9kg (3kN)
LCM17K500E	509.9kg (5kN)
LCM17T001E	1.020t (10kN)
LCM17T002E	2.039t (20kN)

Steady-arm models with anti-uplift mechanism
 (LCM17 unit and steady arm)

Model No.	Capacity
LCM17K100E-M	102.0kg (1kN)
LCM17K200E-M	203.9kg (2kN)
LCM17K300E-M	305.9kg (3kN)
LCM17K500E-M	509.9kg (5kN)
LCM17T001E-M	1.020t (10kN)
LCM17T002E-M	2.039t (20kN)

Specifications

- Rated output ————— 1.0mV/V±0.1%
 (0.5mV/V±0.1% for 1kN)
- Load limit ————— 150% of R.C.
- Combined error ————— 0.03% of R.O.
- Recommended excitation voltage — DC5 to 12V
- Maximum excitation voltage — DC15V
- Zero balance ————— ±2% of R.O.
- Input terminal resistance — 390±30Ω
- Output terminal resistance — 350±5Ω
- Insulation resistance — Greater than 5000MΩ
 at DC50V
- Compensated temperature range — -10°C to 40°C
- Temperature effect on
 Zero balance ————— 0.028% of R.O./10°C
 Span ————— 0.011% of Load/10°C Typ.
- Cable diameter/length — ∅7/5m
- Dustproof/waterproof — IP54
- LCM17-M
 Permissible horizontal force — Maximum 10kN (1019kg)
 Permissible lifting force — Maximum 20kN (2039kg)

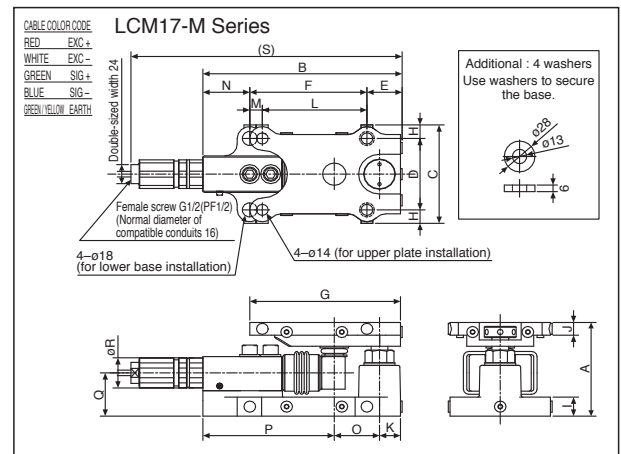


Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	Net Weight
LCM17K100E																		
LCM17K200E																		
LCM17K300E	(256)	170	56	25	76	13	43	32	43	41	94	M12	∅21	∅14	20.5	88	54	2.8
LCM17K500E																		
LCM17T001E																		
LCM17T002E	(298)	212	60	38	95	19	48	38	48	46	117	M20	∅30.2	∅21	23	94	59	3.9

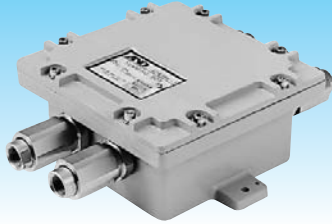
Unit = mm Net Weight = kg

Model No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	Net Weight
LCM17K100E-M																				
LCM17K200E-M																				
LCM17K300E-M	118	238	124	90	42	140	180	17	24	16	25	125	15	56	54	157	54.5	38	324	8.7
LCM17K500E-M																				
LCM17T001E-M																				
LCM17T002E-M	132	274	124	90	42	172	180	17	24	16	25	125	15	60	54	193	57	43	360	11.2

Unit = mm Net Weight = kg



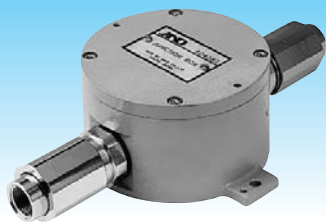
AD-4386 Series of Flameproof Summing Boxes



Two to four flameproof load cells can be summed in parallel. Boxes include an embedded potentiometer to adjust the output of load cells.

- AD-4386-2, AD-4386-3, and AD-4386-4 (for summing 2, 3, and 4 load cells, respectively)
- Complies with TIIS EXdIIBT4 specifications for explosion class and ignition temperature and is suitable for Zones 1 and 2
- Certified under the Labor Safety and Health Law (TC13430) in Japan

AD-4387 Flameproof Junction Box

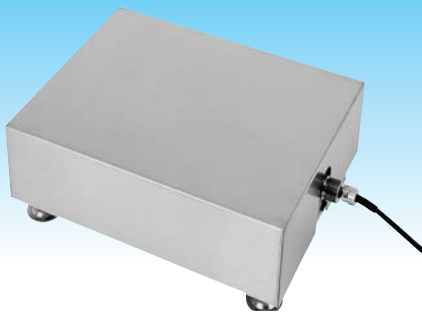


This extension connection box is used when a flameproof load cell and indicator are separated. Its compact size and light weight make operation easy.

- Complies with TIIS EXdIIBT4 specifications for explosion class and ignition temperature and is suitable for Zones 1 and 2

*There is no Labor Safety and Health Number because there is no electrical contact.

SB-FP Series Flameproof Platforms



Uses lightweight and compact single-point load cell

- Complies with TIIS EXdIIBT4 specifications for explosion class and ignition temperature and is suitable for Zones 1 and 2
- Optional roller conveyor can be prepared. Conforms to i2G4 flameproof standard for use in Zones 0,1 and 2
- Compliant with LCB01/LCB02/LCB06

Model No.	Capacity	Dimensions (DXWXHmm)	Platform Weight
SB30K05-FP	30kg	290×375×140	13kg
SB60K05-FP	60kg	290×375×140	13kg
SB150K06-FP	150kg	390×530×170	15kg
SB300K07-FP	300kg	600×700×210	57kg
SB600K07-FP	600kg	600×700×210	57kg

Cable length : 6m Measurement Accuracy : 1/3000

AD-4403-FP Flameproof Weighing Indicator



Built-in sequences for normal batching and loss-in-weight weighing.

Complies with TIIS EXdIIBT5X specifications for explosion class and ignition temperature and is suitable for Zones 1 and 2

- High-speed sampling (100 times/second) ensures sensitive response to weight changes
- Equipped with a main and secondary display
The main display shows the mass value and the secondary display shows settings and total weight
- Calculates net weight automatically after weighing
- Equipped with a control I/O with 6 inputs and 9 outputs as standard
- Equipped with 20 mA current loop output as standard (for connections to A&D peripherals)
- Digital calibration function

Waterproof Weighing Platforms SB Series



Easy-to-use, complete platform equipped with stainless steel weighing pan and load cell

- Water and dust proof (IP-65) for sanitary, safe use in the toughest industrial environment

Model No.	Capacity	Dimensions (D×W×Hmm)	Platform Weight
SB-15K10	15kg	250×250×110	4.5kg
SB-60K11	60kg	330×424×110	8kg
SB-100K12	100kg	390×530×135	14kg
SB-200K12	220kg	390×530×135	14kg

Cable length : 3m

Linearity & Hysteresis : 0.03% of R.O.

Pan material : Stainless steel

SB-SC Series Dustproof/Waterproof Platforms



IP68 compliant body resists water from heavy duty cleaning
Can be fully submerged in water for cleaning

(Conditions : Water depth at most 1m continuously for 24 hours)

Model No.	Capacity	Dimensions (D×W×Hmm)	Platform Weight
SB30K17SC	30kg	300×380×117	9.3kg
SB60K17SC	60kg	300×380×117	9.3kg
SB150K17SC	150kg	300×380×117	9.3kg
SB60K18SC	60kg	390×530×117	13kg
SB150K18SC	150kg	390×530×117	13kg

Cable length : 1.5m

Linearity & Hysteresis : 0.03% of R.O.

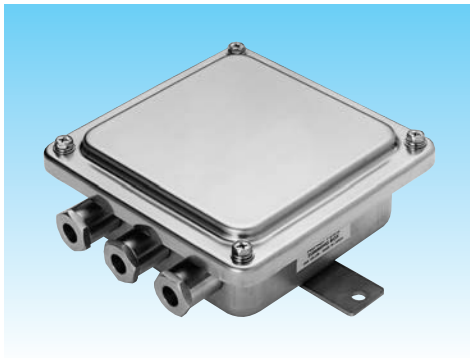
Base unit and pan material : Stainless steel 304



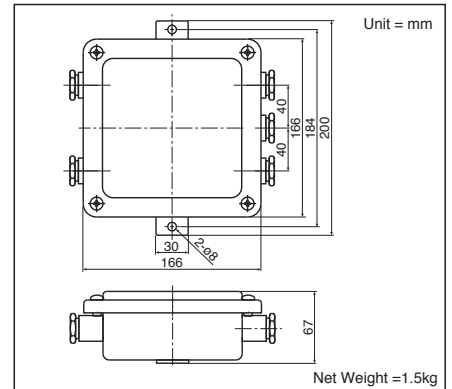
Skeleton frame structure

Easy-to-clean design won't accumulate stains or grime

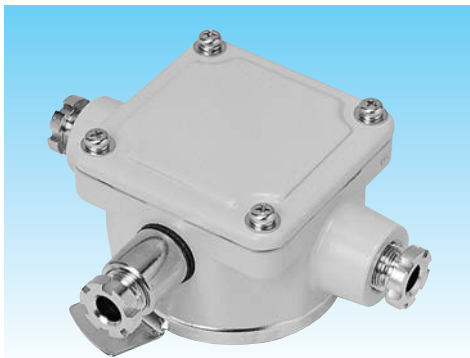
AD-4379 Stainless Steel Summing Box



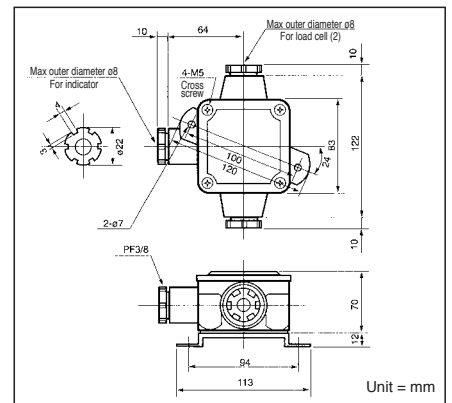
Stainless steel,
dustproof/waterproof (IP67).
Up to 4 connections possible.
Equipped with load cell
sensitivity adjustment trimmer.
For load cell cable diameters
between 4 to 12mm.



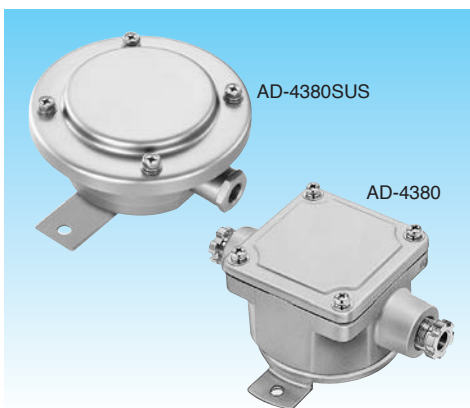
AD-4382 Summing Box



For connecting 2 load cells.
Dustproof, waterproof IP56.
Equipped with load cell
sensitivity adjustment trimmer.



AD-4380SUS/AD-4380 Junction Box

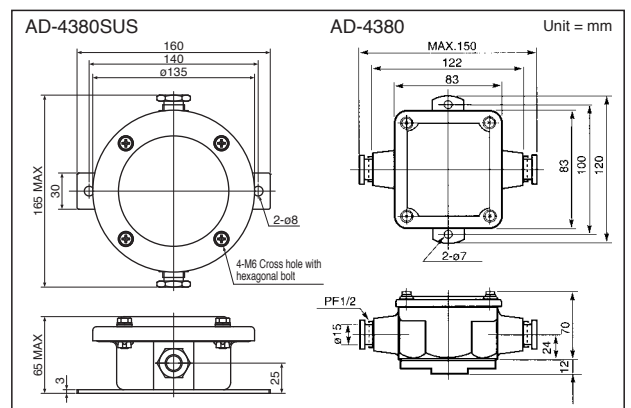


AD-4380SUS

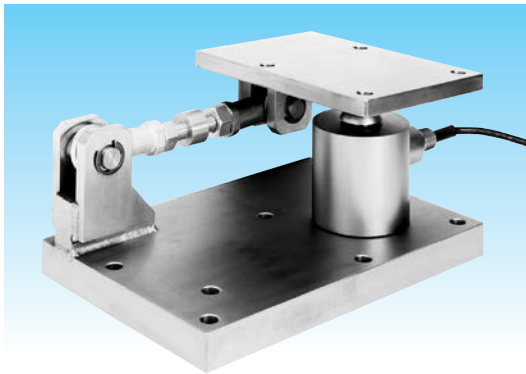
Extends cables from load cell to indicator.
Stainless steel, dustproof/waterproof (IP67).
Does not contain load cell sensitivity adjustment trimmer.

AD-4380

Extends cables from load cell to indicator.
Dustproof, waterproof IP56.
Does not contain load cell sensitivity adjustment trimmer.



Anti-vibration Mounting Fixture LCZ Series



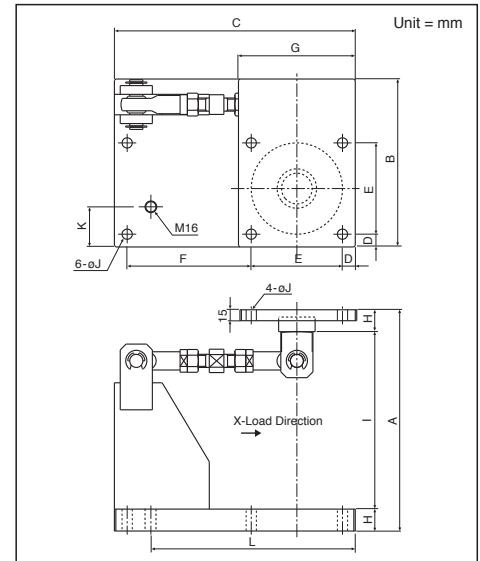
Model No.	Max.transverse load
LCZAP0405	20kN (Only in X direction)
LCZAP0408	
LCZAP0411	

Applicable range chart

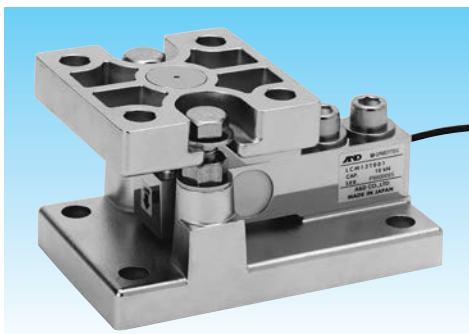
Model No.	CP/CP-FP Model
LCZAP0405	200L~1
LCZAP0408	2~5
LCZAP0411	10

* Intended load cells for CP/CP-FP

Model No.	A	B	C	D	E	F	G	H	(I)	J	K	L
LCZAP0405	154	170	300	11.5	77	200	100	15	124	8	25	250
LCZAP0408	213	200	315	12.5	105	185	130	23	167	12	40	265
LCZAP0411	303	230	330	17.5	125	170	160	30	243	14	55	280



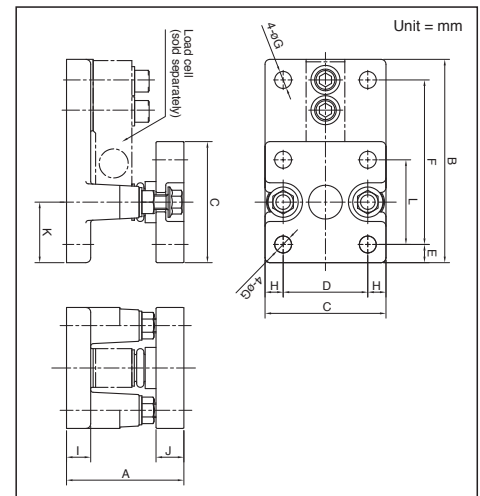
Weighing Module Kit LCZAP1413/1414/1415



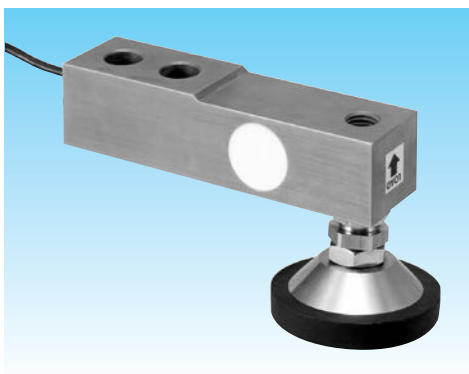
Model No.	LCZAP1413	LCZAP1414	LCZAP1415
Intended load cells	LCM13K100 LCM13K200 LCM13K300 LCM13K500 LCM13T001 LCM13T1.5 LCM19K500 LCM19T001 LCM19T1.5	LCM13T002 LCM13T003 LCM19T002	LCM13T005
Max. horizontal force	6kN	12kN	20kN
Max. lifting force	20kN	30kN	40kN
Max. displacement	2mm(All directions)	2mm(All directions)	2mm(All directions)
Net Weight	3.4kg	6.0kg	12.0kg

* Net weight does not include load cell

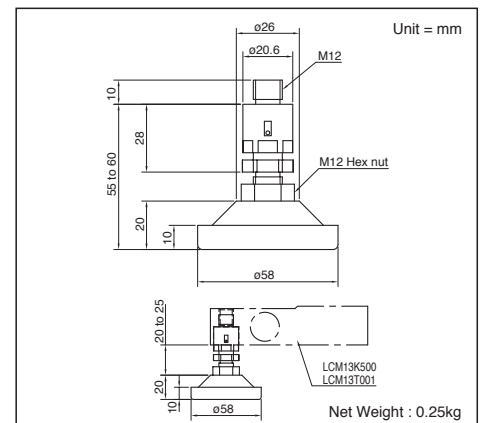
Model No.	A	B	C	D	E	F	øG	H	I	J	K	L
LCZAP1413	97	168	100	70	15	136	14	15	20	23	50	70
LCZAP1414	116	212	120	84	18	175	14	18	24	26	60	84
LCZAP1415	121	227	150	100	18	190	14	25	24	29	75	114



Swivel Foot LCZAFT01S



Intended load cells	LCM13K100 LCM13K200 LCM13K300 LCM13K500 LCM13T001 LCM13T1.5 LCM19K500 LCM19T001 LCM19T1.5
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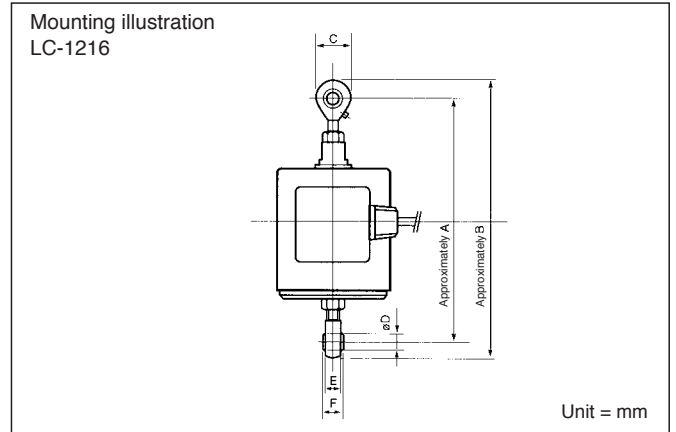
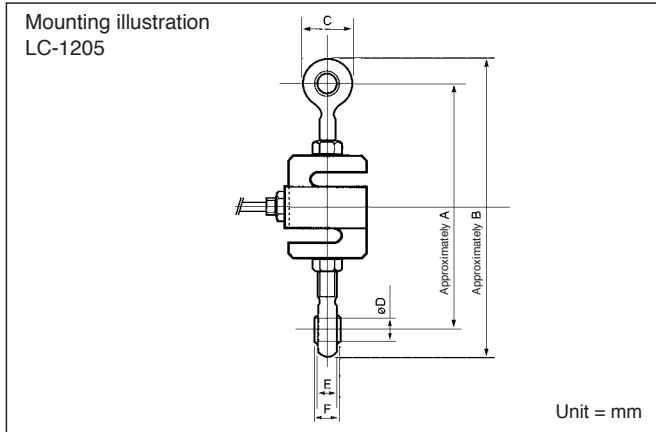


Mounting Fixtures

Rod-end bearings

Order No.	Intended load cells	Remarks
LCB-A6	LC1205-K020/K050/K100, LC1216-K100, LC1122-K050/K100	M6X1
LCB-A12	LC1205-K200/K500, LC1216-K200/K500, LC1122-K250/K500	M12X1.75
LCB-A18	LC1205-T001A, LC1216-T001A	M18X1.5
LCB-18	LC1205-T002	M18X1.5
LCB-24-2T	LC1216-T002A	M24X2
LCB-24-5T	LC1205-T005, LC1216-T005	M24X2

Mounting illustration



Model No.	Rod-end bearings	A	B	C	øDH7	E	F
LC1205-K020/K050/K100	LCB-A6	116	134	18	6	7	9
LC1205-K200/K500	LCB-A12	152	182	30	12	12	16
LC1205-T001A	LCB-A18	194	236	42	18	17	23
LC1205-T002	LCB-18	214	257	43	18	16.3	20
LC1205-T005	LCB-24-5T	268	338	70	25	25.3	35

Model No.	Rod-end bearings	A	B	C	øDH7	E	F
LC1216-K100	LCB-A6	160	178	18	6	7	9
LC1216-K200/K500	LCB-A12	194	224	30	12	12	16
LC1216-T001A	LCB-A18	270	312	42	18	17	23
(LC1216-T002)	LCB-18	285	328	43	18	16.3	20
LC1216-T002A	LCB-24-2T	320	376	56	25	22	31
LC1216-T005	LCB-24-5T	342	412	70	25	25.3	35

Stainless-steel rod end bearing (for LCS15 load cell)

LCZARE12S
 Applicable load cell: LCS15K500
 Static radial load rating: 5.88kN
 Static fracture load: 23.53kN
 Mass: 85g

LCZARE18S
 Applicable load cell: LCS15T001
 Static radial load rating: 11.52kN
 Static fracture load: 46.09kN
 Mass: 258g

LCZARE24S
 Applicable load cell: LCS15T002
 Static radial load rating: 17.4kN
 Static fracture load: 69.62kN
 Mass: 730g

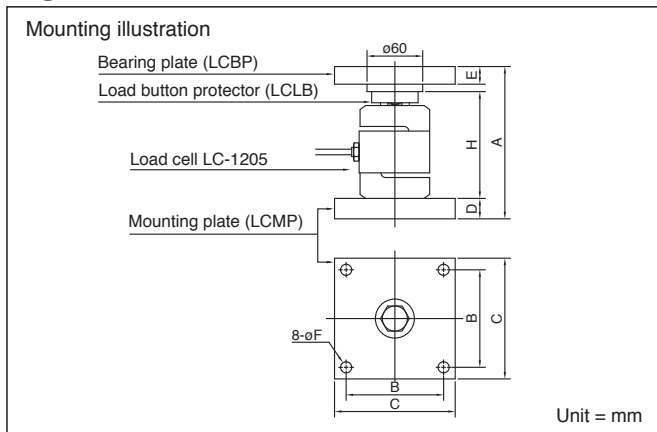
*When using a stainless steel rod end bearing, set the normal load to 1/2 of the rated capacity.
 *One stainless steel nut (Type 1) is included as standard.

Compression fixtures

Intended load cells	Components - Single convex				Components - Double convex		
	Bearing plate	Mounting plate	Load button	Bolt	Button-hole plate	Load button	Bolt
LC1205-K020/K050/K100	LCBP-1	LCMP-1	LCLB-1	M6	LCBHP-1	LCLB-1	M6
LC1205-K200/K500	LCBP-1	LCMP-2	LCLB-2	M6	LCBHP-1	LCLB-2	M6
LC1205-T001A/T002	LCBP-2	LCMP-4	LCLB-4	M10	LCBHP-2	LCLB-4	M10
LC1205-T005	LCBP-2	LCMP-5	LCLB-5	M10	LCBHP-3	LCLB-5	M10

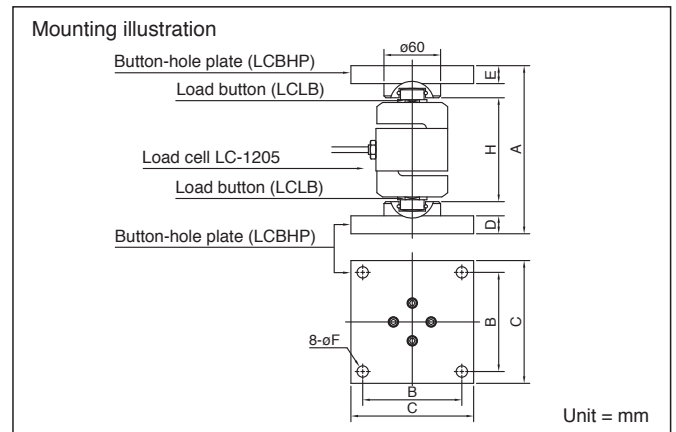
*A bolt is included to attach the load cell to the mounting plate.

Single convex



Model No.	A	B	C	D	E	F	H
LC1205-K020/K050/K100	115	77	100	16	16	8	72
LC1205-K200/K500	115	77	100	16	16	8	72
LC1205-T001A/T002	164	105	130	22	19	12	115
LC1205-T005	167	105	130	22	19	12	118

Double convex



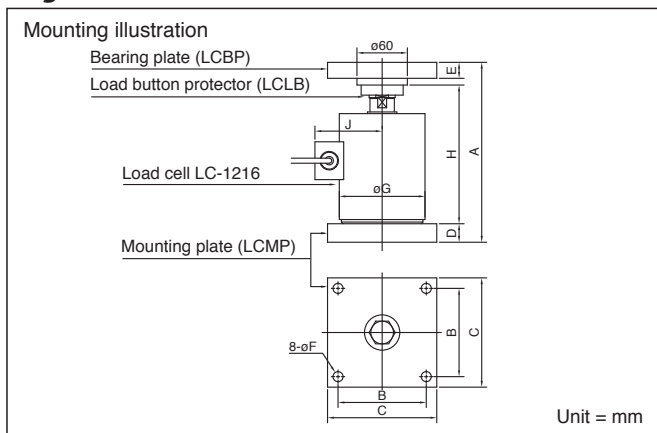
Model No.	A	B	C	D	E	F	H
LC1205-K020/K050/K100	120	77	100	16	16	8	70
LC1205-K200/K500	120	77	100	16	16	8	70
LC1205-T001A/T002	178	105	130	19	19	12	110
LC1205-T005	190	105	130	19	19	12	116

Compression fixtures

Intended load cells	Components - Single convex				Components - Double convex		
	Bearing plate	Mounting plate	Load button	Bolt	Button-hole plate	Load button	Bolt
LC1216-K100	LCBP-1	LCMP-1	LCLB-1	M6	LCBHP-1	LCLB-1	M6
LC1216-K200/K500	LCBP-1	LCMP-2	LCLB-2	M6	LCBHP-1	LCLB-2	M6
LC1216-T001A/(T002)	LCBP-2	LCMP-4	LCLB-4	M10	LCBHP-2	LCLB-4	M10
LC1216-T002A/T005	LCBP-2	LCMP-5	LCLB-5	M10	LCBHP-3	LCLB-5	M10

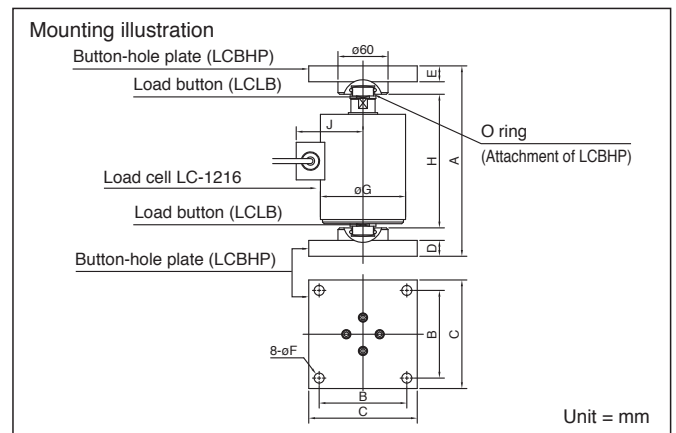
*A bolt is included to attach the load cell to the mounting plate.

Single convex



Model No.	A	B	C	D	E	øF	øG	H	J
LC1216-K100	155	77	100	16	16	8	77	114	62
LC1216-K200/K500	155	77	100	16	16	8	77	114	62
LC1216-T001A/(T002)	214	105	130	22	19	12	102	165	80
LC1216-T002A/T005	247	105	130	22	19	12	102	198	80

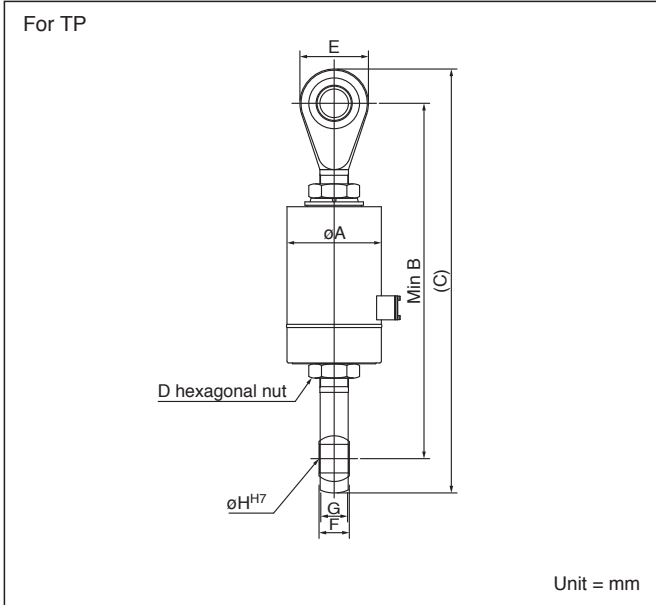
Double convex



Model No.	A	B	C	D	E	øF	øG	H	J
LC1216-K100	160	77	100	16	16	8	77	110	62
LC1216-K200/K500	160	77	100	16	16	8	77	110	62
LC1216-T001A/(T002)	228	105	130	19	19	12	102	160	80
LC1216-T002A/T005	270	105	130	19	19	12	102	196	80

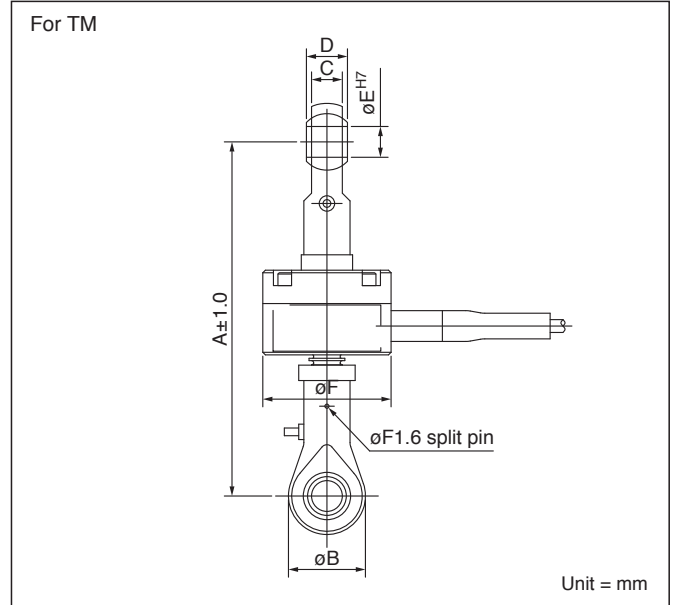
Mounting Fixtures

Universal shackle



Intended load cells	Model No.	øA	B	C	D hexagonal nut	E	F	G	øH ^{H7}	Net Weight (kg)
TP-20L ~ 100L	S-1	89	183	209	M10X1.25	26	14	10.5	10	0.2
TP-200L ~ 1	S-2	89	195	229	M12X1.25	34	16	13.3	12	0.3
TP-2 ~ 5	S-3A	89	280	342	M24X2	62	28	19.3	22	1.4
TP-10	S-4	125	461	561	M39X2	100	43	39	40	9
TP-20	S-5	165	622	742	M50X2	120	53	49	50	17

Note: The Min B dimension is the attachment minimum dimension when the shackle is screwed in completely. The attachment is attached in the range of B to B+0.2 mm. (The shackle screw is rotated back about half a turn to line up with the shackle position.)

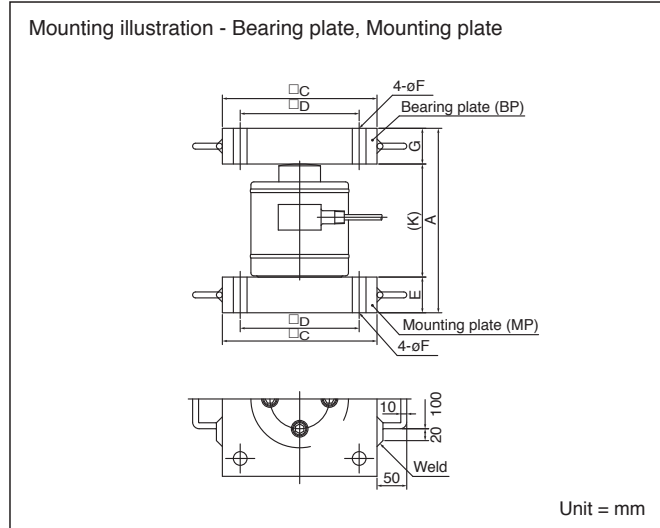


Intended load cells	Model No.	øA	øB	C	D	øE ^{H7}	øF	Net Weight (kg)
TM-50L-A	SM-1	138	30	12 ^{+0.1}	16 ⁰ _{-0.1}	12	50	0.2
TM-100L-A								
TM-200L-A								
TM-500L ~ 1	SM-2A	170	38	15	21	16	62	0.4
TM-2	SM-2	170	39	15.25 ^{+0.13}	19 ⁰ _{-0.13}	16	62	0.4

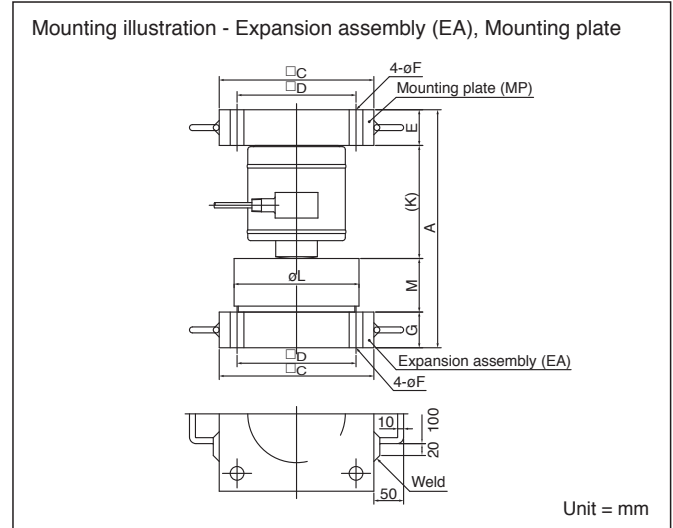
Note: When the TM series is used, we recommend use of a universal shackle (for tension) to prevent bending load on the load cell.

Bearing plate (BP), mounting plate (MP), expansion assembly and mounting plate (EA)

Use the bearing plate and mounting plate when attaching the load cell.



If you anticipate bending load on the load cell from heat expansion, use the EA.



Note: The BP-100, MP-100, and EA-100 and higher have handles attached to their plates.

Intended load cells	Bearing Plate and Mounting Plate Dimensions									Expansion Assembly (EA) and Mounting Plate Dimensions											
	Model No.	A	C	D	E	øF	G	K	Net Weight (kg)	Model No.	A	C	D	E	øF	G	øL	K	M	±N	Net Weight (kg)
CP-20L ~ 100L	BP-1, MP-1	152	100	77	15	8	15	122	3	EA-1, MP-1	177	100	77	15	8	15	60	122	25	±8	4
CP-200L ~ 1	BP-1, MP-1	154	100	77	15	8	15	124	3	EA-1, MP-1	179	100	77	15	8	15	60	124	25	±8	4
CP-2 ~ 5	BP-2, MP-2	213	130	105	23	12	23	167	6	EA-2, MP-2	248	130	105	23	12	23	90	167	35	±8	8
CP-10	BP-10, MP-10	303	160	125	30	14	30	243	12	EA-10, MP-10	348	160	125	30	14	30	110	243	45	±10	16
CP-20	BP-20, MP-20	378	200	150	30	14	30	318	18	EA-20, MP-20	443	200	150	30	14	30	130	318	65	±10	26
CP-30	BP-30, MP-30	480	240	180	40	19	40	400	36	EA-30, MP-30	545	240	180	40	19	40	160	400	65	±15	46
CP-50	BP-100, MP-110	620	260	200	60	23	60	500	65	EA-100, MP-110	710	260	200	60	23	60	210	500	90	±15	96
CP-100	BP-210, MP-210	800	360	280	60	27	60	680	130	EA-200, MP-210	905	360	280	60	27	60	300	680	105	±15	180
C2Z1-500L ~ 2	BP-2, MP-2	131	130	105	23	12	23	85	6	EA-2, MP-2	166	130	105	23	12	23	90	85	35	±8	8
C2F1-500L ~ 2		151	130	105	23	12	23	105	6		186	130	105	23	12	23	90	105	35	±8	8
C2Z1-5, 10	BP-10, MP-10	170	160	125	30	14	30	110	12	EA-10, MP-10	215	160	125	30	14	30	110	110	45	±10	16
C2F1-5, 10		160	160	125	30	14	30	100	12		205	160	125	30	14	30	110	100	45	±10	16
C2Z1-20	BP-20, MP-20	205	200	150	30	14	30	145	18	EA-20, MP-20	270	200	150	30	14	30	130	145	65	±10	26
C2F1-20		180	200	150	30	14	30	120	18		245	200	150	30	14	30	130	120	65	±10	26
C2X1-30, 50	BP-50, MP-50	240	220	160	40	19	40	160	30	EA-50, MP-50	305	220	160	40	19	40	160	160	65	±15	40
C2X1-100	BP-100, MP-100	310	260	200	60	23	60	190	64	EA-100, MP-100	400	260	200	60	23	60	210	190	90	±15	86
C2X1-200	BP-200, MP-200	390	280	200	80	27	80	230	100	EA-200, MP-200	475	360 (EA) 280 (MP)	280 (EA) 200 (MP)	80	27	60	300	230	105	±15	170
C2X1-300	BP-300, MP-300	500	280	200	80	35	100	320	110	EA-300, MP-300	585	400 (EA) 280 (MP)	320 (EA) 200 (MP)	80	35	60	350	320	125	±15	222
C2X1-500	BP-500, MP-500	630	380	280	100	40	130	400	260	EA-500, MP-500	745	500 (EA) 380 (MP)	400 (EA) 280 (MP)	100	40	80	430	400	165	±15	457
CMX-50L ~ 2	BP-2-A, MP-2-A	55	130	105	15	12	15	25	4	EA-2, MP-2-A	98	130	105	15	12	23	90	25	35	±8	7
CMX-5 ~ 20	BP-10, MP-10-A	110	160	125	30	14	30	50	12	EA-10, MP-10-A	155	160	125	30	14	30	110	50	45	±10	16

N : Permitted movement range

Appearance and/or specifications subject to change for improvement without notice.



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