



# TENSION & COMPRESSION TYPE LOAD CELL

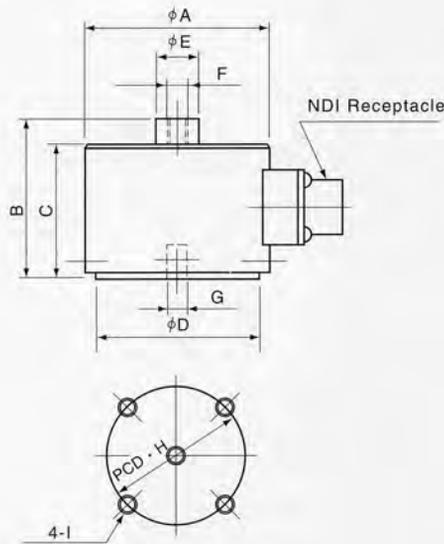
MODEL: **LRM** 0.05% grade

## Features

Assuring minimum error of output and compactly designed, commonly used for low capacity range of compression and tension control by use of connecting thread at both sides. High precision, high output and economical cost.



## Outline



## Standard Specifications

Rated Capacity.....	20N~20KN
Rated Output.....	2mV/V $\pm$ 1% (20N~50N is 1mV/V, 100N is 1.5mV/V)
Non-Linearity.....	0.05%R.O.
Hysteresis.....	0.05%R.O.
Repeatability.....	0.05%R.O.
Recommended Input Voltage.....	10V (20N~50N is 5V)
Maximum Input Voltage.....	18V (20N~50N is 10V)
Input/Output Resistance.....	350 $\Omega$ $\pm$ 1%
Insulation Resistance.....	>2000M $\Omega$
Compensated Temperature Range.....	-10~+70 $^{\circ}$ C
Operating Temperature Range.....	-20~+100 $^{\circ}$ C
Temperature Effect on Zero Balance.....	$\pm$ 0.01%R.O./ $^{\circ}$ C
Temperature Effect on Rated Output.....	$\pm$ 0.01%/ $^{\circ}$ C
Safe Overload Rating.....	120%R.C.
Cable.....	$\phi$ 6, 4-conductor shielded cable 3m long

## Dimensions

MODEL	ITEM	RATED CAPACITY	$\phi$ A	B	C	$\phi$ D	$\phi$ E	F	G	H	I	WEIGHT(kg)
LRM-20N	20N	2.039kgf	52	45	38	47	12	M6 P1 Deep 8	M6 P1 Deep 6	38	M4 Deep 6	0.26
LRM-50N	50N	5.099kgf	52	45	38	47	12	M6 P1 Deep 8	M6 P1 Deep 6	38	M4 Deep 6	0.26
LRM-100N	100N	10.19kgf	63	60	55	55	20	M10 P1.5 Deep 15	M10 P1.5 Deep 15	40	M5 Deep 10	0.95
LRM-200N	200N	20.39kgf	63	60	55	55	20	M10 P1.5 Deep 15	M10 P1.5 Deep 15	40	M5 Deep 10	0.95
LRM-500N	500N	50.99kgf	63	60	55	55	20	M10 P1.5 Deep 15	M10 P1.5 Deep 15	40	M5 Deep 10	0.95
LRM-1KN	1KN	101.9kgf	70	65	60	64	20	M10 P1.5 Deep 15	M10 P1.5 Deep 15	40	M5 Deep 10	1.30
LRM-2KN	2KN	203.9kgf	70	65	60	64	20	M10 P1.5 Deep 15	M10 P1.5 Deep 15	40	M5 Deep 10	1.30
LRM-5KN	5KN	509.9kgf	70	85	85	60	--	M12 P1.75 Deep 15	M12 P1.75 Deep 15	40	M5 Deep 10	1.70
LRM-10KN	10KN	1.019tonf	88	110	110	80	--	M18 P1.5 Deep 22	M18 P1.5 Deep 22	60	M8 Deep 12	3.50
LRM-20KN	20KN	2.039tonf	98	110	110	90	--	M18 P1.5 Deep 22	M18 P1.5 Deep 22	60	M8 Deep 12	4.20

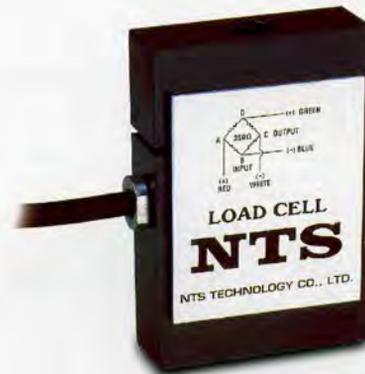
UNIT: mm

# TENSION & COMPRESSION TYPE LOAD CELL

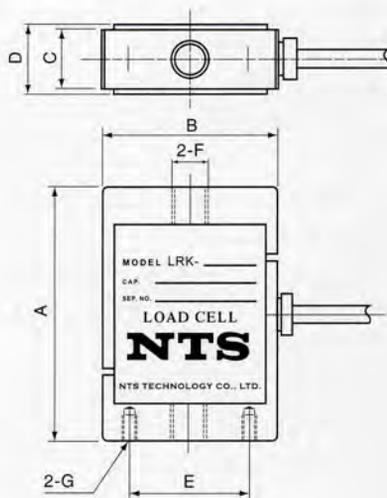
MODEL: **LRK** 0.05% grade

## Features

Assuring minimum error of output and compactly designed, commonly used for low capacity range of compression and tension control by use of connecting thread at both sides. High precision, high output and economical cost.



## Outline



## Standard Specifications

Rated Capacity.....	100N~20KN
Rated Output.....	2mV/V $\pm 1\%$ (100N~200N is $\pm 3\%$ )
Non-Linearity.....	0.05%R.O.
Hysteresis.....	0.05%R.O.
Repeatability.....	0.03%R.O.
Recommended Input Voltage.....	10V (100N~200N is 5V)
Maximum Input Voltage.....	18V (100N~200N is 10V)
Input/Output Resistance.....	350 $\Omega$ $\pm 1\%$
Insulation Resistance.....	>2000M $\Omega$
Compensated Temperature Range.....	-10~+70 $^{\circ}$ C
Operating Temperature Range.....	-20~+100 $^{\circ}$ C
Temperature Effect on Zero Balance.....	$\pm 0.01\%$ R.O./ $^{\circ}$ C
Temperature Effect on Rated Output.....	$\pm 0.01\%$ / $^{\circ}$ C
Safe Overload Rating.....	120%R.C.
Cable.....	$\phi 6$ , 4-conductor shielded cable 3m long (500N~20KN) $\phi 3$ , 4-conductor shielded cable 3m long (100N~200N)

## Dimensions

MODEL	ITEM	RATED CAPACITY	A	B	C	D	E	F	G	WEIGHT(kg)
LRK-100N		100N 10.19kgf	55	42	12	16	--	M6 P1 Deep 8	-----	0.17
LRK-200N		200N 20.39kgf	55	42	12	16	--	M6 P1 Deep 8	-----	0.17
LRK-500N		500N 50.99kgf	85	58	20	24	40	M12 P1.75 Deep 15	M5 Deep 8	0.65
LRK-1KN		1KN 101.9kgf	85	58	20	24	40	M12 P1.75 Deep 15	M5 Deep 8	0.65
LRK-2KN		2KN 203.9kgf	85	58	20	24	40	M12 P1.75 Deep 15	M5 Deep 8	0.65
LRK-5KN		5KN 509.9kgf	85	58	20	24	40	M12 P1.75 Deep 15	M5 Deep 8	0.65
LRK-10KN		10KN 1.019tonf	105	78	32	36	60	M18 P1.5 Deep 22	M6 Deep 10	1.65
LRK-20KN		20KN 2.039tonf	110	88	35	40	60	M18 P1.5 Deep 22	M6 Deep 10	2.25

UNIT: mm

# HIGH ACCURACY COMPRESSION TYPE LOAD CELL

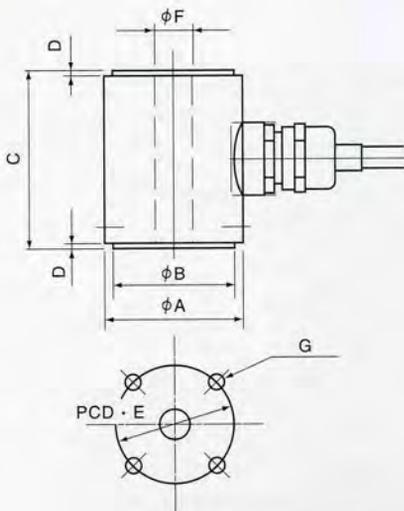
MODEL: **LCH**

## Features

Most suitable for load control of riveting, power insetting, or caulking devices,...,etc. As relatively low on height, easy to set with press machine and fixing jig tools.



## Outline



## Standard Specifications

Rated Capacity.....	5KN~500KN
Rated Output.....	1mV/V $\pm$ 1%
Non-Linearity.....	0.3%R.O.
Hysteresis.....	0.3%R.O.
Repeatability.....	0.1%R.O.
Recommended Input Voltage.....	10V
Maximum Input Voltage.....	18V
Input/Output Resistance.....	700 $\Omega$ $\pm$ 1% (5KN is 350 $\Omega$ $\pm$ 1%)
Insulation Resistance.....	>2000M $\Omega$
Compensated Temperature Range.....	-10~+70 $^{\circ}$ C
Operating Temperature Range.....	-20~+100 $^{\circ}$ C
Temperature Effect on Zero Balance.....	$\pm$ 0.01%R.O./ $^{\circ}$ C
Temperature Effect on Rated Output.....	$\pm$ 0.01%/ $^{\circ}$ C
Safe Overload Rating.....	120%R.C.
Cable.....	$\phi$ 6, 4-conductor shielded cable 3m long

## Dimensions

MODEL	ITEM	RATED CAPACITY	$\phi$ A	$\phi$ B	C	D	$\phi$ E	$\phi$ F	G	WEIGHT(kg)
LCH-5KN	5KN	509.9kgf	40	35	50	1	24	10	2x4-M4 Deep 8	0.30
LCH-10KN	10KN	1.019tonf	62	55	70	2	44	18	2x4-M5 Deep 8	0.95
LCH-20KN	20KN	2.039tonf	62	55	70	2	44	18	2x4-M5 Deep 8	1.00
LCH-30KN	30KN	3.059tonf	62	55	70	2	44	18	2x4-M5 Deep 8	1.00
LCH-50KN	50KN	5.099tonf	62	55	70	2	44	18	2x4-M5 Deep 8	1.00
LCH-100KN	100KN	10.19tonf	62	55	80	2	44	※	2x4-M5 Deep 8	1.30
LCH-200KN	200KN	20.39tonf	88	80	100	2	60	20	2x4-M8 Deep 12	2.90
LCH-300KN	300KN	30.59tonf	100	90	120	2	70	20	2x4-M8 Deep 15	4.60
LCH-500KN	500KN	50.99tonf	134	120	150	2	90	30	2x4-M10 Deep 16	11.00

※  $\phi$ 18 C'BORE x 6 mm deep on both upper and lower surface, and  $\phi$ 12 through for LCH-100KN.

UNIT: mm

# HIGH ACCURACY COMPRESSION TYPE LOAD CELL

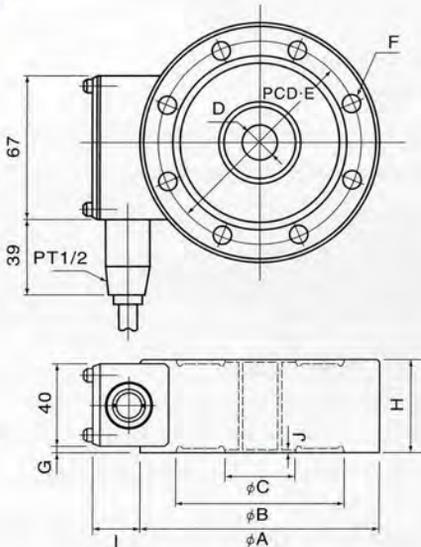
MODEL: **LCX** 0.05% grade

## Features

Thin model in spite of high capacity range, with threaded center hole. High precision and high output besides of high toughness against horizontal pressure and twisting momentum.



## Outline



## Standard Specifications

Rated Capacity.....	5KN~2000KN
Rated Output.....	2mV/V $\pm$ 0.25%
Non-Linearity.....	0.05%R.O.
Hysteresis.....	0.05%R.O.
Repeatability.....	0.03%R.O.
Recommended Input Voltage.....	10V
Maximum Input Voltage.....	18V
Input/Output Resistance.....	350 $\Omega$ $\pm$ 1%
Insulation Resistance.....	>2000M $\Omega$
Compensated Temperature Range.....	-10~+70 $^{\circ}$ C
Operating Temperature Range.....	-20~+100 $^{\circ}$ C
Temperature Effect on Zero Balance.....	$\pm$ 0.005%R.O./ $^{\circ}$ C
Temperature Effect on Rated Output.....	$\pm$ 0.005%/ $^{\circ}$ C
Safe Overload Rating.....	150%R.C.
Cable.....	$\phi$ 10, 4-conductor shielded cable 3m long

## Dimensions

MODEL	ITEM	RATED CAPACITY	$\phi$ A	$\phi$ B	$\phi$ C	D	E	F	G	H	I	J	WEIGHT(kg)
LCX-5KN		5KN 0.509tonf	118	82	36	M18 P1.5	100	8- $\phi$ 9	3	46	(25)	1	3.20
LCX-10KN		10KN 1.019tonf	118	82	36	M18 P1.5	100	8- $\phi$ 9	3	46	(25)	1	3.20
LCX-20KN		20KN 2.039tonf	118	82	36	M18 P1.5	100	8- $\phi$ 9	3	46	(25)	1	3.20
LCX-50KN		50KN 5.099tonf	118	82	36	M18 P1.5	100	8- $\phi$ 9	3	46	(25)	1	3.20
LCX-100KN		100KN 10.19tonf	138	94	48	M24 P2	116	8- $\phi$ 11	5	50	(25)	1	5.00
LCX-200KN		200KN 20.39tonf	182	126	76	M39 P2	154	8- $\phi$ 14	10	60	(28)	1	9.65
LCX-500KN		500KN 50.99tonf	226	153	92	M50 P2	190	12- $\phi$ 18	25	90	(28)	1	21.50
LCX-1000KN		1000KN 101.9tonf	310	200	138	M76 P3	256	8- $\phi$ 26	35	110	(28)	2	60.00
LCX-2000KN		2000KN 203.9tonf	370	252	160	M100 P3	314	12- $\phi$ 26	55	150	(28)	2	95.00

UNIT: mm

# STATIC TORQUE METER

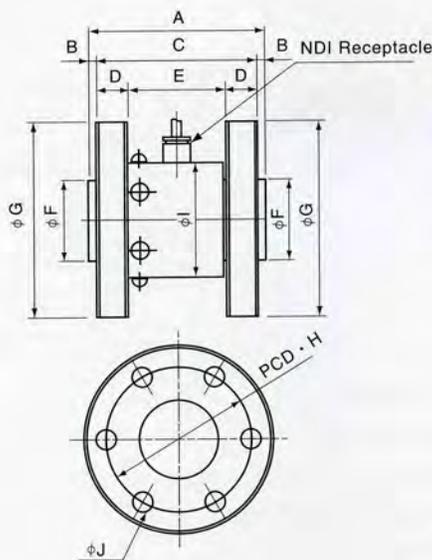
MODEL: **TCF**

## Features

A static torque sensor used for measurement of torque of stationary objects or within a certain angle rotation. Suitable for torque measurement of various automobile parts, pneumatic, electric screwdriver,....,etc.



## Outline



## Standard Specifications

Rated Capacity.....	0.2N-m~5000N-m
Rated Output.....	1mV/V $\pm$ 1% (0.2N-m is 0.7mV/V)
Non-Linearity.....	0.3%R.O. (0.2N-m~5N-m is 0.5%R.O.)
Hysteresis.....	0.3%R.O. (0.2N-m~5N-m is 0.5%R.O.)
Repeatability.....	0.2%R.O.
Recommended Input Voltage.....	10V
Maximum Input Voltage.....	18V
Input/Output Resistance.....	350 $\Omega$ $\pm$ 1%
Insulation Resistance.....	>2000M $\Omega$
Temperature Effect on Zero Balance.....	$\pm$ 0.01%R.O./ $^{\circ}$ C
Temperature Effect on Rated Output.....	$\pm$ 0.01%/ $^{\circ}$ C
Safe Overload Rating.....	120%R.C.
Cable.....	$\phi$ 10, 4-conductor shielded cable (500N-m and above) $\phi$ 6, 4-conductor shielded cable (1~200N-m) $\phi$ 3, 4-conductor shielded cable (0.2~0.5N-m)

## Dimensions

MODEL	ITEM	RATED CAPACITY		A	B	C	D	E	$\phi$ F	$\phi$ G	H	$\phi$ I	$\phi$ J	WEIGHT(kg)
TCF-0.2N		0.2N-m	0.020kgf-m	61	3	55	5	45	20	48	38	26	2x4-4.5	0.32
TCF-0.5N		0.5N-m	0.050kgf-m	61	3	55	5	45	20	48	38	26	2x4-4.5	0.32
TCF-1N		1N-m	0.102kgf-m	61	3	55	10	35	40	80	66	48	2x4-6.5	1.20
TCF-2N		2N-m	0.204kgf-m	61	3	55	10	35	40	80	66	48	2x4-6.5	1.20
TCF-5N		5N-m	0.510kgf-m	61	3	55	10	35	40	80	66	48	2x4-6.5	1.21
TCF-10N		10N-m	1.019kgf-m	61	3	55	10	35	40	80	66	48	2x4-6.5	1.30
TCF-20N		20N-m	2.039kgf-m	61	3	55	10	35	40	80	66	48	2x4-6.5	2.20
TCF-50N		50N-m	5.099kgf-m	61	3	55	10	35	40	80	66	48	2x4-6.5	4.20
TCF-100N		100N-m	10.19kgf-m	61	3	55	10	35	40	80	66	48	2x4-6.5	6.50
TCF-200N		200N-m	20.39kgf-m	86	3	80	15	50	40	98	78	58	2x6-10.5	9.70
TCF-500N		500N-m	50.99kgf-m	130	5	120	20	80	60	118	95	58	2x6-10.5	18.00
TCF-1000N		1000N-m	101.9kgf-m	136	3	130	20	90	60	146	115	75	2x6-14	
TCF-2000N		2000N-m	203.9kgf-m	146	3	140	25	90	60	166	130	88	2x8-18	
TCF-5000N		5000N-m	509.9kgf-m	176	3	170	35	100	60	197	155	98	2x12-17	

UNIT: mm

# DIGITAL INDICATOR

MODEL: **IND-7660**

## Enjoying Plenty of Functions for Automatic Control

This indicator can be connected with strain gauge type load cell and pressure transducer to show data detected by those transducers. It has various functions to process data, form judgement, and output to outer appliances.



## Features

### • Functional Digital Calibration

Instead of actual load calibration, this indicator adopts digital calibration by inputting rated voltage output (mV/V).

### • Easy to Check Graphic LCD

Easily make settings on the indicator in dialog style by checking messages on the graphic LCD.

### • Various Digital Processing

Analog signals from transducers will be effectively converted into digital signals by A/D converter at the rate of 640 times/sec.

### • Intelligent Judgement Function

By lighting on the HI, OK, or LOW lamp and proceeding signal output to judge the test result.

### • Options

Models with RS-232C interface or analog output (4-20mA) are available.

## Specifications

Range of Gain Adjustment	Full scale setting of 0.5mV/V~2.5mV/V
Value Display Range	± 10000
Linearity	0.05% of F.S. ±1digit
A/D Converter	16 bit 640 times/sec.
LED Lamp	4 lamps Red (HI, LOW) Green (OK) Yellow (HOLD)
Key Switch	4 switches ZERO, MENU, RESET, HOLD
Comparator Function	Top/bottom value setting
Data Hold Function	Peak, bottom, signal from outer appliances, peak or bottom data in limited area, limited period top point or change point
Output Signal	Open collector O.L, HI, OK, LOW
Input Signal	Contact point or open collector ZERO, HOLD, RESET
Outer Power Supply	DC24V for input/output signal isolation
Optional Models	Indicator unit with RS-232C interface Indicator unit with analog output 4-20mA
Power Supply	AC 85V~265V
Operation Condition	Temperature:5~40℃ Humidity less than 85%RH (No bedewing)
Outer Dimension	96W x 96H x 155D mm (Panel cut 92x92mm)
Weight	Approx. 900g

※ The above specifications are subject to change without notice.

# PRESS LOAD CONTROL SYSTEM

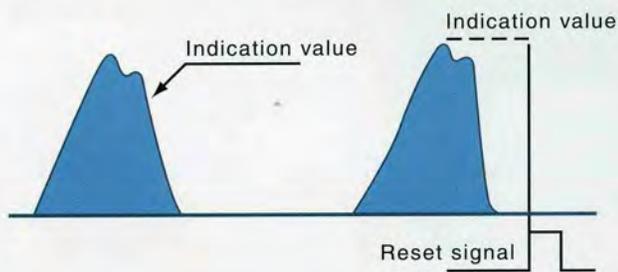
Recently, the press load control system has become more and more important when the machine is in operation. The system can be installed easily to various types of press machines such as: powder metal press, caulking, forging, and hot press.

## Features

- It adopts strain gauge type load cell, so the deformability is extremely low.
- It uses digital Indicator, Model No.: IND-7660
- Standardized auto zero
- High speed sampling rate (1,000/sec.)
- Available peak hold and data hold
- Maintain peak value automatically even exceed press stroke and it will transmit an OK-NG signal.

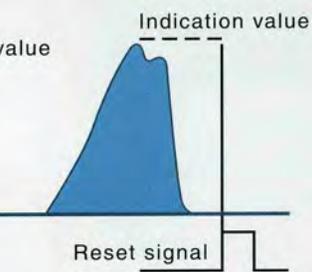


Fig. 1



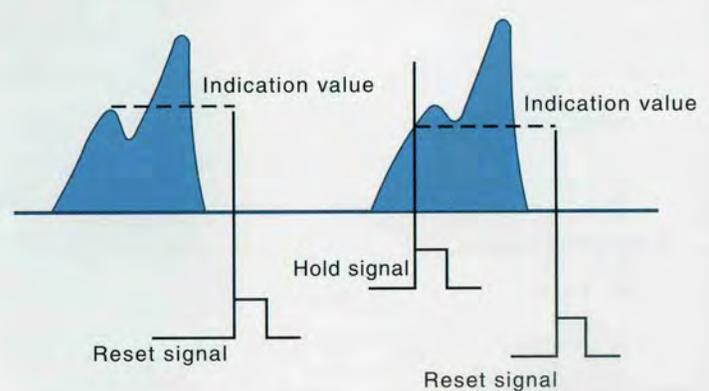
Used for leisurely load without peak hold.

Fig. 2



Peak hold of max. load value when pressed and distinct Yes-No.

Fig. 3



Maintain peak value automatically even exceed press stroke.

Fig. 4

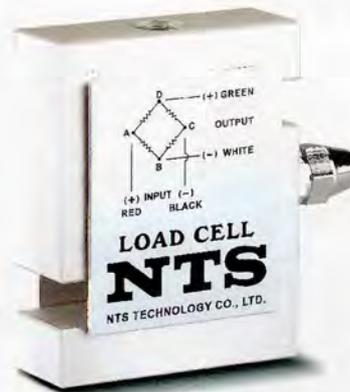
Distinct Yes-No by data hold of pressed stroke.

# TENSION & COMPRESSION TYPE LOAD CELL

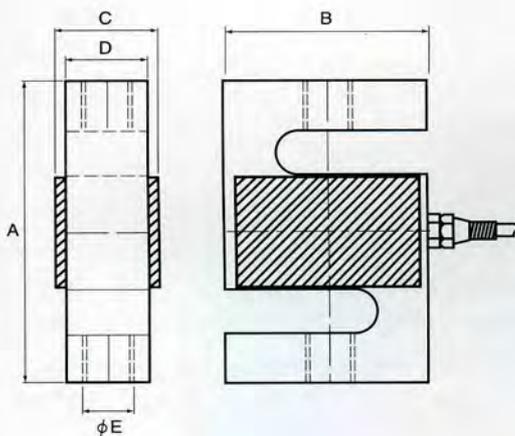
MODEL: **NTA**

## Applications

- Crane Scale
- Belt Scale
- Tensile Testing
- Silo and Tank Weighing
- Industrial Scale
- Mechanical Conversion Kits



## Outline



## Standard Specifications

Rated Capacity.....	1KN~5KN
Rated Output.....	2±0.05mV/V
Zero Balance.....	±0.03%R.O.
Creep Error (20 minutes).....	±0.04%R.O.
Repeatability.....	±0.02%R.O.
Recommended Input Voltage.....	10V
Maximum Input Voltage.....	15V
Input Resistance.....	390±3Ω
Output Resistance.....	350±3Ω
Compensated Temperature Range.....	-10~+40°C
Operating Temperature Range.....	-20~+60°C
Temperature Effect on Zero Balance.....	±0.01%R.O./°C
Temperature Effect on Rated Output.....	±0.01%/°C
Safe Overload Rating.....	150%R.C.
Ultimate Load.....	200%R.C.
Material.....	Aluminum
Sealing.....	Complete hermetic sealing; cable entry sealed by metal header
Protection Class.....	IP 66
Cable.....	φ 6, 4-conductor shielded cable 4m long

## Dimensions

MODEL	ITEM	RATED CAPACITY		A	B	C	D	φE
NTA-1KN		1KN	101.9kgf	76.2	50.8	24.4	20	M12
NTA-2.5KN		2.5KN	254.9kgf	82.0	64.0	27.4	23	M12
NTA-5KN		5KN	509.9kgf	82.0	64.0	27.4	23	M12

UNIT: mm

# BEAM TYPE LOAD CELL

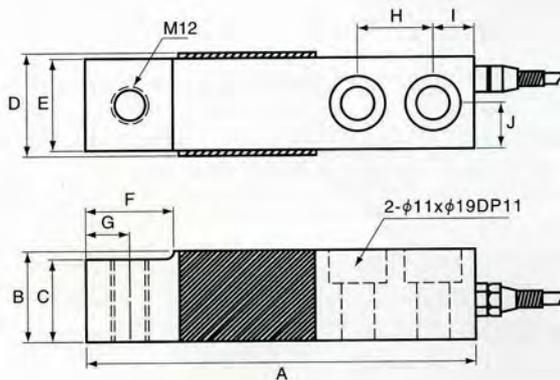
MODEL: **NSA**

## Applications

- Platform Scale
- Silo and Tank Weighing



## Outline



## Standard Specifications

Rated Capacity.....	1.5KN~10KN
Rated Output.....	2 ± 0.05mV/V
Zero Balance.....	± 0.03%R.O.
Creep Error (20 minutes).....	± 0.025%R.O.
Repeatability.....	± 0.02%R.O.
Recommended Input Voltage.....	10V
Maximum Input Voltage.....	15V
Input Resistance.....	390 ± 3Ω
Output Resistance.....	350 ± 3Ω
Compensated Temperature Range.....	-10~+40°C
Operating Temperature Range.....	-20~+60°C
Temperature Effect on Zero Balance.....	± 0.01%R.O./°C
Temperature Effect on Rated Output.....	± 0.01%/°C
Safe Overload Rating.....	150%R.C.
Ultimate Load.....	200%R.C.
Material.....	Aluminum
Sealing.....	Potted
Protection Class.....	IP 66
Cable.....	φ 6 shielded wire round cable 2m long

## Dimensions

MODEL	ITEM	RATED CAPACITY	A	B	C	D	E	F	G	H	I	J
NSA-1.5KN		1.5KN 152.9kgf	128	30	27	34.4	30	28	14	25	14	15
NSA-2KN		2KN 203.9kgf	128	30	27	34.4	30	28	14	25	14	15
NSA-3KN		3KN 305.9kgf	128	30	27	34.4	30	28	14	25	14	15
NSA-5KN		5KN 509.9kgf	128	30	27	34.4	30	28	14	25	14	15
NSA-7.5KN		7.5KN 764.8kgf	128	30	27	34.4	30	28	14	25	14	15
NSA-10KN		10KN 1.019tonf	128	30	27	34.4	30	28	14	25	14	15

UNIT: mm

# SINGLE POINT LOAD CELL

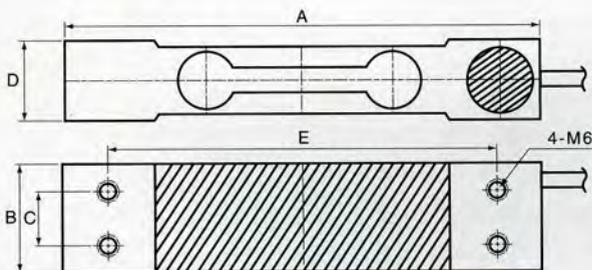
MODEL: **NBA**

## Applications

- Price Scale
- Counting Scale
- Weighing Scale



## Outline



## Standard Specifications

Rated Capacity.....	30N~350N
Rated Output.....	$2 \pm 0.05 \text{mV/V}$
Zero Balance.....	$\pm 0.03\% \text{R.O.}$
Creep Error (20 minutes).....	$\pm 0.025\% \text{R.O.}$
Repeatability.....	$\pm 0.02\% \text{R.O.}$
Recommended Input Voltage.....	10V
Maximum Input Voltage.....	15V
Input Resistance.....	$394 \pm 3\Omega$
Output Resistance.....	$350 \pm 3\Omega$
Compensated Temperature Range.....	$-10 \sim +40^\circ \text{C}$
Operating Temperature Range.....	$-20 \sim +60^\circ \text{C}$
Temperature Effect on Zero Balance.....	$\pm 0.01\% \text{R.O./}^\circ \text{C}$
Temperature Effect on Rated Output.....	$\pm 0.01\% / ^\circ \text{C}$
Safe Overload Rating.....	150%R.C.
Ultimate Load.....	200%R.C.
Material.....	Aluminum
Sealing.....	Potted
Protection Class.....	IP 65
Maximum Platform Size.....	380x380mm
Cable.....	$\phi 6$ shielded wire round cable 45cm long

## Dimensions

MODEL	ITEM	RATED CAPACITY		A	B	C	D	E
NBA-30N		30N	3.06kgf	130	30	15	22	106
NBA-60N		60N	6.12kgf	130	30	15	22	106
NBA-120N		120N	12.24kgf	130	30	15	22	106
NBA-200N		200N	20.39kgf	130	30	15	22	106
NBA-350N		350N	35.69kgf	130	30	15	22	106

UNIT: mm

# SINGLE POINT LOAD CELL

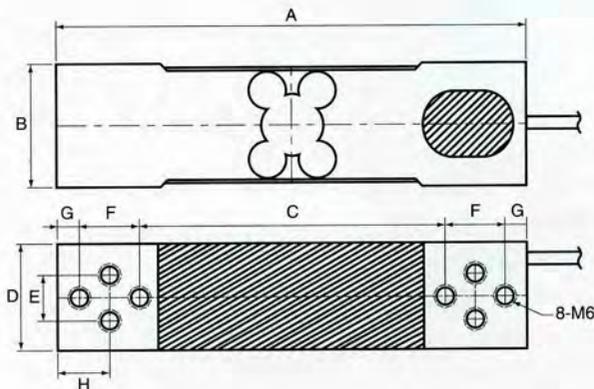
MODEL: **NBB**

## Applications

- Bench Scale
- Platform Scale



## Outline



## Standard Specifications

Rated Capacity.....	350N~5KN
Rated Output.....	2±0.05mV/V
Zero Balance.....	±0.03%R.O.
Creep Error (20 minutes).....	±0.025%R.O.
Repeatability.....	±0.02%R.O.
Recommended Input Voltage.....	10V
Maximum Input Voltage.....	15V
Input Resistance.....	402±3Ω
Output Resistance.....	350±3Ω
Compensated Temperature Range.....	-10~+40°C
Operating Temperature Range.....	-20~+60°C
Temperature Effect on Zero Balance.....	±0.01%R.O./°C
Temperature Effect on Rated Output.....	±0.01%/°C
Safe Overload Rating.....	150%R.C.
Ultimate Load.....	200%R.C.
Material.....	Aluminum
Sealing.....	Potted
Protection Class.....	IP 65
Maximum Platform Size.....	500x500mm
Cable.....	φ6 shielded wire round cable 2m long

## Dimensions

MODEL	ITEM	RATED CAPACITY	A	B	C	D	E	F	G	H
NBB-350N		350N 35.69kgf	150	40	78.4	35	15	19	7	16.5
NBB-600N		600N 61.18kgf	150	40	78.4	35	15	19	7	16.5
NBB-1KN		1KN 101.9kgf	150	40	78.4	35	15	19	7	16.5
NBB-2KN		2KN 203.9kgf	150	40	78.4	35	15	19	7	16.5
NBB-3KN		3KN 305.9kgf	150	40	78.4	35	15	19	7	16.5
NBB-5KN		5KN 509.9kgf	150	40	78.4	35	15	19	7	16.5

UNIT: mm

# SINGLE POINT LOAD CELL

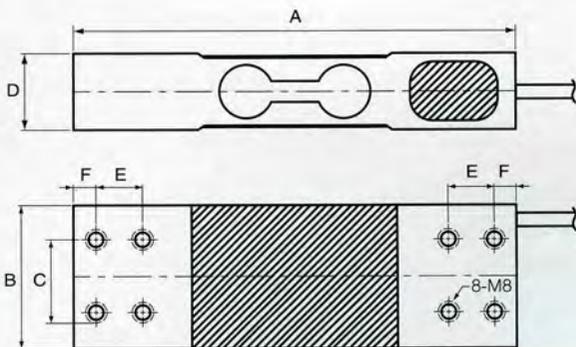
MODEL: **NBD**

## Applications

- Bench Scale
- Platform Scale



## Outline



## Standard Specifications

Rated Capacity.....	1KN~7.5KN
Rated Output.....	2±0.05mV/V
Zero Balance.....	±0.03%R.O.
Creep Error (20 minutes).....	±0.025%R.O.
Repeatability.....	±0.02%R.O.
Recommended Input Voltage.....	10V
Maximum Input Voltage.....	15V
Input Resistance.....	414±3Ω
Output Resistance.....	350±3Ω
Compensated Temperature Range.....	-10~+40 °C
Operating Temperature Range.....	-20~+60 °C
Temperature Effect on Zero Balance.....	±0.01%R.O./°C
Temperature Effect on Rated Output.....	±0.01%/°C
Safe Overload Rating.....	150%R.C.
Ultimate Load.....	200%R.C.
Material.....	Aluminum
Sealing.....	Potted
Protection Class.....	IP 65
Maximum Platform Size.....	600x600mm
Cable.....	φ 6 shielded wire round cable 2m long

## Dimensions

MODEL	ITEM	RATED CAPACITY	A	B	C	D	E	F
NBD-1KN		1KN 101.9kgf	174	60	30	30	19	7
NBD-1.5KN		1.5KN 152.9kgf	174	60	30	30	19	7
NBD-2KN		2KN 203.9kgf	174	60	30	30	19	7
NBD-3KN		3KN 305.9kgf	174	60	30	30	19	7
NBD-5KN		5KN 509.9kgf	174	60	30	30	19	7
NBD-7.5KN		7.5KN 764.8kgf	174	60	30	30	19	7

UNIT: mm

# SINGLE POINT LOAD CELL

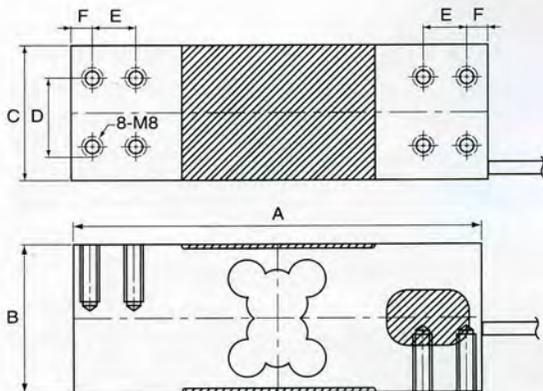
MODEL: **NBE**

## Applications

- Bench Scale
- Platform Scale



## Outline



## Standard Specifications

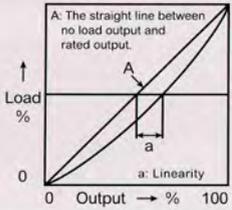
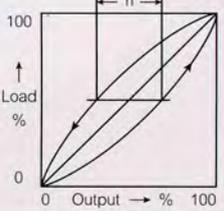
Rated Capacity.....	600N~10KN
Rated Output.....	$2 \pm 0.05\text{mV/V}$
Zero Balance.....	$\pm 0.03\%\text{R.O.}$
Creep Error (20 minutes).....	$\pm 0.025\%\text{R.O.}$
Repeatability.....	$\pm 0.02\%\text{R.O.}$
Recommended Input Voltage.....	10V
Maximum Input Voltage.....	15V
Input Resistance.....	$414 \pm 3\Omega$
Output Resistance.....	$350 \pm 3\Omega$
Compensated Temperature Range.....	$-10 \sim +40^\circ\text{C}$
Operating Temperature Range.....	$-20 \sim +60^\circ\text{C}$
Temperature Effect on Zero Balance.....	$\pm 0.01\%\text{R.O./}^\circ\text{C}$
Temperature Effect on Rated Output.....	$\pm 0.01\%/^\circ\text{C}$
Safe Overload Rating.....	150%R.C.
Ultimate Load.....	200%R.C.
Material.....	Aluminum
Sealing.....	Potted
Protection Class.....	IP 65
Maximum Platform Size.....	800x800mm
Cable.....	$\phi 6$ shielded wire round cable 2m long

## Dimensions

MODEL	ITEM	RATED CAPACITY		A	B	C	D	E	F
NBE-600N		600N	61.18kgf	174	64	60	30	19	7
NBE-1KN		1KN	101.9kgf	174	64	60	30	19	7
NBE-1.5KN		1.5KN	152.9kgf	174	64	60	30	19	7
NBE-2KN		2KN	203.9kgf	174	64	60	30	19	7
NBE-3KN		3KN	305.9kgf	174	64	60	30	19	7
NBE-5KN		5KN	509.9kgf	174	64	60	30	19	7
NBE-7.5KN		7.5KN	764.8kgf	174	64	60	30	19	7
NBE-10KN		10KN	1.019tonf	174	64	60	30	19	7

UNIT: mm

# DEFINITIONS OF TERMS REGARDING LOAD CELL

TERMS	DEFINITIONS
Rated Capacity (R.C.)	The maximum force measured by continuous test of load cell according to its specifications.
Rated Output	The value subtracted output value of no load from output value of rated capacity. Generally, it is expressed as mV/V or relative strain.
Non-Linearity	The maximum deviation of calibration curve against the straight line between no load output and rated output, and expressed by percentage of rated output. It is measured while being loaded. 
Hysteresis	The maximum difference of output value of load cell between load is increased and load is decreased, and is expressed by percentage of rated output. 
Repeatability	The maximum difference of output value among results of repeated tests under the same loading conditions and environment. It is generally measured at the rated capacity and expressed by percentage of rated output.
Recommended Input Voltage	The voltage with that the load cell can perform its optimum function.
Maximum Input Voltage	The maximum voltage at which the load cell is not damaged. In this case, the load cell can perform its function, but the result is not guaranteed.
Input/Output Resistance	Resistance value at input or output terminal when no load is applied.
Insulation Resistance	The direct current resistance between the load cell circuit and the load cell itself. Normally, it is measured at DC50V.
Compensated Temperature Range	The temperature range being compensated to keep the rated output and zero point within the setting range.
Operating Temperature Range	The temperature range that can be used without deforming the characteristics of load cell.
Temperature Effect on Zero Balance	The variation of zero balance when the environment temperature is varied. It is generally expressed by percentage of variation per 1°C to rated output.
Temperature Effect on Rated Output	The variation of rated output when the environment temperature is varied. It is generally expressed by percentage of output variation per 1°C to rated output.
Safe Overload Rating	Limit of load that will not cause permanent deformation of load cell. It is expressed by percentage of rated capacity.
Initial Bridge Balance	Percentage of output at no load to output at rated capacity when the load cell is normally installed.

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