Summing Box

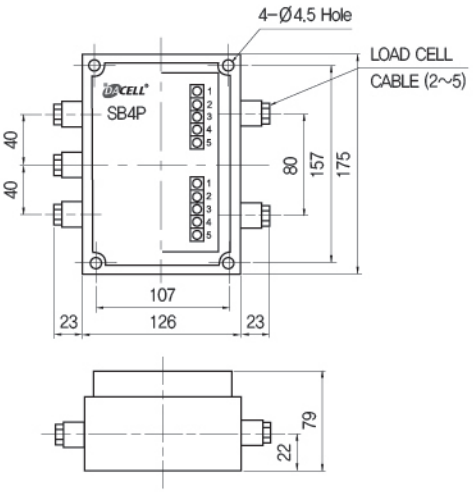
Summing Box

> Model SB4P

Load cell 2 to 4 single cell
Trimming – Individual cell,
excitation trim 0~20 ohms
Potentiomenters – 20 ohms,
20-turn cerment 100ppm
Cable Fitting – input Ø5~Ø8
output Ø5~Ø10
Enclosure – ABS(Acrylnitrile Butadiene Styrene) cast, IP67

>DIMENSIONS

SB4P unit:mm

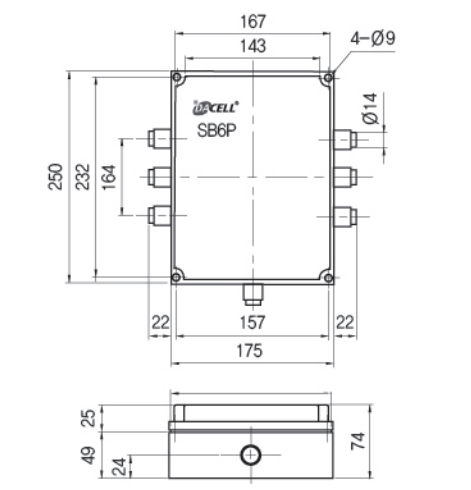


Summing Box

> Model SB6P

Load cell 2 to 6 single cell
Trimming – Individual cell,
excitation trim 0~20 ohms
Potentiomenters – 20 ohms,
20-turn cerment 100ppm
Cable Fitting – input Ø5~Ø10
output Ø5, Ø9~Ø12
Enclosure – ABS(Acrylnitrile Butadiene Styrene) cast, IP67

SB6P unit:mm



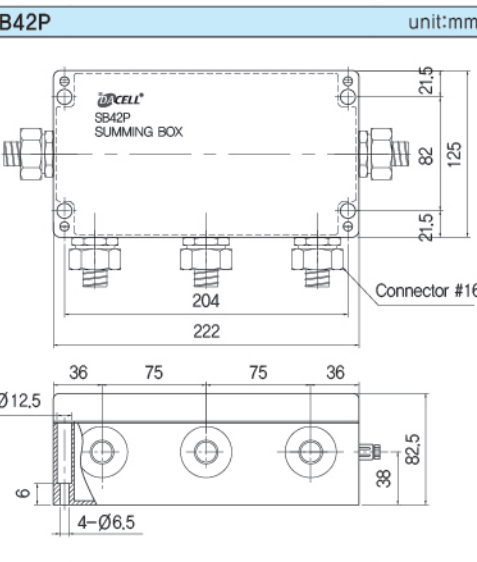
Summing Box

> Model SB42P, SB62P

- 42P : 4 loadcells
- 62P : 6 loadcells

Loadcell 2 to 4 single cells
Trimming – Individual cell,
excitation trim 0~20 ohms
Potentiomenters – 20 ohms,
20-turn cerment 100ppm
Cable Fittings – Ø5~Ø10
Enclosure – Aluminium die-cast, IP67

SB42P unit:mm



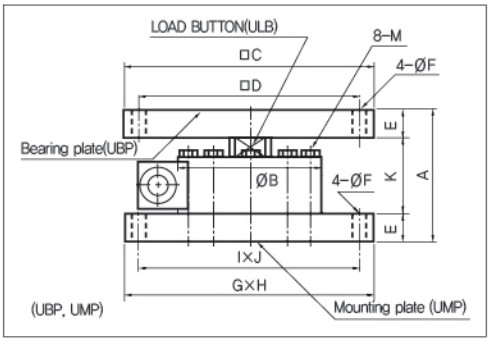
★Specifications are subject to change without notice.

BEARING & MOUNTING PLATE

>LOW PROFILE TYPE(UL)

unit:mm

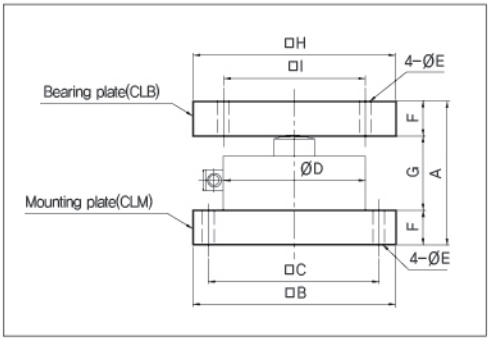
Model	Load Cell Cap	A	B	C	D	E	F	G	H	I	J	M	K
UBP-5 UMP-5	UL-500K	67	88	100	80	15	9	100	100	80	80	6-M6	37
UBP-1 UMP-1	UL-1T~5T	112	118	130	105	23	12	210	130	185	105	8-M8	66
UBP-2 UMP-2	UL-10T	155	180	200	150	30	14	210	200	160	160	8-M12	95
	UL-20T	165	180	200	150	30	14	210	200	160	160	8-M12	105
UBP-3 UMP-3	UL-50T	265	226	260	200	60	23	260	260	200	200	12-M16	145
UBP-4 UMP-4	UL-100T	315	306	360	280	60	27	360	360	280	280	16-M20	195



>LOW PROFILE TYPE(CL)

unit:mm

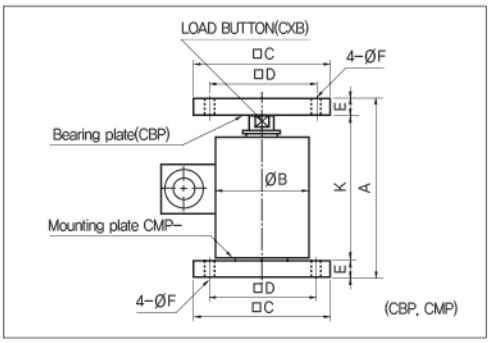
Model	Load Cell Cap	A	B	C	D	E	F	G	H	I
CLB-1 CLM-1	CL-1T~5T	96	150	120	98	9	25	46	150	120
CLB-2 CLM-2	CL-10T	125	160	130	118	12	30	65	160	130
CLB-3 CLM-3	CL-20T	125	190	150	157	14	30	65	180	150
CLB-4 CLM-4	CL-50T	165	230	170	187	23	45	75	220	190
CLB-5 CLM-5	CL-100T	240	320	250	278	27	60	120	310	270



>CANISTER TYPE(CX)

unit:mm

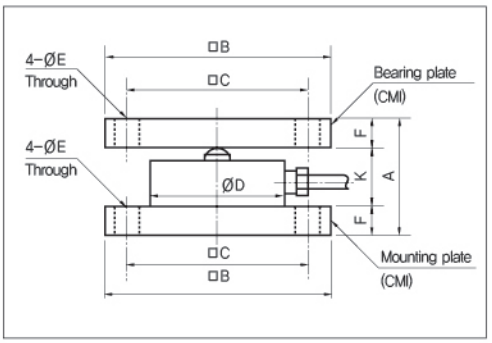
Model	Load Cell Cap	A	B	C	D	E	F	K
CPB-1 CMP-1	CX-50K~CX-1T	162	88	145	110	23	12	434
CPB-2 CMP-2	CX-2T~CX-5T	222	88	145	110	26	12	170
CPB-3 CMP-3	CX-10T	187	93	160	125	30	14	127
	CX-20T~30T	207	93	160	125	30	14	147
CPB-4 CMP-4	CX-50T	245	137	160	125	40	19	165
CPB-5 CMP-5	CX-100T	330	166	260	200	60	23	210



>CM TYPE

unit:mm

Model	Load Cell Cap	A	B	C	D	E	F	G
CMI-1	CM-50K~2T	56	100	78	51	8	15	26
CMI-2	CM-5T	102	160	126	88	14	30	42
	CM-10T	107	160	126	88	14	30	47
CMI-3	CM-20T	110	160	126	114	14	30	50



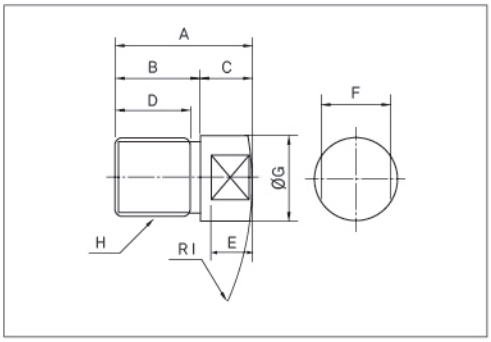
★Specifications are subject to change without notice.

Load Cell Accessory

LOAD BUTTON

unit:mm

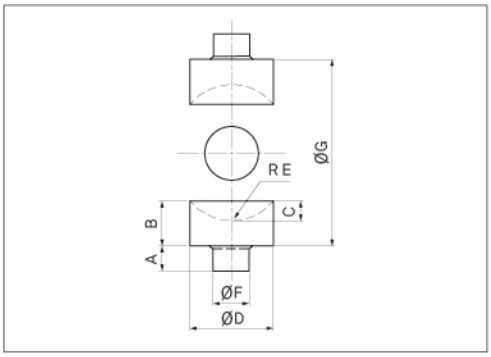
Model	Load Cell Cap	A	B	C	D	E	F	G	H	R I
CXB-1	CX-50K~1T	19	10	9	7	6.7	16	24	M12×1.25	65
CXB-2	CX-2T~5T	43	23	20	19	18	32	42	M24×2	60
ULB-1	UL-1T~5T	60	40	20	36	20	27	34	M18×1.5	100
ULB-2	UL-10T	70	40	30	36	30	36	39	M24×2.0	100
ULB-3	UL-20T	100	60	40	56	40	50	59	M39×2.0	200
ULB-4	UL-50T	105	60	45	56	45	65	80	M50×2	200
ULB-5	UL-100T	145	80	65	75	65	105	116	M76×3	240
ULB-6	UL-500K	27	15	12	13	9	14	20	M12×1.25	65



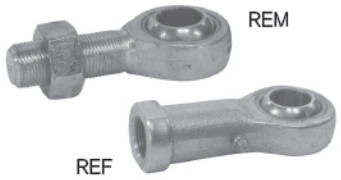
MOVEMENT ABSORBER UNIT FOR CP

unit:mm

Model	Load Cell Cap	A	B	C	ØD	R E	ØF	Ball
CPB11	5kgf~300kgf	11	16	7	30	19.5	11.4	Ø19
CPB13	500kgf~2tf	11	16	7	30	19.5	13.4	Ø19
CPB18	3tf~5tf	11	15	10	40	24.0	18.0	Ø25.4
CPB26	10tf	15	27	12	60	40.0	26.0	Ø38.1



ROD END BEARING

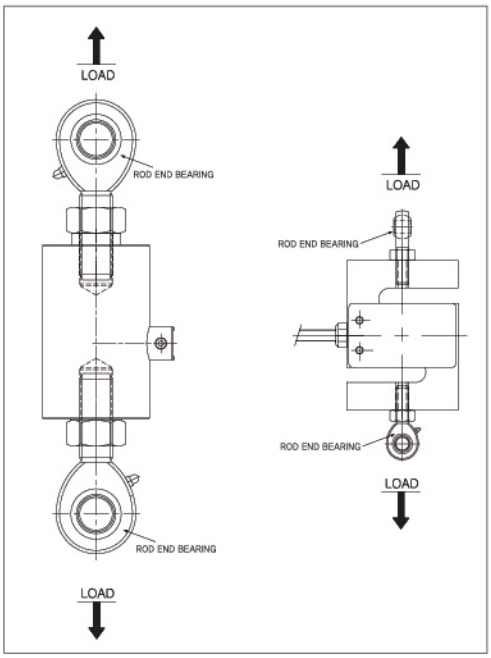


unit:mm

Model	Specification	Pitch	Application			
REF-3	M3	0.5	UMM			
REF-6	M6	1	UMM			
REF-12	M12	1.25	UM			
REF-16	M16	1.5	TX25			
REF-20	M20	1.5	TX25			
REF-24	M24	2	TX25			

unit:mm

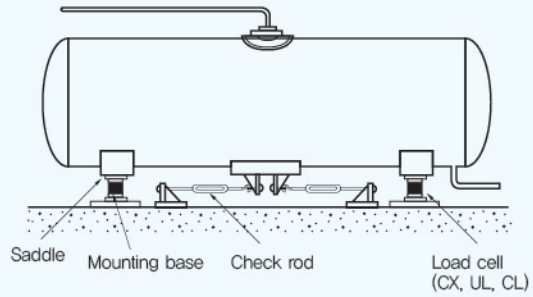
Model	Specification	Pitch	Application			
REM-4	M4	0.7	UMI			
REM-6	M6	1	UU	UU2	UU3	UMI
REM-12	M12	1.25	TX	UL		
REM-12A	M12	1.75	UU	UMI		
REM-18	M18	1.5		UMI		
REM-20	M20	1.5	UU			
REM-24	M24	2	TX	UU		
REM-39	M39	2	TX	UU		



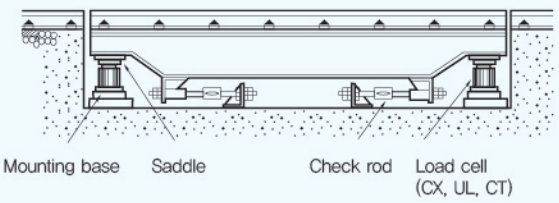
★Specifications are subject to change without notice.

Load Cell Serve Extensively

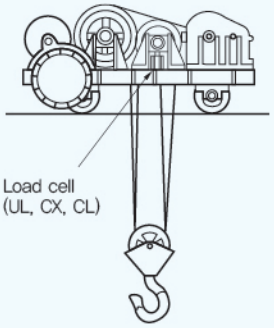
Measurement of tank's storage capacity



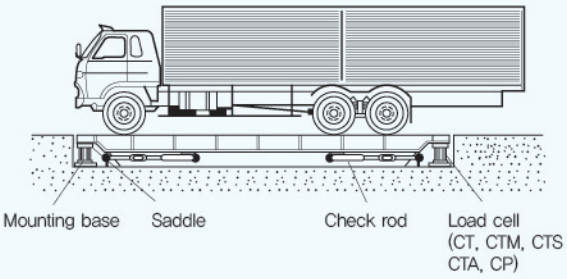
Measurement of freight-car weight



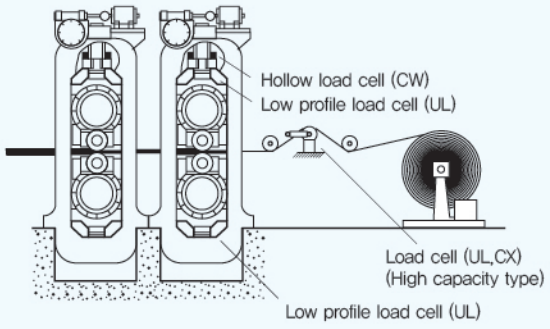
Measurement of swing weight



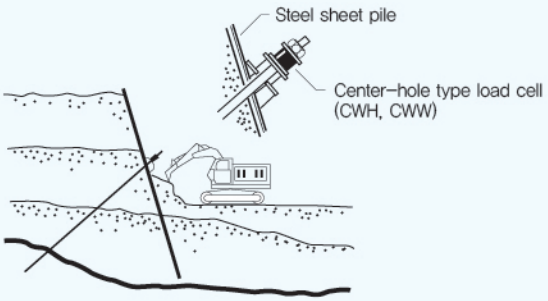
Measurement of truck weight



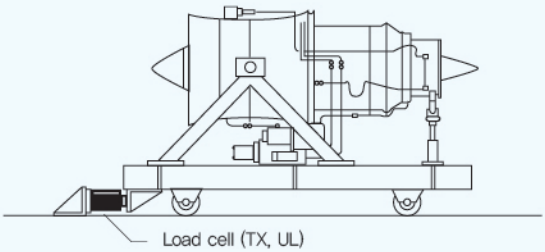
Measurement of rolling mill roll pressure



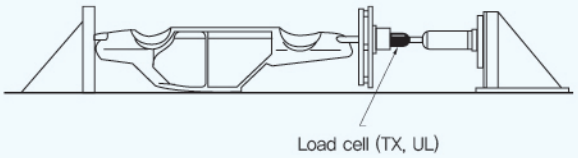
Measurement of load to bank with steel sheet pile



Measurement of jet engine's thrust



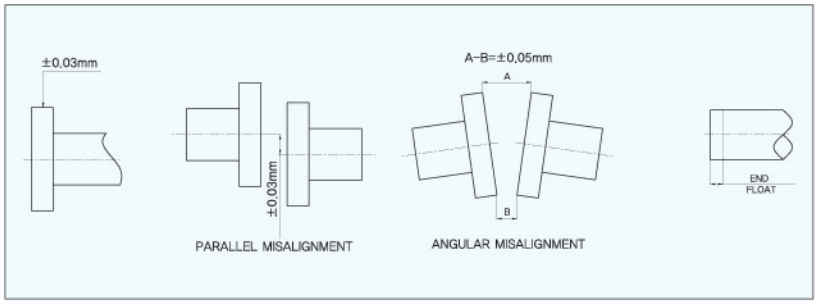
Measurement of vehicle body



Installation of Torque Sensors

1. Shaft Misalignments

Parallel misalignment is the offset of two mating shaft centerlines although the centerlines remain parallel to each other. Angular misalignment is two shaft centerlines intersecting at some angle other than zero degrees. End float is the relative displacement of one shaft end with respect to the other.



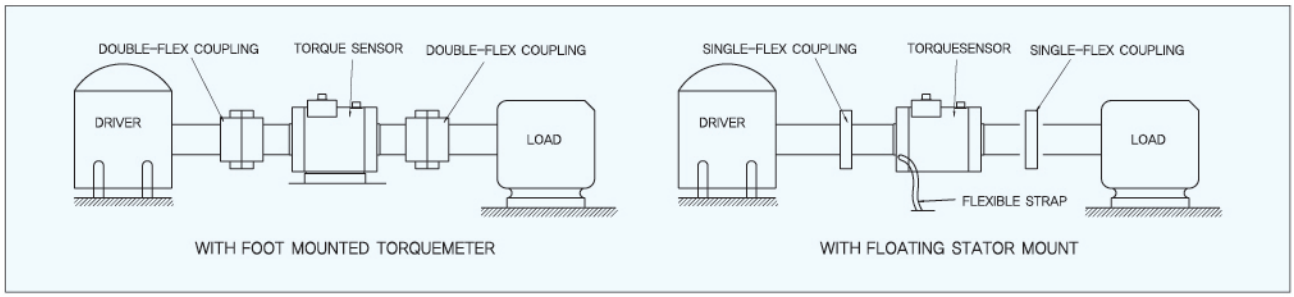
2. Coupling Types (single-flex, double-flex and rigid Coupling)

A single−flex coupling accepts angular misalignment only. That means it acts as a hinge or a pivot and cannot accept parallel misalignment. A double−flex coupling accept both angular and parallel misalignment. It may be visualized as two single−flex couplings with a short spacer or distance between the pivots. Depending on their design, both single−flex and double−flex types may or may not accept end float. A rigid coupling, as its name implies, is merely a set of rigid flanges mounted on a shaft. It cannot compensate for or permit any misalignment.

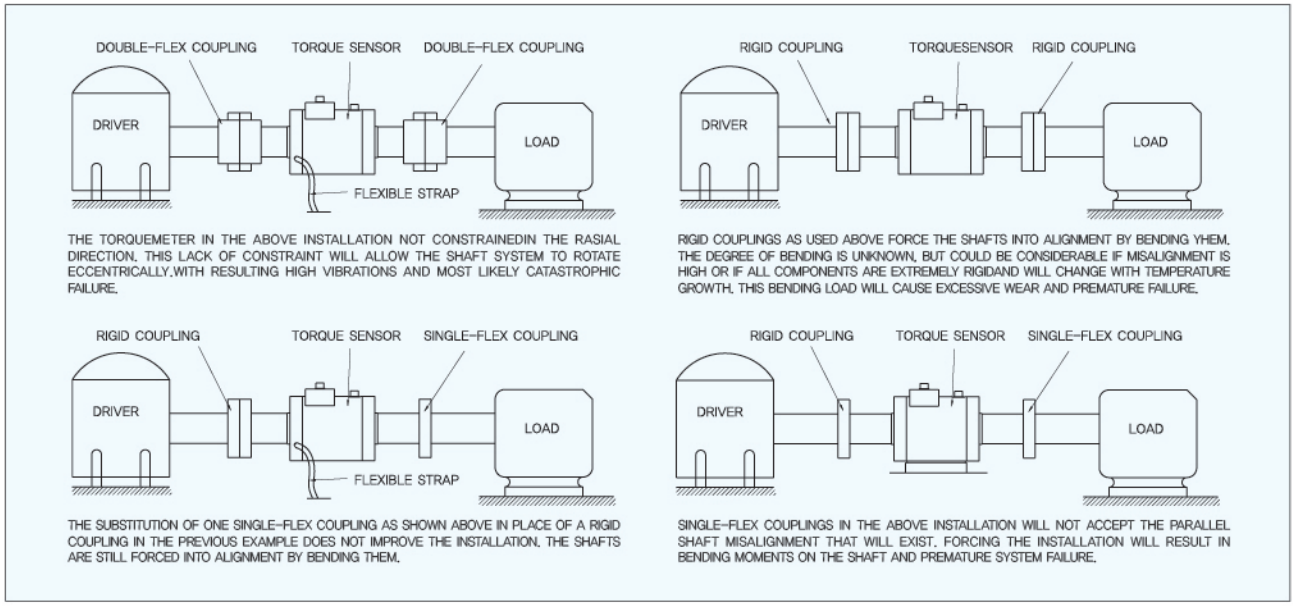
3.Torquemeter Mountings

Floating Shaft − applicable to both shaft and flange type torquemeters. Use a single flex coupling at each shaft end to accommodate angular misalignment Foot Mounted − for shaft style torquemeters only. Use a double flex coupling at each shaft end to handle both parallel and angular misalignments.

BEST INSTALLATIONS



INCORRECT INSTALLATIONS



Technical Definitions of Terminology

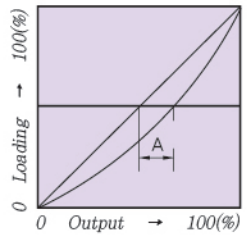
❶ RATED CAPACITY (R.C.)

The maximum axial load that a load cell is designed to measure within its specification.

❷ RATED OUTPUT (R.O.)

The algebraic difference between the outputs at no-load and at rated load.
Usually load cell output is specified in milli-volts per volt at rated capacity.

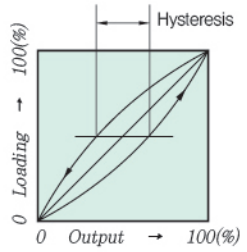
❸ NON-LINEARITY



The maximum deviation of the cali-bration curve from a straight line between zero and rated load outputs, expressed as a percent of the rated output and measured on increasing load only.

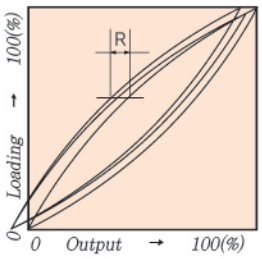
A: Linar line drawn to obtain terminal linearity

❹ HYSTERESIS



The maximum difference between output readings for the same applied load one point obtained while increasing from zero and the othr while decreasing from rated output. The points are taken on the same continuous cycle. The deviation is expressed as a percent of rated output.

❺ REPEATABILITY



The ability of a load cell to reproduce output readings when the same load is applied to it consecutively, under the same conditions, and in the same direc-tion. Repeatability is expressed as the maximum difference between output readings as a percent of rated output.

❻ ZERO BALANCE

The output signal of the load cell with rated exitation and with no load applied, usually expressed in percent of rated output.

❼ TEMPERATURE RANGE, COMPENSATED

The range of temperature over which the load cell is compensated to maintain rated output and zero balance withn specific limits.

❽ TEMPERATURE RANGE, SAFE

The range of temperature over which the load cell may be safely operated up to full scale without causing failure but specifications may not be met.

❾ TEMPERATURE EFFECT ON RATED OUTPUT

The change in rated output due to a change in ambient temperature. Usually expressed as +/- a percentage change in rated output per degree C change in ambient temparature, over the compensated temperature range.

❿ TEMPERATURE EFFECT ON ZERO BALANCE

The change in zero balance due to a change in ambient temperature. Usually expressed as +/- a percentage change in rated output per degree C change in ambient temperature, over the compensated temperature range.

⓫ TERMINAL RESISTANCE, INPUT

The resistance of the load cell circuit measured at the excitation terminal, at standard temperature, with no-load applied, and with the output terminals open-circuited.

⓬ TERMINAL RESISTANCE, OUTPUT

The resistance of the load cell circuit measured at the output signal terminals, at standard temperature, with no-load applied, and with the excitation terminals opencircuited.

⓭ INSULATION RESISTANCE

The DC resistance expressed in ohms measured between any electrical connector pin or lead wire and the load cell body or case. Normally measured at 50 V DC.

⓮ EXCITATION

The voltage or current applied to the input terminals of the load cell.

⓯ SAFE OVERLAD

The maximum load in percent of rated capacity which can be applied without causing a permanent change in the performance specifications.

⓰ ULTIMATE OVERLOAD

The maximum load in percent of rated capacity which can be applied wuthout producing a structural failure.

⓱ CREEP

The change in load cell output occurring with time, while under load, and with all environmental conditions and other variables remaining constant.
Usually measured with rated load applied and expressed as a percent of rated output over a specific period of time.

⓲ ACCURACY

Stated as a limit tolerance which defines the average deviation between the actual output versus theoretical output.
In practical load cell applications, the potential errors of nonlinearity, hysteresis, repeatability and temperature effects do not normally occur simultaneously, nor are they necessarily additive.
Therefore, accuracy is calculated based upon the RMS value of potential errors, assuming a temperature band of ±10℃, full rated load applied, and proper set up and calibration. Potential errors of the readout, cross talk, or creep effects are not included.