



- Contactless Torque Sensor
- Contact Torque Sensor
- Non-rotating Torque Sensor
- Displacement Sensor
- RPM Sensor
- Digital Indicator
- Amplifier

# TORQUE SENSOR

## Product Catalog

**CAS**

# WE WEIGH THE WORLD™

Since its founding in 1983, CAS Corporation consistently aims at becoming a leader in the international weighing industry. By offering a variety of products and dedicated customer service, CAS rapidly developed its global network system. With a manufacturing facility and Headquarter located in South Korea, CAS has expended its business territory further to United States, India, Russia, Turkey and China including active sale performance in over 120 overseas countries. Our global network and cutting-edge technology will ensure total customer satisfaction.

- 1983 Company established
- 1989 Acquired FCC US Official Standards
- 1990 Acquired NSC Australian Measuring Verification Standards  
Assigned as a National Verification and Correction Facility (177)  
[Established CAS USA](#)
- 1991 Acquired NBS US Measuring Verification Standards  
Approved by NTEP & UL, US Safety Standards
- 1992 Developed strain gage | [Established CAS Turkey](#)  
Developed the first label printer in the Korean market
- 1993 Approved by CSA (Canada)
- 1994 [Established CAS Russia](#)  
Acquired the first OIML, EU Standards
- 1995 [Established CAS China](#)
- 1996 [Established Shanghai factory in China](#)  
Acquired the first ISO 9001 in the Korean weighing industry
- 1997 [Established CAS TSC \(service center\) in Russia](#)
- 1999 [Established CAS India](#)  
Acquired EC Self-Verification Certification
- 2000 Awarded the Best Certification Company by ISO9000
- 2001 Awarded the Best Certification Company by ISO9000  
for two consecutive years  
Awarded the best prize for Precision technology  
Acquired Japanese NMIJ Standards Certification  
[Established CAS New Zealand](#)
- 2002 Awarded the Best Global Company by Japanese  
Management Association  
Awarded Russia Golden Balance 2002
- 2003 CAS Europe Tour
- 2004 [Established CAS Poland](#)
- 2005 Granted 30 million dollar export Tower from the government  
[Established CAS Deutschland](#) | [Established Bangladesh](#)
- 2006 The first CAS Global Business Conference in Korea
- 2007 The second CAS Global Business Conference in Korea  
Awarded the Global Star prize  
Awarded the Techno CEO prize
- 2008 The third CAS Global Business Conference in Korea  
Acquired certificate of quality control system of medical  
instrument  
Selected as a electric scale providing company in Chinese  
standardized market
- 2009 Fourth CAS Global Business Conference in Korea  
[Established CAS Nicaragua](#)
- 2010 [Established CAS Bangladesh Chittagong](#)  
[Service center/office](#)
- 2011 Acquired as Self-National verification & correction Facility  
from Korean Agency for Technology and Standard
- 2012 [Established Vietnam](#)
- 2013 [Jiashan factory, China, Completed](#)  
Nominated for WC300  
[Established CAS Chemical](#)  
[Established CAS E&C](#)
- 2014 Chosen to execute 1<sup>st</sup> year project for the [World Class300](#)  
Designated as No.1 brand in Global Brand Competency  
Index(GBCI)
- 2015 Chosen to execute 2<sup>nd</sup> year project for the [World Class300](#)  
Received 2015 Global Excellence Awards
- 2016 Designated as No.1 brand in Global Customer Satisfaction  
Competency Index(GCSI)
- 2018 Designated as No.1 brand in Global Brand Competency  
Index(GBCI)  
Designated as No.1 brand in Global Customer Satisfaction  
Competency Index(GCSI)



# CONTENTS

TYPE	MODEL	CAPACITY (kgf.cm)	ACCURACY (%R.O)	OUTPUT	RPM	Page
Contactless Torque Sensor	SNR	1 ~ 500	≤ 0.2	CAN DIGITAL	OPTION	5p
	SNA	1 ~ 5				6p
	SNF	1 ~ 20				7p
	SNRC	20 ~ 500				8p
	SNC	10 ~ 1000				9p
Contact Torque Sensor	SA	1 ~ 1000	≤ 0.25	1.3 ± 0.3 mV/V	OPTION	10p
	SC	5 ~ 1000			-	11p
	SCR	5 ~ 1000			OPTION	12p
	SAF	1 ~ 300			OPTION	13p
	SF	5 ~ 50			-	14p
Non-rotating torque Sensor	NE	1 ~ 1000	≤ 0.25	1.3 ± 0.3 mV/V	-	15p
	NF	5 ~ 1000				16p
	NS	5 ~ 1000				17p
	NT	1 ~ 300				18p
Displacement Sensor	LP	10 ~ 100 mm	±0.4 % F.S	2kΩ(10mm), 5k(30~100mm)	-	19p
	DP	4 ~ 10 mm	0.1 %	-	-	20p
	CP	500 ~ 200 mm	±0.25 % F.S	5kΩ ~ 10kΩ	-	21p
	LDT	5 ~ 200 mm	≤±0.1% F.S	2 mV/V	-	22p
RPM Sensor	RS-025	1~20,000 r/min	-	Retangular waveform Hi : 5V ± 0.5V, Lo: +0.5V or less	-	23p

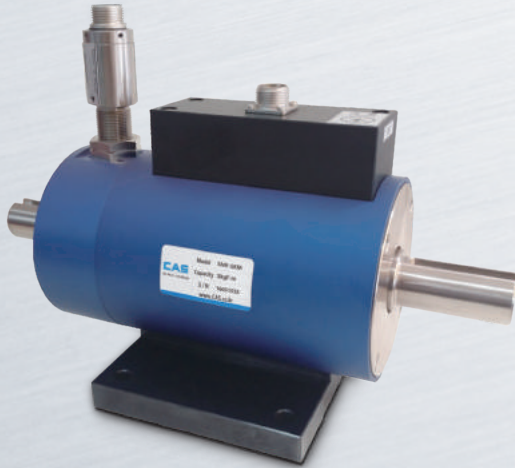
TYPE	MODEL	IN PUT	AD BIT, SAMPLING	SIZE, DISPLAY	RPM	Page
Digital Indicator MGI Series	2100	CAN DIGITAL	-19999 ~ +99999	96 X 96 3.5" TFT Touch LCD	-	25p
	2200	CAN Dual Input	-19999 ~ +99999		0	26p
	3200	S/G Dual Input	-19999 ~ +99999		0	27p
Digital Indicator SS-Series	100	S/G	-19999 ~ +99999	96 X 96 7 segment LED	-	28p
	130	S/G, RPM Sensor (RS-025) Dual Input	-19999 ~ +99999 0 ~ 60000 / 24 ,1000Hz		0	29p
	130D	S/G Dual Input	-19999 ~ +99999 / 24 ,1000Hz		-	30p
	200	S/G	-19999 ~ +99999 / 24 ,1000Hz		-	31p
	10W	S/G	-19999 ~ +99999 / 16 ,100Hz	96 x 48 5 Digit	-	32p
	20W	Resistive Displacement Sensor, Voltage Current Output Type Sensor	-19999 ~ +99999 / 16 ,100Hz		-	33p
	25W	LVDT	-19999 ~ +99999 / 16 ,100Hz		-	34p
	30W	RPM (RS-025)	0 ~ 99999		-	35p
	50W	S/G	-19999 ~ +99999 24, 1000Hz		-	36p
	201	Resistive Displacement Sensor	-19999 +99999		-	37p
	301	S/G	-19999 +99999		-	38p
	501	Voltage Current Output Type Sensor	-19999 +99999		-	39p
	2100	CAN DIGITAL	-19999 +99999		-	40p
Amplifier ST Series	LCT <sup>PRO</sup>	-	-	-	-	41p
Applications	Dynamometer Torque Measurem	-	-	-	-	43p



# Torque Sensor

**SNR / SNA / SNF / SNRC / SNC / SA / SC / SCR / SAF / SF / NE / NF / NS / NT / LP / DP / CP / LDT / RS-025**

CAS has excellent technology in weighing, measuring and control fields, and provides high accuracy torque sensors for various industrial environments.



**FEATURE**

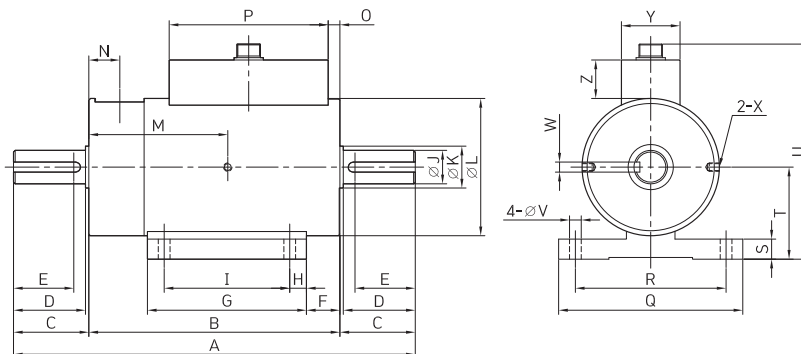
- ▶ Shaft type, non-contacting digital torque sensor
- ▶ Static, dynamic torque measurement and RPM (optional) measurement of rotating equipment (10,000 RPM)
- ▶ Torque measurement of motor load test, bolt torque, reducer, car parts, etc
- ▶ As built-in amplifier, it minimizes NOISE effects compared to mV / V output type sensor
- ▶ Since the output type is CAN digital type, the influence of line noise is less than that of analog type
- ▶ No interference by CARRIER frequency (SYNC is unnecessary)

**SPECIFICATIONS**

Rated Capacity(R.C.)	1,2,5,10,20,50,100,200,300,500 kgf·m
Total error	≤ 0.2% R.O.
Repeatability	≤ 0.2% R.O.
Creep(30min.)	≤ 0.2% R.O.
Zero Balance	≤ 0.1% F.S.
Resolution	± 1/30,000
Excitation Voltage	12 ~ 28V DC
Output	CAN DIGITAL DATA
Output Speed	2000 Times/sec
Temperature effect, on rated output	≤ 0.2% LOAD / 10°C
Temperature effect, on zero balance	≤ 0.2% R.O. / 10°C
Safety Overload	150% R.C.
Temperature operating	0 ~ 60°C
Cable	Ø 5 Shield 5m

**DIMENSIONS**

▶ SNR



Capa.	A	B	C	D	E	F	G	H	I	ØJ	ØK	ØL	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1-5 kgf.m	240	150	45	43	36	20	95	10	75	20	25	82	83	18.5	7	95	110	90	12	55±0.1	128.5	7	6x6	M5 DP6	35	23
10-20 kgf.m	240	150	45	43	36	20	95	10	75	20	25	82	83	18.5	7	95	110	90	12	55±0.1	128.5	7	8x7	M5 DP6	35	23
50-100 kgf.m	325	163	81	80	60	26	96	10	76	38	40	110	89	19	15.5	95	130	110	15	70±0.2	158.6	7	10x8	M6 DP6	35	24.1
200-500 kgf.m	400	188	106	105	81	29	110	15	80	63	65	158	100	21	30.5	95	170	140	20	100±0.2	213.5	9	18x11	M6 DP10	35	25



**FEATURE**

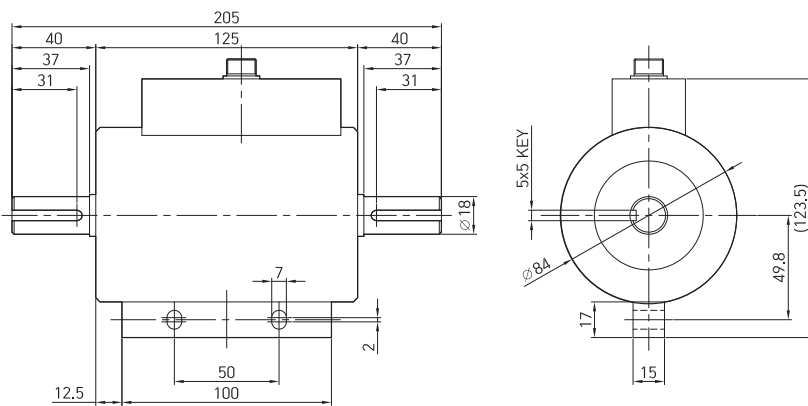
- ▶ Shaft type, non-contacting digital torque sensor
- ▶ Static, dynamic torque measurement and RPM (optional) measurement of rotating equipment (10,000 RPM)
- ▶ Torque measurement of motor load test, bolt torque, reducer, car parts, etc
- ▶ As built-in amplifier, it minimizes NOISE effects compared to mV / V output type sensor
- ▶ Since the output type is CAN digital type, the influence of line noise is less than that of analog type
- ▶ No interference by CARRIER frequency (SYNC is unnecessary)

**SPECIFICATIONS**

Rated Capacity(R.C.)	1,2,5 kgf.m
Total error	≤ 0.2% R.O.
Repeatability	≤ 0.2% R.O.
Creep(30min.)	≤ 0.2% R.O.
Zero Balance	≤ 0.1% F.S.
Resolution	± 1/30,000
Excitation Voltage	12 ~ 28V DC
Output	CAN DIGITAL DATA
Output Speed	2000Times/sec
Temperature effect, on rated output	≤ 0.2% LOAD / 10°C
Temperature effect, on zero balance	≤ 0.2% R.O. / 10°C
Safety Overload	150% R.C.
Temperature operating	0 ~ 60°C
Cable	Ø 5 Shield 5m

**DIMENSIONS**

▶ SNA





**FEATURE**

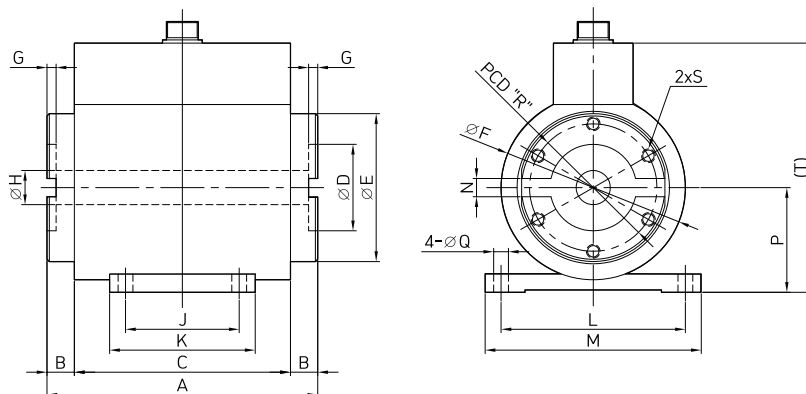
- ▶ Flange-type rotary non-contacting digital torque sensor
- ▶ Static and dynamic torque measurement of rotating equipment
- ▶ Torque measurement of motor load test, bolt torque, reducer, car parts, etc
- ▶ As built-in amplifier, it minimizes NOISE effects compared to mV / V output type sensor
- ▶ Since the output type is CAN digital type, the influence of line noise is less than that of analog type.
- ▶ No interference by CARRIER frequency (SYNC is unnecessary)

**SPECIFICATIONS**

Rated Capacity(R.C.)	1,2,5,10,20 kgf·m
Total error	≤ 0.2% R.O.
Repeatability	≤ 0.2% R.O.
Creep(30min.)	≤ 0.2% R.O.
Zero Balance	≤ 0.1% F.S.
Resolution	± 1/30,000
Excitation Voltage	12 ~ 28V DC
Output	CAN DIGITAL DATA
Output Speed	2000 Times/sec
Temperature effect, on rated output	≤ 0.2LOAD / 10°C
Temperature effect, on zero balance	≤ 0.2 R.O. / 10°C
Safety Overload	150% R.C.
Temperature operating	0 ~ 60°C
Cable	Ø 5 Shield 5m

**DIMENSIONS**

▶ SNF



Capa.	A	B	C	ØD	ØE	ØF	G	ØH	J	K	L	M	N	P	ØQ	PCD "R"	S	T
1~2 kgf.m	119	12	95	38	65	81	4	-	50	64	81	95	8	46	6.5	56	6-M6 DP15	109.5
5~20 kgf.m	119	12	95	38	65	81	4	15	50	64	81	95	8	46	6.5	56	6-M6 DP15	109.5



## FEATURE

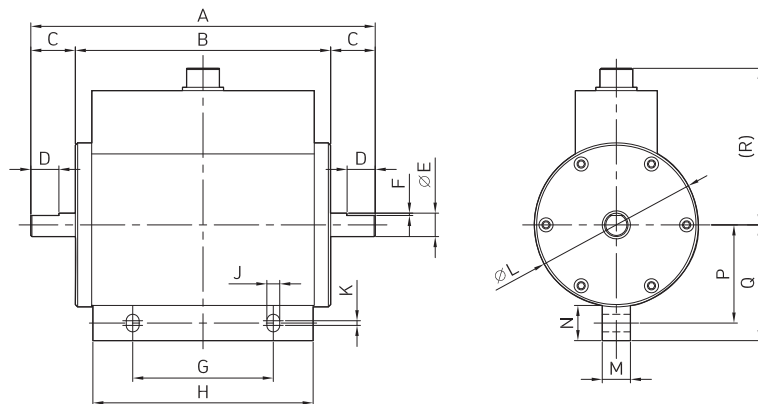
- ▶ Shaft type, non-contacting digital torque sensor
- ▶ Static, dynamic torque measurement and RPM (optional) measurement of rotating equipment (10,000 RPM)
- ▶ Torque measurement of motor load test, bolt torque, reducer, car parts, etc
- ▶ As built-in amplifier, it minimizes NOISE effects compared to mV / V output type sensor
- ▶ Since the output type is CAN digital type, the influence of line noise is less than that of analog type
- ▶ No interference by CARRIER frequency (SYNC is unnecessary)

## SPECIFICATIONS

Rated Capacity(R.C.)	20,50,100,200,500 kgf.m
Total error	≤ 0.2% R.O.
Repeatability	≤ 0.2% R.O.
Creep(30min.)	≤ 0.2% R.O.
Zero Balance	≤ 0.1% F.S.
Resolution	± 1/30,000
Excitation Voltage	12 ~ 28V DC
Output	CAN DIGITAL DATA
Output Speed	2000 Times/sec
Temperature effect, on rated output	≤ 0.2 LOAD / 10°C
Temperature effect, on zero balance	≤ 0.2 R.O. / 10°C
Safety Overload	150% R.C.
Temperature operating	0 ~ 60°C
Cable	Ø 5 Shield 5m

## DIMENSIONS

### ▶ SNRC



Capa.	A	B	C	D	ØE	F	G	H	J	K	ØL	M	N	P	Q	R
20-50 kgf.cm	147	109	19	12	10	1	60	94	5.5	2	70	12	15	41.9	49.4	66.8
100-200 kgf.cm	153	109	22	15	18	5x5	60	94	5.5	2	70	12	15	41.9	49.4	66.8
500 kgf.cm	175	109	33	25	20	6x6	60	194	5.5	2	70	112	15	41.9	49.4	66.8



**FEATURE**

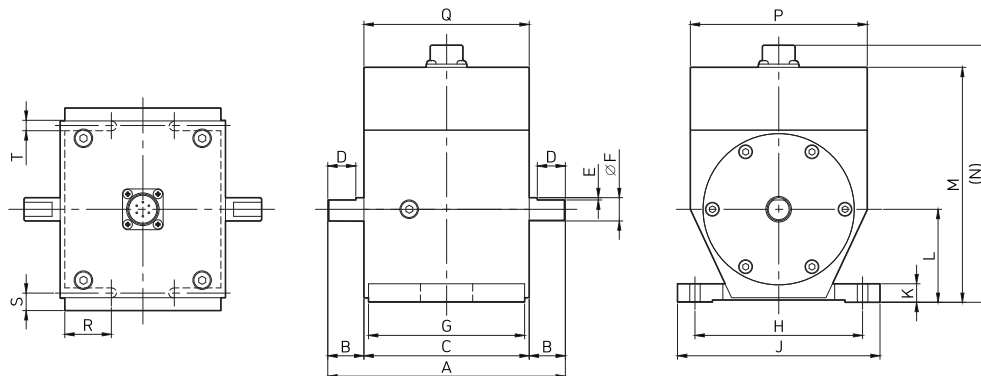
- ▶ Shaft type, non-contacting digital torque sensor
- ▶ Static, dynamic torque measurement and RPM (optional) measurement of rotating equipment (10,000 RPM)
- ▶ Torque measurement of motor load test, bolt torque, reducer, car parts, etc
- ▶ As built-in amplifier, it minimizes NOISE effects compared to mV / V output type sensor
- ▶ Since the output type is CAN digital type, the influence of line noise is less than that of analog type
- ▶ No interference by CARRIER frequency (SYNC is unnecessary)

**SPECIFICATIONS**

Rated Capacity(R.C.)	10,20,50,100,200,500,1000 kgf.m
Total error	≤ 0.2% R.O.
Repeatability	≤ 0.2% R.O.
Creep(30min.)	≤ 0.2% R.O.
Zero Balance	≤ 0.1% F.S.
Resolution	± 1/30,000
Excitation Voltage	12 ~ 28V DC
Output	CAN DIGITAL DATA
Output Speed	2000 Times/sec
Temperature effect, on rated output	≤ 0.2LOAD / 10°C
Temperature effect, on zero balance	≤ 0.2 R.O. / 10°C
Safety Overload	150% R.C.
Temperature operating	0 ~ 60°C
Cable	Ø 5 Shield 5m

**DIMENSIONS**

▶ SNC



Capa.	A	B	C	D	E	ØF	G	H	J	K	L	M	N	P	Q	R	S	T
10-50 kgf.cm	102	15.5	71	12	1	10	67	72	87	8	40	101	110.5	76	71	20	7.5	4.5
100-200 kgf.cm	115	22	71	15	5x5	18	67	72	87	8	40	101	110.5	76	71	20	7.5	4.5
500-1000 kgf.cm	146	37.5	71	25	6x6	20	76	82	97	8	40	101	110.5	76	71	25	7.5	5.5



**FEATURE**

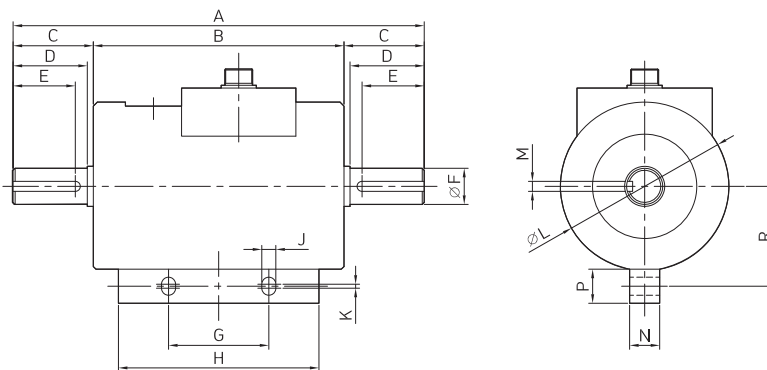
- ▶ Shaft-type rotary contacting torque sensor
- ▶ Static, dynamic torque measurement and RPM (optional) measurement of rotating equipment
- ▶ Torque measurement of motor load test, bolt torque, reducer, car parts, etc.
- ▶ Foot mount & high capacity can be custom made

**SPECIFICATIONS**

Rated Capacity(R.C.)	1,2,5,10,20,50,100,200,300,500,1000 kgf.m
Rated output(R.O.)	1.3 ± 0.3 mV/V
Total error	≤ 0.25% R.O
Repeatability	≤ 0.25% R.O
Creep(30min.)	≤ 0.25% R.O.
Zero balance	0 ± 0.05 mV/V
Input resistance	352Ω ± 1%
Output resistance	352Ω ± 1%
Insulation resistance	> 2,000MΩ
Temperature effect, on rated output	≤ 0.2% LOAD / 10°C
Temperature effect, on zero balance	≤ 0.2% R.O. / 10°C
Excitation voltage	5V, 10V DC
Safety overload	150% R.C
Temperature operating	-10 ~ 60 °C
Cable	Ø 5 Shield 5m

**DIMENSIONS**

▶ SA



Capa.	A	B	C	D	E	ØF	G	H	J	K	ØL	M (key)	N	P	R	RPM
1-5 kgf.m	205	125	40	37	31	18	50	100	7	2	84	5x5	15	17	49.8	4500
10-20 kgf.m	240	130	55	50	40	32	50	100	7	2	100	10x8	15	17	57.9	4000
50-100 kgf.m	340	158	91	86	75	47	60	128	9	2	118	12x8	17	20	68.4	3000
200-300 kgf.m	360	152	104	100	86	63	60	128	9	2	131	18x11	17	20	74.95	2500
500 kgf.m	430	182	124	115	95	73	70	152	11	3	160	20x12	20	25	91.8	2000
1000 kgf.m	470	196	137	130	110	90	70	152	11	3	180	25x14	20	25	101.9	1000

# SC | Contact Torque Sensor



▶ Mount Not Fitted



▶ Mount Fitted

## FEATURE

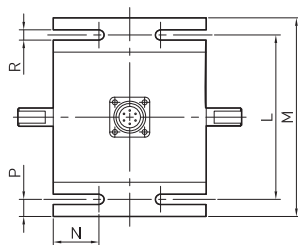
- ▶ Shaft-type rotary small contacting torque sensor
- ▶ Static and dynamic torque measurement of rotating equipment
- ▶ Compact design for fine torque measurement
- ▶ Torque measurement such as motor load test, bolt torque, spring, hinge, etc.

## SPECIFICATIONS

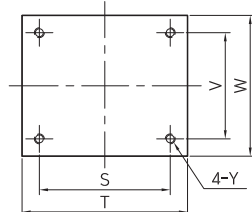
Rated Capacity(R.C.)	1,2,5,10,20,50,100,200,300,500,1000 kgf·m
Rated output(R.O.)	1.3 ± 0.3 mV/V
Total error	≤ 0.25% R.O
Repeatability	≤ 0.25% R.O
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Insulation resistance	> 2,000MΩ
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Temperature effect, on zero balance	≤ 0.2% R.O. / 10°C
Excitation voltage	5V, 10V DC
Safety overload	150% R.C
Temperature operating	-10 ~ 60 °C
Cable	Ø 5 Shield 5m

## DIMENSIONS

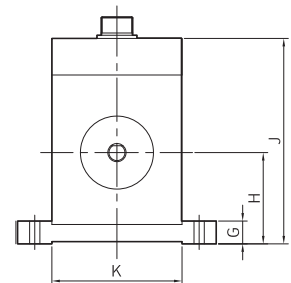
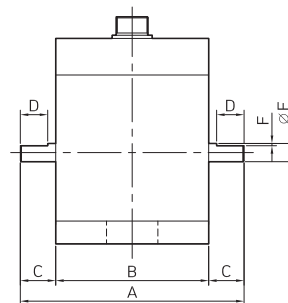
▶ SC



[ MOUNT 장착 ]



[ MOUNT 미장착 ]



Capa.	A	B	C	D	ØE	F	G	H	J	K	L	M	N	P	R	S	T	V	W	Y
5~10 kgf.cm	98	67	15.5	12	8	1	10	40	90	57	72	87	20	7.5	4.5	53	67	43	57	M4 DP15
20~50 kgf.cm	102	67	17.5	12	10	1	10	40	90	57	72	87	20	7.5	4.5	53	67	43	57	M4 DP15
100~200 kgf.cm	120	76	22	15	18	5x5	10	40	90	57	72	87	25	7.5	4.5	62	76	43	57	M4 DP15
500~1000kgf.cm	146	76	35	25	20	6x6	10	40	93	67	82	97	25	7.5	5.5	62	76	53	67	M4 DP15



### FEATURE

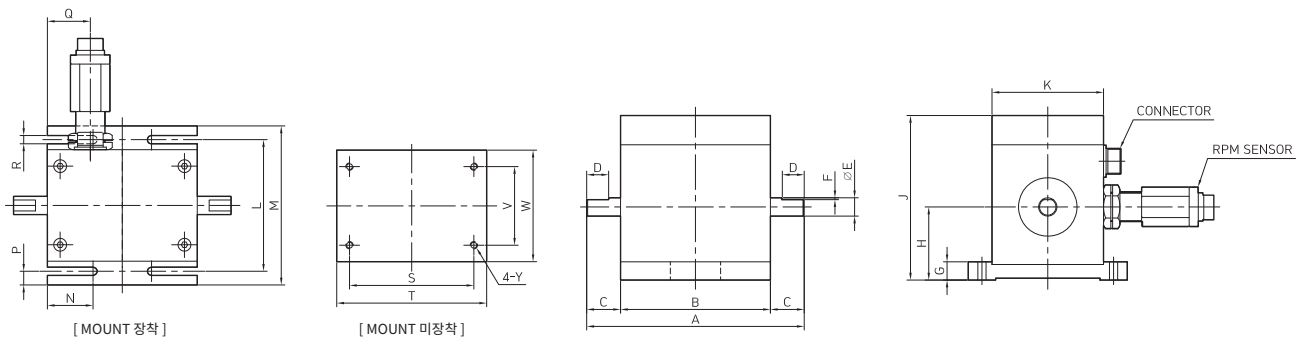
- ▶ Shaft-type rotary small contacting torque sensor
- ▶ Static and dynamic torque measurement of rotating equipment
- ▶ Compact design for fine torque measurement
- ▶ Torque measurement such as motor load test, bolt torque, spring, hinge, etc.

### SPECIFICATIONS

Rated Capacity(R.C.)	5,10,20,50,100,200,500,1000 kgf·cm
Rated output(R.O.)	1.3 ± 0.3 mV/V
Total error	≤ 0.25% R.O.
Repeatability	≤ 0.25% R.O.
Creep(30min.)	≤ 0.25% R.O.
Zero balance	0 ± 0.05 mV/V
Input resistance	352Ω ± 1%
Output resistance	352Ω ± 1%
Insulation resistance	> 2,000MΩ
Temperature effect, on rated output	≤ 0.2% LOAD / 10°C
Temperature effect, on zero balance	≤ 0.2% R.O. / 10°C
Excitation voltage	5V, 10V DC
Safety overload	150% R.C
Temperature operating	-10 ~ 60 °C
Cable	Ø 5 Shield 5m

### DIMENSIONS

#### ▶ SCR



Capa.	A	B	C	D	∅E	F	G	H	J	K	L	M	N	P	Q	R	S	T	V	W	Y
1-5 kgf.cm	119	82	18.5	12	8	1	10	40	90	57	72	87	25	7.5	23.5	4.5	68	82	43	57	M4 DP15
20-50 kgf.cm	119	82	18.5	12	10	1	10	40	90	61	72	87	25	7.5	23.5	4.5	68	82	43	61	M4 DP15
100-200 kgf.cm	135	91	22	15	18	5x5	10	40	90	61	72	87	25	7.5	22	4.5	77	91	43	61	M4 DP15
500-1000 kgf.cm	161	91	35	25	20	6x6	10	40	93	70	82	97	30	7.5	24	5.5	77	91	53	70	M4 DP15



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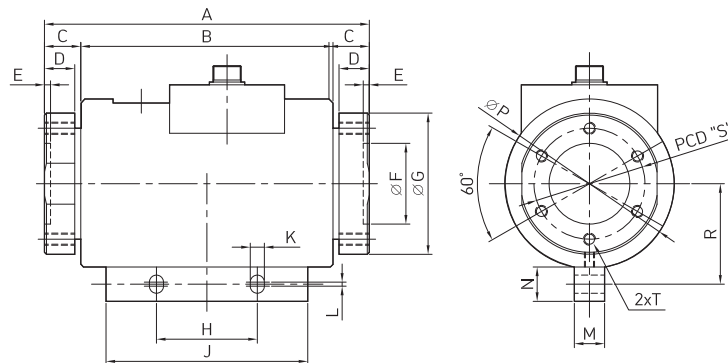
- ▶ Flange type rotary contacting torque sensor
- ▶ Static, dynamic torque and RPM (optional) measurements of rotating equipment
- ▶ Torque measurement such as automobile parts production line, kneading machine, bolt torque, etc.

**SPECIFICATIONS**

Rated Capacity(R.C.)	1,2,5,10,20,50, 100, 200, 300 kgf.m
Rated output(R.O.)	1.3 ± 0.3 mV/V
Total error	≤ 0.25% R.O.
Repeatability	≤ 0.25% R.O.
Creep(30min.)	≤ 0.25% R.O.
Zero balance	0 ± 0.05 mV/V
Input resistance	352Ω ± 1%
Output resistance	352Ω ± 1%
Insulation resistance	> 2,000MΩ
Temperature effect, on rated output	≤ 0.2% LOAD / 10°C
Temperature effect, on zero balance	≤ 0.2% R.O. / 10°C
Excitation voltage	5V, 10V DC
Safety overload	150% R.C
Temperature operating	-10 ~ 60 °C
Cable	Ø 5 Shield 5m

**DIMENSIONS**

▶ SAF



Capa.	A	B	C	D	E	ØF	ØG	H	J	K	L	M	N	ØP	R	PCD "S"	T
1-5 kgf.m	161	125	18	15	3	40	70	50	100	7	2	15	17	84	49.8	55	6-M6(60°)
10-20 kgf.m	178	130	24	19	3	50	85	50	100	7	2	15	17	100	57.9	66	6-M6(60°)
50-100 kgf.m	222	158	32	27	5	65	99	60	128	9	2	17	20	118	68.4	82	6-M8(60°)
200-300 kgf.m	220	152	34	30	5	90	138	60	128	9	2	17	20	131	74.95	114	6-M10(60°)



**FEATURE**

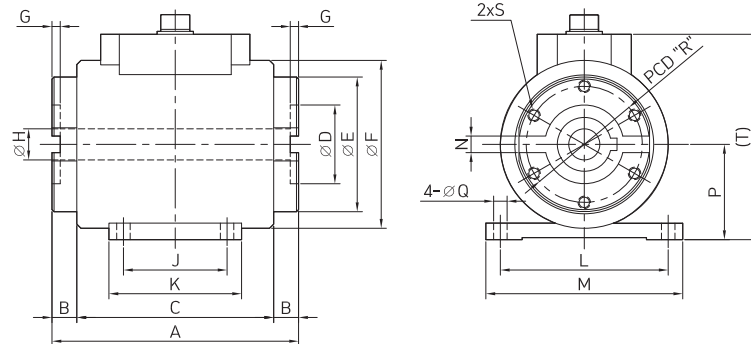
- ▶ Flange type rotary contacting torque sensor
- ▶ Static, dynamic torque and RPM (optional) measurements of rotating equipment
- ▶ Torque measurement such as automobile parts production line, kneading machine, bolt torque, etc.

**SPECIFICATIONS**

Rated Capacity(R.C.)	1,2,5,10,20,50,30,50 kgf-m
Rated output(R.O.)	1.3 ± 0.3 mV/V
Total error	≤ 0.25% R.O.
Repeatability	≤ 0.25% R.O.
Creep(30min.)	≤ 0.25% R.O.
Zero balance	0 ± 0.05 mV/V
Input resistance	352Ω ± 1%
Output resistance	352Ω ± 1%
Insulation resistance	> 2,000MΩ
Temperature effect, on rated output	≤ 0.2% LOAD / 10°C
Temperature effect, on zero balance	≤ 0.2% R.O. / 10°C
Excitation voltage	5V, 10V DC
Safety overload	150% R.C
Temperature operating	-10 ~ 60 °C
Cable	Ø 5 Shield 5m

**DIMENSIONS**

▶ SF



Capa.	A	B	C	D	ØE	F	G	H	J	K	L	M	N	P	Q	R	S	T	V	W	Y
1-5 kgf.cm	119	82	18.5	12	8	1	10	40	90	57	72	87	25	7.5	23.5	4.5	68	82	43	57	M4 DP15
20-50 kgf.cm	119	82	18.5	12	10	1	10	40	90	61	72	87	25	7.5	23.5	4.5	68	82	43	61	M4 DP15
100-200 kgf.cm	135	91	22	15	18	5x5	10	40	90	61	72	87	25	7.5	22	4.5	77	91	43	61	M4 DP15
500-1000 kgf.cm	161	91	35	25	20	6x6	10	40	93	70	82	97	30	7.5	24	5.5	77	91	53	70	M4 DP15



**FEATURE**

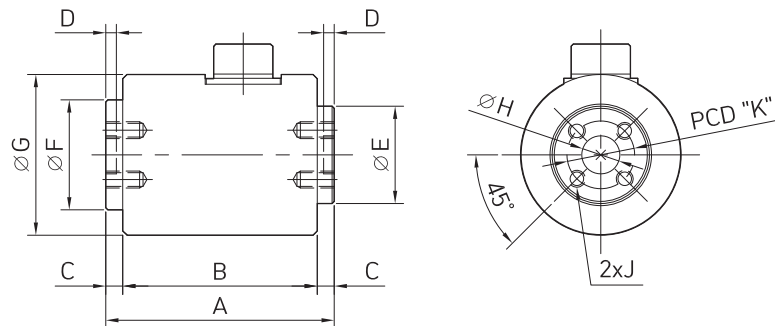
- ▶ Flange type non-rotating small torque sensor
- ▶ Compact design and easy installation
- ▶ Torque measurement in stationary equipment or in 0° to 90° angle
- ▶ Torque measurement in product testing, speed reducer, and various actuators

**SPECIFICATIONS**

Rated Capacity(R.C.)	20,50,100,200,500,1000,2000,3000 kgf.cm
Rated output(R.O.)	1.3 ± 0.3 mV/V
Total error	≤ 0.25% R.O.
Repeatability	≤ 0.25% R.O.
Creep(30min.)	≤ 0.25% R.O.
Zero balance	0 ± 0.05 mV/V
Input resistance	352Ω ± 1%
Output resistance	352Ω ± 1%
Insulation resistance	> 2,000MΩ
Temperature effect, on rated output	≤ 0.2% LOAD / 10°C
Temperature effect, on zero balance	≤ 0.2% R.O. / 10°C
Excitation voltage	5V, 10V DC
Safety overload	150% R.C
Temperature operating	-10 ~ 60 °C
Cable	Ø 5 Shield 5m

**DIMENSIONS**

▶ NE



Capa.	A	B	C	D	ØE	ØF	ØG	ØH	J	PCD "K"
20-100 kgf.cm	54	46	4	2.5	23	26	38	9	4-M4 DP8	16
200-500 kgf.cm	61	51	5	3	32	35	50	14	4-M5 DP10	23
1000-2000 kgf.cm	70	58	6	3.5	42	47	64	18	4-M5 DP12	30
3000 kgf.cm	90	74	8	5	55	60	79	24	4-M5 DP20	40



**FEATURE**

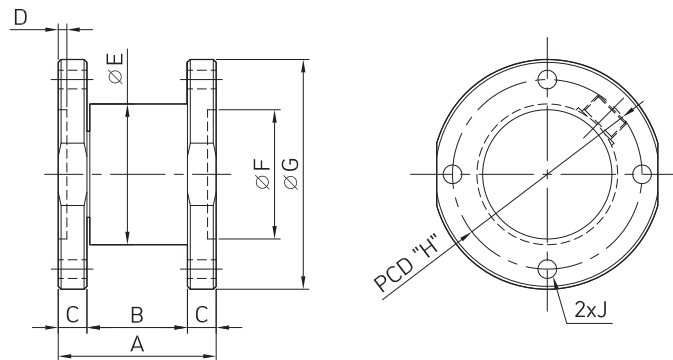
- ▶ Flange type non-rotating small torque sensor
- ▶ Compact design and easy installation
- ▶ Torque measurement in stationary equipment or in 0° to 90° angle
- ▶ Torque measurement in product testing, speed reducer, and various actuators

**SPECIFICATIONS**

Rated Capacity(R.C.)	10,20,50,100,200,500,1000 / 20,50,100,200,500,1000,2000 kgf·m·cm
Rated output(R.O.)	1.3 ± 0.3 mV/V
Total error	≤ 0.25% R.O.
Repeatability	≤ 0.25% R.O.
Creep(30min.)	≤ 0.25% R.O.
Zero balance	0 ± 0.05 mV/V
Input resistance	352Ω ± 1%
Output resistance	352Ω ± 1%
Insulation resistance	> 2,000MΩ
Temperature effect, on rated output	≤ 0.2% LOAD / 10°C
Temperature effect, on zero balance	≤ 0.2% R.O. / 10°C
Excitation voltage	5V, 10V DC
Safety overload	150% R.C
Temperature operating	-10 ~ 60 °C
Cable	Ø 5 Shield 5m

**DIMENSIONS**

▶ NF



Capa.	A	B	C	D	ØE	ØF	ØG	PCD "H"	J
10-20 kgf·cm	43	33	5	1.5	33	30	54	44	4-Ø4.5 (90°)
50-1000 kgf·cm	55	35	10	3	49	45	80	66	4-Ø6.5 (90°)
20 kgf·m	85	55	15	4	56	55	98	78	6-Ø10.5 (60°)
50 kgf·m	110	70	20	5	73	70	118	95	6-Ø4.5 (60°)
100 kgf·m	120	80	20	5	85	85	146	115	6-Ø14 (60°)
200 kgf·m	140	90	25	7.5	96	90	166	130	6-Ø18 (60°)
500 kgf·m	180	110	35	10	114	110	197	155	6-Ø21 (60°)
1000 kgf·m	200	120	40	10	132	120	205	165	8-Ø17 (45°)
2000 kgf·m	205	125	40	10	166	155	245	203	8-Ø17 (45°)



**FEATURE**

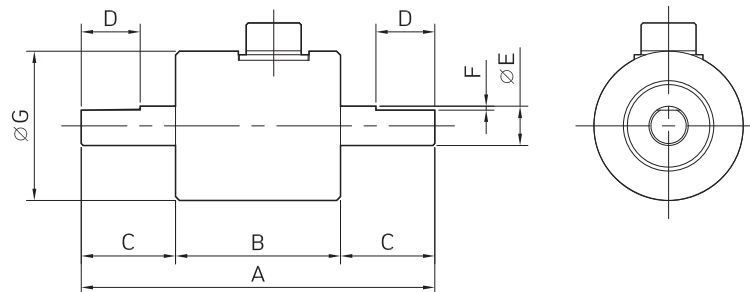
- ▶ Shaft type non-rotating small torque sensor
- ▶ Compact design and easy installation
- ▶ Torque measurement in stationary equipment or in 0° to 90° angle
- ▶ Torque measurement in product testing, speed reducer, and various actuators

**SPECIFICATIONS**

Rated Capacity(R.C.)	10,20,50,100,200,300,500 kgf·cm
Rated output(R.O.)	1.3 ± 0.3 mV/V
Total error	≤ 0.25% R.O.
Repeatability	≤ 0.25% R.O.
Creep(30min.)	≤ 0.25% R.O.
Zero balance	0 ± 0.05 mV/V
Input resistance	352Ω ± 1%
Output resistance	352Ω ± 1%
Insulation resistance	> 2,000MΩ
Temperature effect, on rated output	≤ 0.2% LOAD / 10°C
Temperature effect, on zero balance	≤ 0.2% R.O. / 10°C
Excitation voltage	5V, 10V DC
Safety overload	150% R.C
Temperature operating	-10 ~ 60 °C
Cable	Ø 5 Shield 5m

**DIMENSIONS**

▶ NS



Capa.	A	B	C	D	ØE	F(key)	ØG
10-50 kgf.cm	90	42	24	15	10	1	38
100 kgf.cm	90	42	24	15	18	5x5	42
200-500 kgf.cm	100	44	28	20	20	6x6	48
1000-2000 kgf.cm	120	50	35	25	32	10x8	62
50-100 kgf.m	182	60	61	50	47	12x8	86
300-500 kgf.m	240	60	90	70	73	20x12	115



**FEATURE**

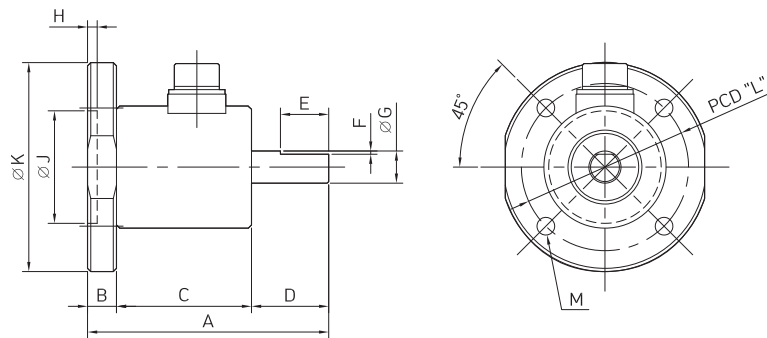
- ▶ Flange - shaft type non-rotating small torque sensor
- ▶ Compact design and easy installation
- ▶ Torque measurement in stationary equipment or in 0 ° to 90 ° angle
- ▶ Torque measurement in product testing, speed reducer, and various actuators

**SPECIFICATIONS**

Rated Capacity(R.C.)	20, 50, 100, 200, 500, 1000, 2000, 3000 kgf.cm
Rated output(R.O.)	1.3 ± 0.3 mV/V
Total error	≤ 0.25% R.O.
Repeatability	≤ 0.25% R.O.
Creep(30min.)	≤ 0.25% R.O.
Zero balance	0 ± 0.05 mV/V
Input resistance	352Ω ± 1%
Output resistance	352Ω ± 1%
Insulation resistance	> 2,000MΩ
Temperature effect, on rated output	≤ 0.2% LOAD / 10°C
Temperature effect, on zero balance	≤ 0.2% R.O. / 10°C
Excitation voltage	5V, 10V DC
Safety overload	150% R.C
Temperature operating	-10 ~ 60 °C
Cable	Ø 5 Shield 5m

**DIMENSIONS**

▶ NT



Capa.	A	B	C	D	E	F	ØG	H	ØJ	ØK	PCD "L"	M
50-20 kgf.cm	75	9	42	24	15	1	10	3	35	65	52	4-Ø5.5
100 kgf.cm	75	9	42	23	15	5x5	18	3	40	75	60	4-Ø6.5
200-500 kgf.cm	84	12	44	28	20	6x6	20	3.5	45	80	66	4-Ø6.5
1000-2000 kgf.cm	100	15	50	35	25	10x8	32	4	55	105	84	4-Ø9



**FEATURE**

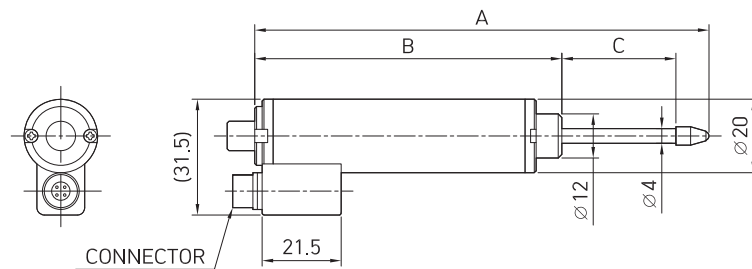
- ▶ Potentiometer-type and spring return type displacement sensor
- ▶ Resistive output type and outputs with input voltage to output voltage ratio
- ▶ Compact shape for easy handling

**SPECIFICATIONS**

Stroke	10,30,50 / 80,100 mm
Non-linearity	± 0.3 / ± 0.4% F.S
Hysteresis	± 0.15 / ± 0.1% F.S
Repeatability	± 0.15 / ± 0.1% F.S
Resistance (±20%)	2kΩ (10mm), 5kΩ(30~10mm)
Operating temperature	-10 ~ 60 °C
Compensated temperature	0 ~ 50 °C
Excitation voltage	5V, 10V% R.C
Cable	Ø 4 Shield 5m

**DIMENSIONS**

▶ LP



Capa.	A	B	C
LP-10	83.5	63.5	Stroke + 0.5 ~ +1 / -0
LP-30	123.5	83.5	Stroke + 0.5 ~ +1 / -0
LP-50	163.5	103.5	Stroke + 0.5 ~ +1 / -0
LP-80	245	155	Stroke + 0.5 ~ +1 / -0
LP-100	265	155	Stroke + 0.5 ~ +1 / -0

# DP | Displacement Transducer



## FEATURE

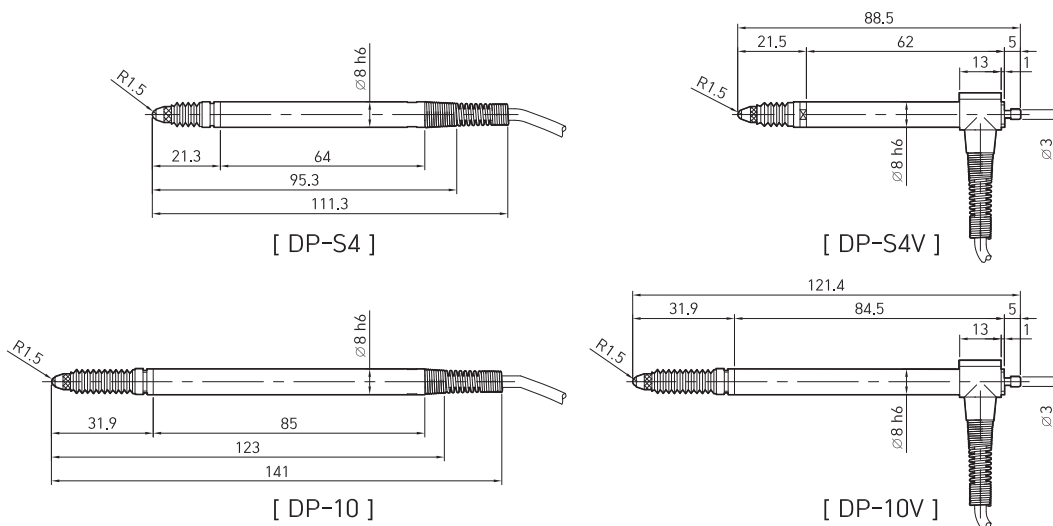
- ▶ High precision, inexpensive price
- ▶ With excellent repeated precision, it is suitable for repeated measurement of mass production line
- ▶ Various measuring instruments can be used depending on the number of measurement points

## SPECIFICATIONS

Model	DP-S4 / DP-S4V / DP-10 / DP-10V
Plunger retraction	Standard / Vacuum / Standard / Vacuum
Operating range	4.95mm / 10.45mm
Measuring range	± 2mm / ± 4mm
Non-linearity	0.1% (± 1.0mm) / 0.1% (± 3.0mm)
Measuring Force	4-90g / 30 ~ 80g
Cable	2.2m / 3m
Outer diameter	Ø 8mm
Weight	17g / 22g / 20g / 26g
Operating temperature	0 ~ 40 °C

## DIMENSIONS

▶ DP





**FEATURE**

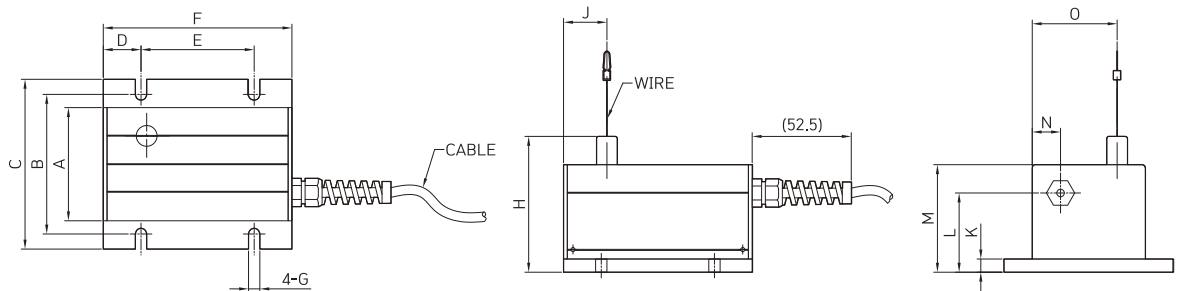
- ▶ Moving distance and location measurement using wire
- ▶ Widely applied to the location control of various facilities and structures
- ▶ Resistive output type and outputs with input voltage to output voltage ratio

**SPECIFICATIONS**

Stroke	500, 1000, 200
Output	Voltage divider
Accuracy	± 0.25% F.S.
Repeatability	± 0.05% F.S.
Measuring wire material	Ø 0.45 stainless steel
Excitation	5V, 10V DC (Max 24V DC)
Resistance	5kΩ ~ 10kΩ
Insulation resistance	> 1000MΩ
Cable	Ø 4 Shield 3m

**DIMENSIONS**

▶ CP



Stroke	A	B	C	D	E	F	G	H	J	K	L	M	N	O
500-1000 mm	60	74	90	20	60	100	6	72	23	7	42	57	15	45
2000 mm	100	119	135	25	65	115	8.5	120.8	26.5	9	74	106	25	87



**FEATURE**

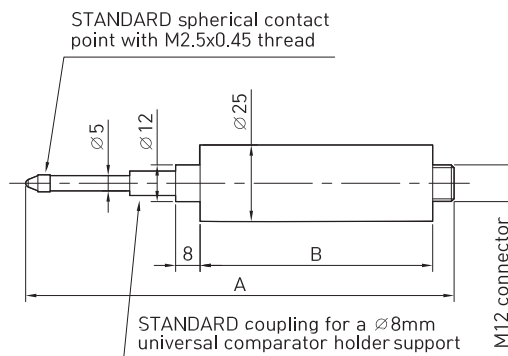
- ▶ Strain gage type displacement sensor
- ▶ Measures various displacement of 5 ~ 200mm

**SPECIFICATIONS**

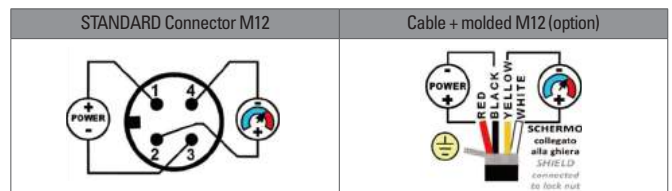
Displacement	5,10,25,50,100,200 mm
Output	2 mV/V
Accuracy	≤ ± 0.1%
Linearity	≤ ± 0.1%
Resistance	350Ω
Insulation resistance	> 5GΩ
Zero balance	≤ ± 0.5% F.S.
Recommend excitation voltage	10V
Normal of range excitation	1 ~ 15V
Max excitation	18V
Temperature effect, on zero balance	≤ ± 0.01%
Temperature effect, on rated output	≤ ± 0.005%
Spring force	2 ~ 4N
Water proof class	IP40
Material	stainless steel
Operating temperature	-10 ~ 70°C
Weight	~ 0.15kg

**DIMENSIONS**

▶ LDT



CODE	Displacement	A	B
LDT-5	5mm	120	76
LDT-10	10mm	125	76
LDT-25	25mm	140	76
LDT-50	50mm	223	134
LDT-100	100mm	100	240
LDT-200	200mm	675	434



# RS-025

Rpm  
Sensor

## FEATURE

- ▶ RS-025 is a magneto-type detector using a Hall element suitable for low to high speed rotation measurements. In addition, operation can be confirmed by the own signal indicator of RS-025.

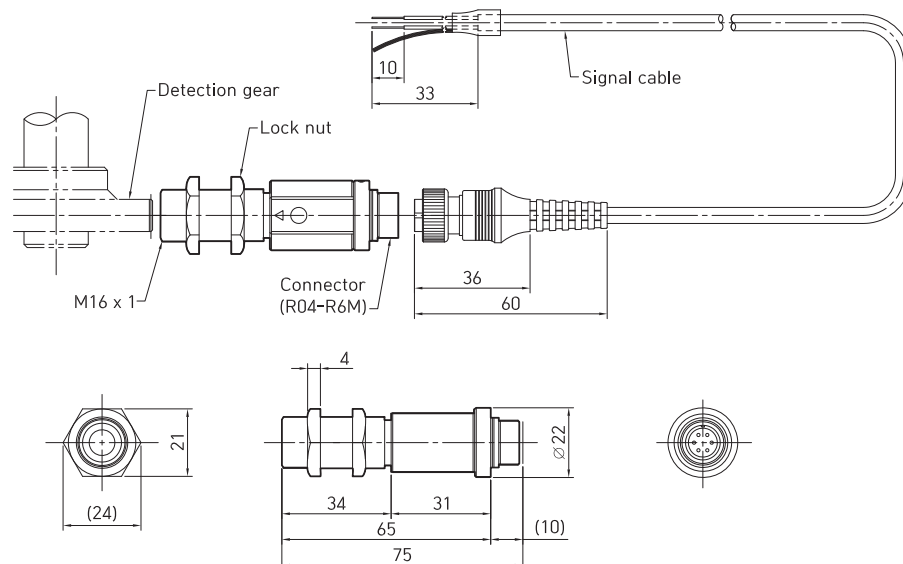


## SPECIFICATIONS

Model	RS-025
Detection method	Hall element
Measurement range	1 Hz ~ 20kHz 1 ~ 20,000 r/min (using a 60P/R gear)
Detection gear	Strong magnetic
Gap between detector and gear	modulus 0.5~3, tooth width 3 mm or greater
Output	retangular waveform Hi : 5V ± 0.5V, Lo: +0.5V or less
Output impedance	Approx. 330Ω
Power supply, Current consumption	12 ± 2VDC, 20mA
Operating temperature range	-10 ~ 70°C
Weight	80g

## DIMENSIONS

### ▶ RS-025





## Digital Indicator

MGI-2100 / MGI-2200 / MGI-3200 / MGI-1000 / SS-100 / SS-130 / SS-130D / SS-200 / SS-10W / SS-20W / SS-25W / SS-30W / SS-50W / SS-201 / SS-301 / SS-501 / SS-2100

CAS weighing indicators, controllers and components provide the best solution for various industrial fields with high performance & high resolution, and excellent performance with various interface.

# MGI-2100

Digital Indicator



## FUNCTION

- ▶ Peak & Sample hold
- ▶ Peak, Average, P-P
- ▶ NG, OK
- ▶ 8 Relay output (NPN O.C)
- ▶ 1CH output

## OPTION

- ▶ OP-01 : BCD out
- ▶ OP-02 : RS232C
- ▶ OP-03 : RS485
- ▶ OP-04 : Analog out

## FEATURE

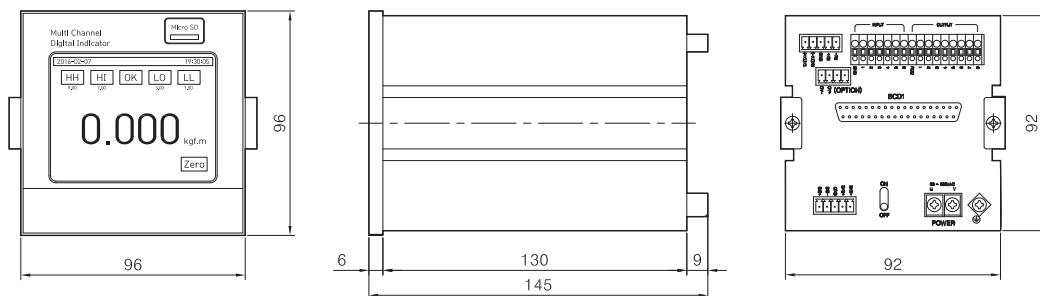
- ▶ This product is a CAN communication input-type digital indicator that displays output value by connecting with CAN communication output type sensor, and outputs by comparing it with set relay value.
- ▶ High precision (0.02% FS or more) and safety
- ▶ Calibration by actual load and sensor output value
- ▶ Digital Scaling

## SPECIFICATIONS

Model	MGI-2100
Application sensor	CAN Coms. Sensor
Sensor excitation voltage	DC 15V or 24V
Zero adjustment range	100% F.S (Auto zero)
Display	-19999 ~ +99999 / 3.5" TFT Touch LCD
Digital Input	6 user mapping
Digital Output	8 user mapping
D/A Converter	16 bit 2000 times/sec
Zero variation	< 0.5 $\mu$ V/°C
Span variation	< 0.01%/°C
Electric contact type	NPN open collector
Electric contact capacity	DC 50V 50mA
Operating Temperature	0 ~ 60°C
Operating Humidity	< 80% RH
Power	AC90 ~ 250V, 50/60Hz
Cutting size	92.5 x 92.5 mm
Weight	800g

## DIMENSIONS

▶ MGI-2100



# MGI-2200

Digital Indicator



## FUNCTION

- ▶ Peak & Sample hold
- ▶ Peak, Average, P-P
- ▶ NG, OK
- ▶ 8 Relay output (NPN O.C)
- ▶ 2CH output

## OPTION

- ▶ OP-01 : BCD out
- ▶ OP-02 : RS232C
- ▶ OP-03 : RS485
- ▶ OP-04 : Analog out

## FEATURE

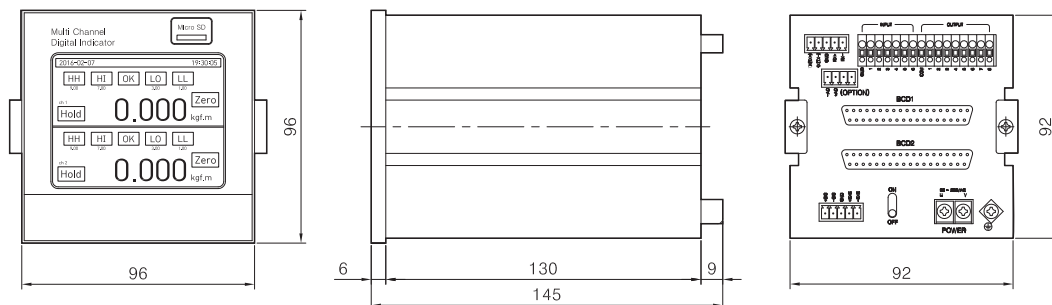
- ▶ This product is a CAN communication input-type digital indicator that displays output value by connecting with CAN communication output type sensor, and outputs by comparing it with set relay value.
- ▶ High precision (0.02% FS or more) and safety
- ▶ Calibration by actual load and sensor output value
- ▶ Digital Scaling

## SPECIFICATIONS

Model	MGI-2200
Application sensor	CAN Coms. Sensor
Sensor excitation voltage	DC 15V or 24V
Zero adjustment range	100% F.S (Auto zero)
Display	-19999 ~ +99999 / 3.5" TFT Touch LCD
Digital Input	6 user mapping
Digital Output	8 user mapping
D/A Converter	16 bit 2000 times/sec
Zero variation	< 0.5 $\mu$ V/°C
Span variation	< 0.01%/°C
Electric contact type	NPN open collector
Electric contact capacity	DC 50V 50mA
Operating Temperature	0 ~ 60°C
Operating Humidity	< 80% RH
Power	AC90 ~ 250V, 50/60Hz
Cutting size	92.5 x 92.5 mm
Weight	800g

## DIMENSIONS

▶ MGI-2200



# MGI-3200

Digital Indicator



## FUNCTION

- ▶ Peak & Sample hold
- ▶ Peak, Average, P-P
- ▶ NG, OK
- ▶ 8 Relay output (NPN O.C)
- ▶ 2CH output

## OPTION

- ▶ OP-01 : BCD out
- ▶ OP-02 : RS232C
- ▶ OP-03 : RS485
- ▶ OP-04 : Analog out

## FEATURE

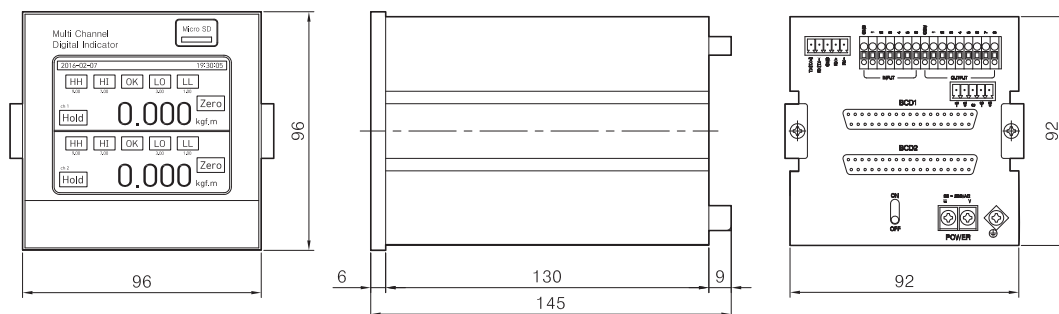
- ▶ This product is a CAN communication input-type digital indicator that displays output value by connecting with CAN communication output type sensor, and outputs by comparing it with set relay value.
- ▶ High precision (0.02% FS or more) and safety
- ▶ Calibration by actual load and sensor output value
- ▶ Digital Scaling

## SPECIFICATIONS

Model	MGI-3200
Application sensor	CAN Coms. Sensor
Sensor excitation voltage	DC 15V or 24V
Zero adjustment range	100% F.S (Auto zero)
Display	-19999 ~ +99999 / 3.5" TFT Touch LCD
Digital Input	6 user mapping
Digital Output	8 user mapping
D/A Converter	16 bit 2000 times/sec
Zero variation	< 0.5 $\mu$ V/°C
Span variation	< 0.01%/°C
Electric contact type	NPN open collector
Electric contact capacity	DC 50V 50mA
Operating Temperature	0 ~ 60°C
Operating Humidity	< 80% RH
Power	AC90 ~ 250V, 50/60Hz
Cutting size	92.5 x 92.5 mm
Weight	800g

## DIMENSIONS

▶ MGI-3200



# SS-100 | Digital Indicator



## FUNCTION

- ▶ Peak & Sample hold
- ▶ Peak, Average, P-P
- ▶ NG, OK
- ▶ 4 Relay output
- ▶ Analog out(DAC)

## OPTION

- ▶ OP-01: BCD out
- ▶ OP-02: RS232C
- ▶ OP-03: RS485

## FEATURE

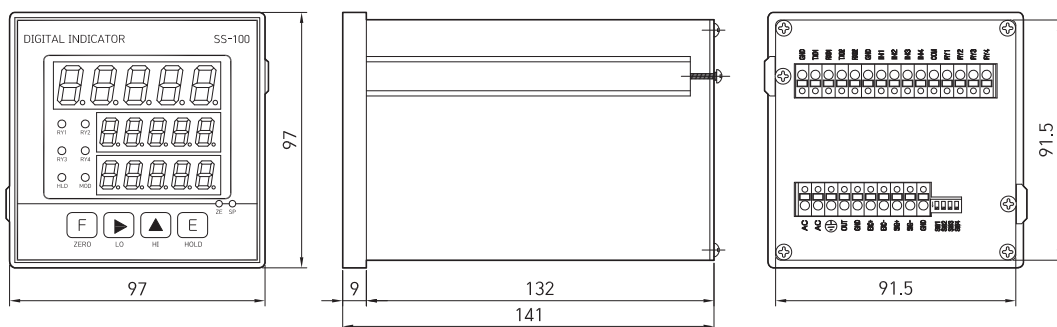
- ▶ This product, suitable for the use of sensors that measure physical quantity by applying strain gauge and sensors which output
- ▶ Ultra fast conversion A / D (5000 times / sec)
- ▶ High precision (0.02% FS or more) and stability
- ▶ Unit conversion feature (kg, N, lb, kg / cm<sup>2</sup>, bar, MPa)
- ▶ Calibration by actual load and sensor output value
- ▶ Auto zero function (digital display and analog output simultaneously Zero)
- ▶ Automatic return of system error

## SPECIFICATIONS

Model	SS-100
Application sensor	Strain gage based full bridge sensor
Excitation Voltage	DC 5V
Zero adjustment range	100% F.S (Auto zero)
Input range	0.5 ~ 3mV/V
Display	-19999 ~ +99999 / 7 segment LED 14mm
A/D converter	16 bit 5000 times / sec
D/A converter	16 bit 1000 times / sec
Zero variation	< 0.5 $\mu$ V/°C
Span variation	< 0.01%/°C
Voltage/Current output	DC 0 ~ 10V (4~20mA: custom)
Electric contact capacity	AC 250V 5A
Electric contact life time	> 500 million
Operating Temperature	-10 ~ 60°C
Operating Humidity	< 80% RH
Power	AC 90 ~ 240V, 50/60Hz (DC 24V : custom requirement)
Cutting size	92.5 x 92.5 mm
Weight	600g

## DIMENSIONS

▶ SS-100



# SS-130 | Digital Indicator



## FUNCTION

- ▶ Peak & Sample hold
- ▶ Upper limit, lower limit, comparative readout
- ▶ Analog out(DAC)

## OPTION

- ▶ OP-02: RS232C
- ▶ OP-03: RS485

## FEATURE

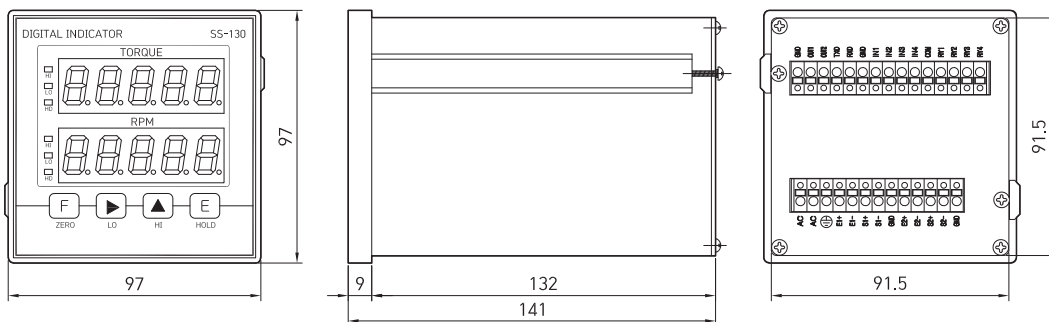
- ▶ This product receives micro-voltage and pulse signals from contacting torque sensor and RPM sensor using strain gauge, thus, it provides relatively fast response and high precision.
- ▶ TORQUE & RPM simultaneous measurement and display
- ▶ High resolution: 24 bit ADC, 16 bit DAC
- ▶ High accuracy (over 0.01% FS) and stability
- ▶ Unit conversion feature (kg, N, lb, kg / cm<sup>2</sup>, bar, MPa)
- ▶ Calibration by actual load and sensor output value
- ▶ Auto zero function (digital display and analog output simultaneously Zero)
- ▶ Automatic return of system error

## SPECIFICATIONS

Model	SS-130
Application sensor	Strain gage based full bridge sensor/ RPM sensor (RS-025)
Excitation Voltage	DC 5V / DC 12V
Zero adjustment range	100% F.S (Auto zero)
Input range	0.5 ~ 3mV/V
Input pulse	1~350 pulse/circle
Display	-19999 ~ +99999 / 0 ~ 60000 / 7 segment LED 14mm
A/D converter	24 bit 1000times / sec
D/A converter	16 bit 1000times / sec
Zero variation	< 0.5 μV/°C
Span variation	< 0.01%/°C
Voltage/Current output	DC 0 ~ 10V (4~20mA: custom requirement)
Electric contact capacity	AC 250V 5A
Electric contact life time	> 500 million
Operating Temperature	-10 ~ 60°C
Operating Humidity	< 80% RH
Power	AC 90 ~ 240V, 50/60Hz (DC 24V: custom requirement)
Cutting size	92.5 x 92.5 mm
Weight	600g

## DIMENSIONS

▶ SS-130



# SS-130D | Digital Indicator



## FUNCTION

- ▶ Peak & Sample hold
- ▶ Upper limit, lower limit, comparative readout
- ▶ Analog out(DAC)

## OPTION

- ▶ OP-02: RS232C
- ▶ OP-03: RS485

## FEATURE

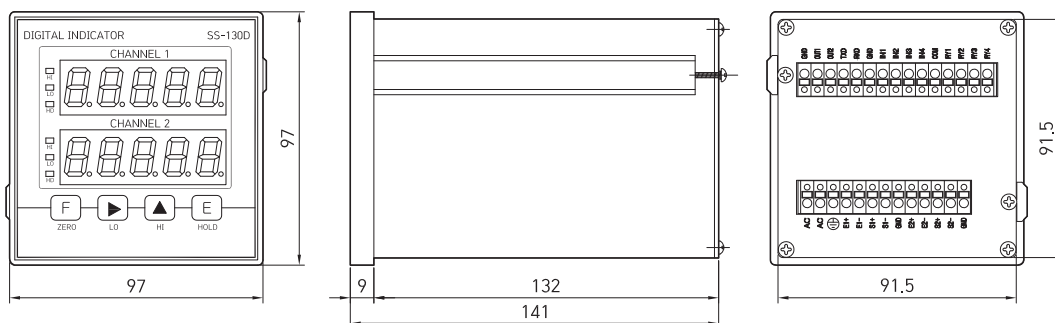
- ▶ This product is suitable for the use of sensors for measuring physical quantities using strain gauges. Notably, it is convenient when two sensors of the same or different currents are installed at the same time for comparative measurement.
- ▶ 2channel indicator
- ▶ High resolution: 24 bit ADC, 16 bit DAC
- ▶ High precision (0.02% FS or more) and stability
- ▶ Unit conversion feature (kg, N, lb, kg / cm<sup>2</sup>, bar, MPa)
- ▶ Calibration by actual load and sensor output value
- ▶ Auto zero function (digital display and analog output simultaneously Zero)
- ▶ Automatic return of system error

## SPECIFICATIONS

Model	SS-130D
Application sensor	Strain gage based full bridge sensor
Excitation Voltage	DC 5V
Zero adjustment range	100% F.S (Auto zero)
Input range	0.5 ~ 3mV/V
Input pulse	1~350 pulse/circle
Display	-19999 ~ +99999 / 0~60000 / 7 segment LED 14mm
A/D converter	24 bit 200 times / sec
D/A converter	16 bit 1000 times/ sec
Zero variation	< 0.5 μV/°C
Span variation	< 0.01%/°C
Voltage/Current output	DC 0 ~ 10V (4~20mA: custom requirement)
Electric contact capacity	AC 250V 5A
Electric contact life time	> 500 million
Operating Temperature	-10 ~ 60°C
Operating Humidity	< 80% RH
Power	AC 90 ~ 240V, 50/60Hz (DC 24V: custom requirement)
Cutting size	92.5 x 92.5 mm
Weight	600g

## DIMENSIONS

▶ SS-130D



# SS-200 | Digital Indicator



## FUNCTION

- ▶ Peak & Sample hold
- ▶ Peak, Average, P-P
- ▶ NG, OK
- ▶ 4 Relay output
- ▶ Analog out(DAC)

## OPTION

- ▶ OP-01: BCD out
- ▶ OP-02: RS232C
- ▶ OP-03: RS485

## FEATURE

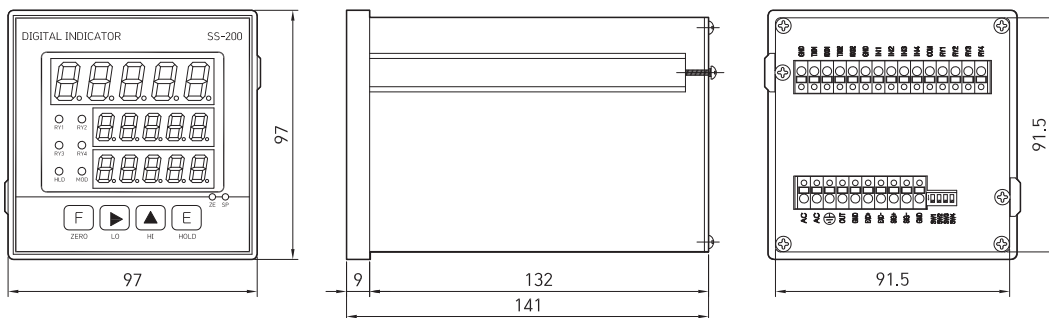
- ▶ This product is suitable for the use of sensors that measure physical quantities by applying strain gauge and sensors which output with small DC voltage along with the digital display, analog output and relay output functions.
- ▶ High resolution: 24bit ADC, 16bit DAC
- ▶ High precision (over 0.01% F.S) and safety
- ▶ Unit conversion feature (kg, N, lb, kg / cm<sup>2</sup>, bar, MPa)
- ▶ Calibration by actual load and sensor output value
- ▶ Auto zero function (digital display and analog output simultaneously Zero)
- ▶ Automatic return of system error

## SPECIFICATIONS

모델명	SS-200
Application sensor	Strain gage based full bridge sensor
Excitation Voltage	DC 5V
Zero adjustment range	100% F.S (Auto zero)
Input range	0.5 ~ 3mV/V
Display	-19999 ~ +99999 / 7 segment LED 14mm
A/D converter	16 bit 5000 times/ sec
D/A converter	16 bit 1000 times/ sec
Zero variation	< 0.5 $\mu$ V/°C
Span variation	< 0.01%/°C
Voltage/Current output	DC 0 ~ 10V (4~20mA: custom requirement)
Electric contact capacity	AC 250V 5A
Electric contact life time	> 500 million
Operating Temperature	-10 ~ 60°C
Operating Humidity	< 80% RH
Power	AC 90 ~ 240V, 50/60Hz (DC 24V: custom requirement)
Cutting size	92.5 x 92.5 mm
Weight	600g

## DIMENSIONS

▶ SS-200



# SS-10W | Digital Indicator



## FUNCTION

- ▶ Peak & Sample hold
- ▶ Upper limit, lower limit, comparative readout
- ▶ NG,OK
- ▶ 4 Relay output
- ▶ Analog out(DAC)

## OPTION

- ▶ OP-01: BCD out
- ▶ OP-02: RS232C
- ▶ OP-03: RS485
- ▶ OP-05: 8 step open collector output

## FEATURE

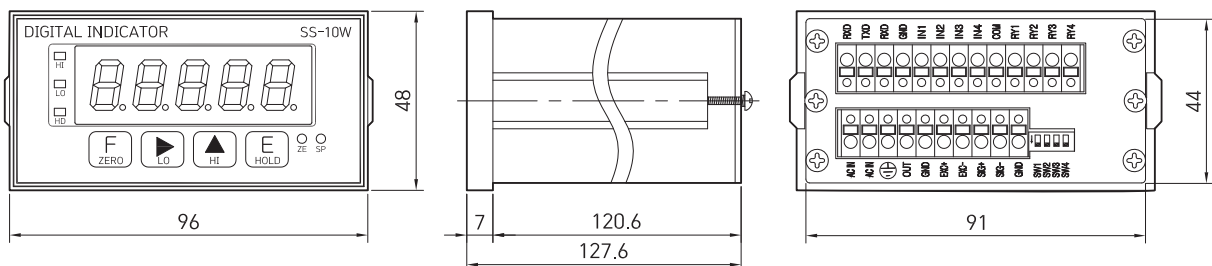
- ▶ This product is suitable for the use of sensors that measure physical quantities by applying strain gauge and sensors which output with small DC voltage along with the digital display, analog output and relay output functions.
- ▶ Optimum for measurement of micro-voltage output sensor (torque, load, pressure)
- ▶ Medium-to-high speed conversion A / D (100 times / sec)
- ▶ High precision (0.02% FS or more) and stability
- ▶ One touch auto zero (Display & Analog out zero)
- ▶ Calibration by actual load and sensor output value
- ▶ Automatic return of system error

## SPECIFICATIONS

Model	SW-10W
Application sensor	Strain gage based full bridge sensor
Excitation Voltage	DC 10V, DC 5V (custom requirement)
Input sensor	Potentiometer
Output	DC 0 ~ 10V, 0(4) ~ 20mA (custom requirement)
Display	-19999 ~ +99999 / 5 digit 7 segment FND
CPU	32 bit
Resolution	± 1/18,000
Zero variation	< 0.5 $\mu$ V/°C
Span variation	< 0.01%/°C
Output adjustment	Zero, Span 18 turn volume
Relay mode	Normal, Hysteresis, Range mode
Electric contact capacity	AC 250V ~ 0.25A, AC 125V ~ 0.5A, DC 24V-1A
Operating Temperature	-10 ~ 60°C
Operating Humidity	< 80% RH
Power	AC 90 ~ 240V, 50/60Hz (DC 24V : custom requirement)
Cutting size	91.5 x 44.5 mm
Weight	600g

## DIMENSIONS

▶SS-10W



# SS-20W | Digital Indicator



## FUNCTION

- ▶ Peak & Sample hold
- ▶ Upper limit, lower limit, comparative readout
- ▶ NG,OK
- ▶ 4 Relay output
- ▶ Analog out(DAC)

## OPTION

- ▶ OP-01: BCD out
- ▶ OP-02: RS232C
- ▶ OP-03: RS485
- ▶ OP-05: 8 step open collector output

## FEATURE

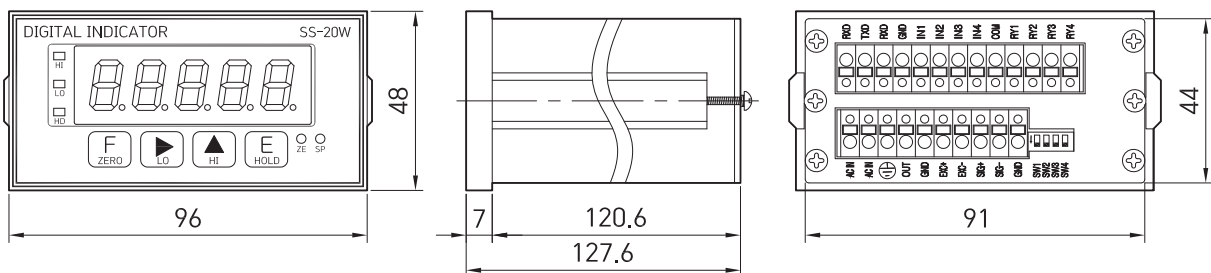
- ▶ This product, suitable for differential transient displacement sensor (LVDT), supplies constant voltage AC power to the sensor and amplifies the signal of the sensor other than the output by micro AC voltage, has digital display, analog output and relay output with relatively quick response and high precision.
- ▶ Optimum for measuring transformer type displacement sensors (LVDT)
- ▶ Medium-to-high speed conversion A / D (100 times / sec)
- ▶ High precision (0.02% FS or more) and stability
- ▶ One touch auto zero (Display & Analog out zero)
- ▶ Automatic return of system error

## SPECIFICATIONS

Model	SS-20W
Application sensor	Resistance, Voltage/Current output sensor
Excitation Voltage	2 Vrms/5kHz
Zero adjustment range	100% F.S (Auto zero)
Display	-19999 ~ +99999 / 7 segment LED 14mm
A/D converter	16 bit 100 times / sec
D/A converter	12 bit
Zero variation	< 0.5 $\mu$ V/ $^{\circ}$ C
Span variation	< 0.01%/ $^{\circ}$ C
Voltage/Current output	DC 0 ~ 10V (4~20mA: custom requirement)
Electric contact capacity	AC 250V 5A
Electric contact life time	> 500 million
Operating Temperature	-10 ~ 60 $^{\circ}$ C
Operating Humidity	< 80% RH
Power	AC 90 ~ 240V, 50/60Hz (DC 24V: custom requirement)
Cutting size	91.5 x 44.5 mm
Weight	800g

## DIMENSIONS

- ▶ SS-20W



# SS-25W | Digital Indicator



## FUNCTION

- ▶ Peak & Sample hold
- ▶ Upper limit, lower limit, comparative readout
- ▶ NG,OK
- ▶ 4 Relay output
- ▶ Analog out(DAC)

## OPTION

- ▶ OP-01: BCD out
- ▶ OP-02: RS232C
- ▶ OP-03: RS485
- ▶ OP-05: 8 step open collector output

## FEATURE

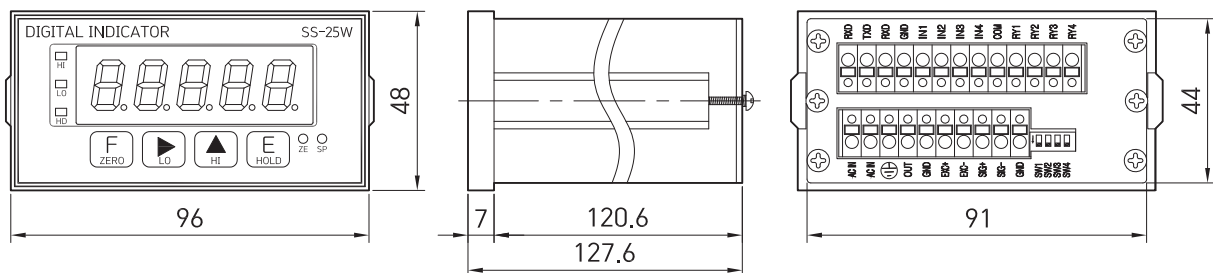
- ▶ This product, suitable for differential transient displacement sensor (LVDT), supplies constant voltage AC power to the sensor and amplifies the signal of the sensor other than the output by micro AC voltage, has digital display, analog output and relay output with relatively quick response and high precision.
- ▶ Optimum for measuring transformer type displacement sensors (LVDT)
- ▶ Medium-to-high speed conversion A / D (100 times / sec)
- ▶ High precision (0.02% FS or more) and stability
- ▶ One touch auto zero (Display & Analog out zero)
- ▶ Automatic return of system error

## SPECIFICATIONS

Model	SS-25W
Application sensor	Linear variable differential transformer(LVDT)
Excitation Voltage	2 Vrms/5kHz
Zero adjustment range	100% F.S (Auto zero)
Display	-19999 ~ +99999 / 7 segment LED 14mm
A/D converter	16 bit 100 times / sec
D/A converter	12 bit
Zero variation	< 0.5 $\mu$ V/°C
Span variation	< 0.01%/°C
Voltage/Current output	DC 0 ~ 10V (4~20mA: custom requirement)
Electric contact capacity	AC 250V 5A
Electric contact life time	> 500 million
Operating Temperature	-10 ~ 60°C
Operating Humidity	< 80% RH
Power	AC 90 ~ 240V, 50/60Hz (DC 24V: custom requirement)
Cutting size	91.5 x 44.5 mm
Weight	800g

## DIMENSIONS

▶SS-25W



# SS-30W | Digital Indicator



## 제품특징

- ▶ This product converts the rotary sensor (RS-025) signal into revolutions per minute (RPM) and performs functions such as digital display, analog output and relay output with relatively quick response and high precision.
- ▶ Optimum for RPM measurement
- ▶ Calibration as pulse / circle input
- ▶ Automatic return of system error

## 제품사양

Model	SS-30W
Application sensor	RPM sensor (RS-025)
Excitation Voltage	DC 12V
Measuring range	Input frequency 5kHz max, 1 ~ 350 pulse/circle
Accuracy	0.05%
Display	0 ~ 99999 1 RPM(min. resolution) 7 segment LED 14mm
Voltage/Current output	DC 0 ~ 10V (4~20mA : custom requirement)
Electric contact capacity	AC 250V 5A
Electric contact life time	> 500 million
Operating Temperature	-10 ~ 60°C
Operating Humidity	< 80% RH
Power	AC 220V, 50/60Hz (AC 110V, DC 24V: custom requirement)
Cutting size	91.5 x 44.5 mm
Weight	800g

## FUNCTION

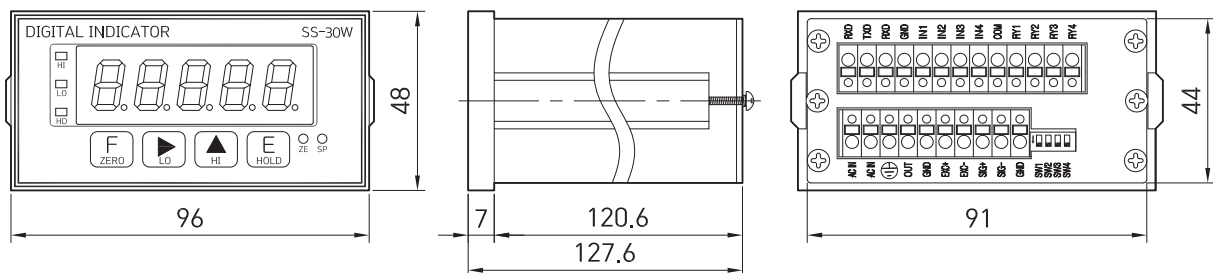
- ▶ Peak & Sample hold
- ▶ Upper limit, lower limit, comparative readout
- ▶ NG,OK
- ▶ 4 Relay output
- ▶ Analog out(DAC)

## OPTION

- ▶ OP-02: RS232C
- ▶ OP-03: RS485

## DIMENSIONS

▶ SS-30W



# SS-50W | Digital Indicator



## FUNCTION

- ▶ Peak & Sample hold
- ▶ Upper limit, lower limit, comparative readout
- ▶ NG,OK
- ▶ 4 Relay output
- ▶ Analog out(DAC)

## OPTION

- ▶ OP-01: BCD out
- ▶ OP-02: RS232C
- ▶ OP-03: RS485

## FEATURE

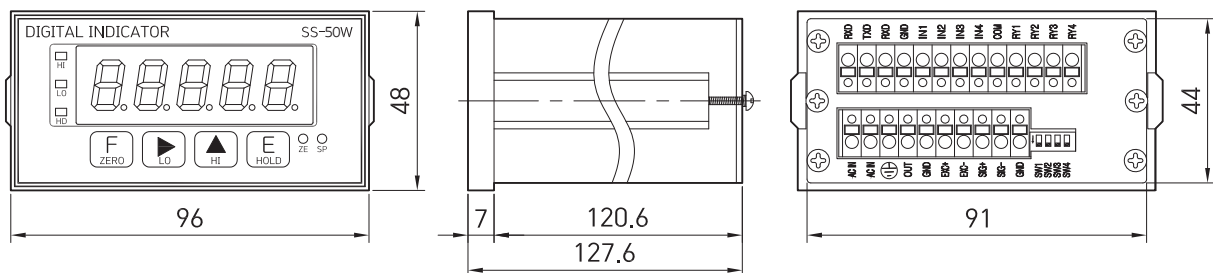
- ▶ This product, as an indicator that displays in digital and outputs analogue the output signals of micro-voltage and the sensors using strain gauge, is capable of high speed sampling of 1000 times/second and comparison output.
- ▶ High resolution: 24bit ADC, 16bit DAC
- ▶ High precision (over 0.01% FS) and stability
- ▶ Unit conversion feature (kg, N, lb, kg / cm<sup>2</sup>, bar, MPa)
- ▶ Analog Peak Hold
- ▶ Calibration by actual load and sensor output value
- ▶ Auto zero function (digital display and analog output simultaneously Zero)
- ▶ Automatic return of system error

## SPECIFICATIONS

Model	SS-50W
Application sensor	Strain gage based full bridge sensor
Excitation Voltage	DC 5V
Zero adjustment range	100% F.S (Auto zero)
Input range	0.5 ~ 3mV/V
Display	-19999 ~ +99999 / 7 segment LED 14mm
A/D converter	24 bit 1000 times / sec
D/A converter	16 bit 1000 times / sec
Zero variation	< 0.5 μV/°C
Span variation	< 0.01%/°C
Voltage/Current output	DC 0 ~ 10V (4~20mA: custom requirement)
Electric contact capacity	AC 250V 5A
Electric contact life time	> 500 million
Operating Temperature	-10 ~ 60°C
Operating Humidity	< 80% RH
Power	AC 90 ~ 240V, 50/60Hz (DC 24V : custom requirement)
Cutting size	91.5 x 44.5 mm
Weight	450g

## DIMENSIONS

▶SS-50W



# SS-201 | Digital Indicator



## FUNCTION

- ▶ Peak & Sample hold
- ▶ Data protection(key lock)
- ▶ Auto zero :front keyor or rear remote
- ▶ Auto calibration
- ▶ Off-set setting

## OPTION

- ▶ OP-01: BCD out
- ▶ OP-02: RS232C
- ▶ OP-03: RS485

## FEATURE

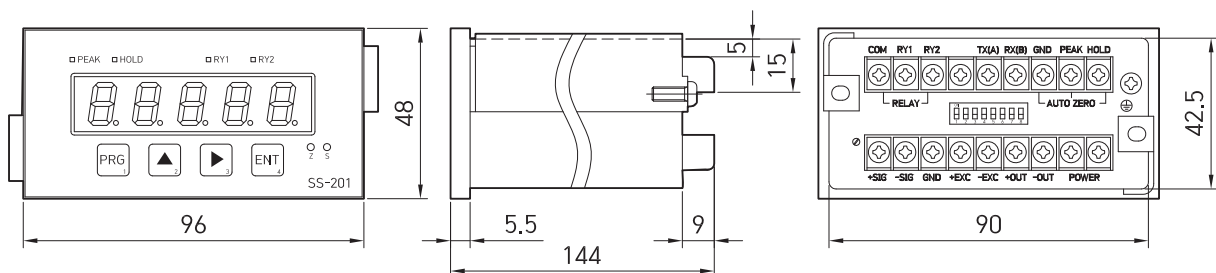
- ▶ This product is a dedicated indicator for our LP model and has digital display, analog output, relay output and other functions.
- ▶ Sampling speed: Up to 15 times
- ▶ Nonlinearity more than 0.02% F.S.
- ▶ Calibration by actual load and sensor output value
- ▶ Filter: 10 Hz, 100 Hz, 1 kHz, W/B

## SPECIFICATIONS

Model	SS-201
Application sensor	Resistance type
Excitation Voltage	DC 10V, DC 5V (custom requirement)
Input sensor	Potentiometer
Voltage/Current output	DC 0 ~ 10V (4~20mA: custom requirement)
Display	-19999 ~ +99999 / 5 digit 7 segment FND
CPU	32 bit
Resolution	± 1/18,000
Zero variation	< 0.5 $\mu$ V/°C
Span variation	< 0.01%/°C
Output adjustment	Zero, Span 18 turn volume
Relay mode	Zero, Span 18 turn volume
Electric contact capacity	AC 250V-0.25A, AC125V-0.5A, DC 24V-1A
Operating Temperature	-10 ~ 60°C
Operating Humidity	< 80% RH
Power	AC 90 ~ 240V, 50/60Hz (DC 24V : custom requirement)
Cutting size	91.5 x 44.5 mm
Weight	600g

## DIMENSIONS

- ▶ SS-201



# SS-301 | Digital Indicator



## FUNCTION

- ▶ Peak & Sample hold
- ▶ Data protection(key lock)
- ▶ Auto zero: front keyor or rear remote
- ▶ Auto calibration
- ▶ Off-set setting

## OPTION

- ▶ OP-01: BCD out
- ▶ OP-02: RS232C
- ▶ OP-03: RS485

## FEATURE

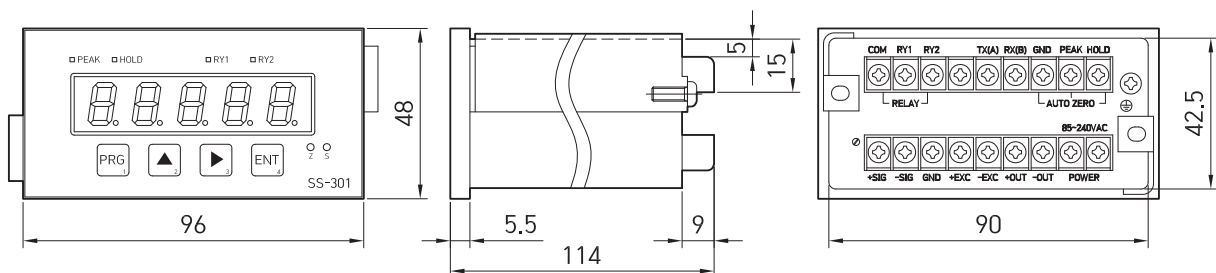
- ▶ This product, suitable for the use of sensors (torque, load, displacement, pressure, etc..) that measure physical quantities by applying strain gauge and sensors that are output with small DC voltage, has functions such as digital display, analog and relay output.
- ▶ Optimum for measurement of micro-voltage output sensor (torque, load, pressure)
- ▶ Sampling speed: Up to 15 times
- ▶ Nonlinearity more than 0.02% F.S.
- ▶ Calibration by actual load and sensor output value
- ▶ Filter: 10 Hz, 100 Hz, 1 kHz, W/B

## SPECIFICATIONS

Model	SS-301
Application sensor	Strain gage based full bridge sensor
Excitation Voltage	DC 10V, DC 5V selectable (sub menu)
Input range	0.5 ~ 3.5 mV/V
Voltage/Current output	DC $\pm 10V$ , 0(4) ~ 20mA: custom requirement)
Display	-19999 ~ +99999 / 5 digit 7 segment FND
CPU	32 bit
Resolution	$\pm 1/18,000$
Zero variation	0.5 $\mu V/^\circ C$
Span variation	0.01%/ $^\circ C$
Output adjustment	Zero, Span 18 turn volume
Relay mode	Normal, Hysteresis, Range mode
Electric contact capacity	AC 250V-0.25A, AC125V-0.5A, DC 24V-1A
Operating Temperature	-10 ~ 60 $^\circ C$
Operating Humidity	< 80% RH
Power	AC 85 ~ 240V Free Voltage
Cutting size	91.5 x 44.5 mm
Weight	400g

## DIMENSIONS

▶ SS-301



# SS-501 | Digital Indicator



## FUNCTION

- ▶ Peak & Sample hold
- ▶ Data protection(key lock)
- ▶ Auto zero: front keyor or rear remote
- ▶ Auto calibration
- ▶ Off-set setting

## OPTION

- ▶ OP-01: BCD out
- ▶ OP-02: RS232C
- ▶ OP-03: RS485

## FEATURE

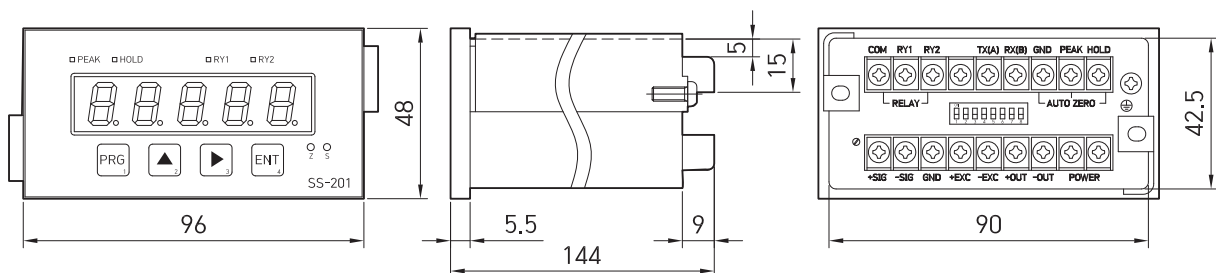
- ▶ This product, suitable especially for pressure and displacement measurement sensors among voltage output type and current output type sensors, has functions such as digital display, analog output, and relay output.
- ▶ Optimum for measuring pressure and displacement
- ▶ Sampling speed: Up to 15 times
- ▶ Nonlinearity more than 0.02% F.S.
- ▶ Calibration by actual load and sensor output value
- ▶ Filter: 10 Hz, 100 Hz, 1 kHz, W/B

## SPECIFICATIONS

Model	SS-501
Application sensor	Voltage / Current output sensor
Excitation Voltage	DC 24V, DC 15V(custom requirement)
Sensor connection method	3 wire, 2 wire sensor
Input	DC $\pm 10V$ , 0(4) ~ 20mA
Voltage/Current output	DC $\pm 10V$ , 0(4) ~ 20mA (custom requirement)
Display	-19999 ~ +99999 / 5 digit 7 segment FND
CPU	32 bit
Resolution	$\pm 1/18,000$
Zero variation	0.5 $\mu V/^\circ C$
Span variation	0.01%/ $^\circ C$
Output adjustment	Zero, Span 18 turn volume
Relay mode	Normal, Hysteresis, Range mode
Electric contact capacity	AC 250V-0.25A, AC125V-0.5A, DC 24V-1A
Operating Temperature	-10 ~ 60 $^\circ C$
Operating Humidity	< 80% RH
Power	AC 220V, 50/60Hz (AC 110V, DC 24V: custom requirement)
Cutting size	91.5 x 44.5 mm
Weight	600g

## DIMENSIONS

### ▶ SS-501



# SS-2100 | Digital Indicator



## FUNCTION

- ▶ Peak & Sample hold
- ▶ NG,OK
- ▶ 1ch.

## OPTION

- ▶ OP-01: BCD out
- ▶ OP-02: RS232C
- ▶ OP-03: RS485
- ▶ OP-04: Analog out

## FEATURE

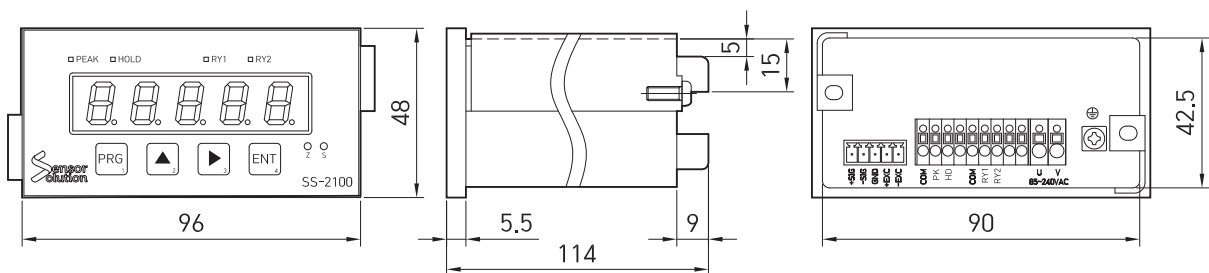
- ▶ This product is a CAN communication input-type digital indicator that displays output value by connecting with CAN communication output-type sensor, and outputs by comparing it with the set relay value.
- ▶ High precision (0.02% FS or more) and safety
- ▶ Calibration by actual load and sensor output value
- ▶ Digital Scaling

## SPECIFICATIONS

Model	MGI-2100
Application sensor	CAN Coms. Sensor
Excitation Voltage	DC 24V
Zero adjustment range	100% F.S (Auto zero)
Display	-19999 ~ +99999 / 5 Digit FND
Digital Input	Hold, Peak, Zero
Digital Output	RY 1~ RY 4
D/A Converter	16 bit 2000 times / sec
Zero variation	0.5 $\mu$ V/°C
Span variation	0.01%/°C
Electric contact type	NPN open collector
Electric contact capacity	DC 50V 50mA
Operating Temperature	0 ~ 60°C
Operating Humidity	< 80% RH
Power	AC90 ~ 250V, 50/60Hz
Cutting size	92.5 x 92.5 mm
Weight	400g

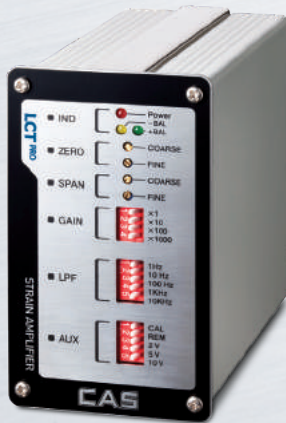
## OPTION

- ▶ SS-2100



# LCT PRO

Strain Amplifier



## FUNCTION

- ▶ Modular options & various output signal type
- ▶ Terminal block type connector
- ▶ built-in Low-pass filter for signal conditioning

## OPTION

- ▶ Current output

## FEATURE

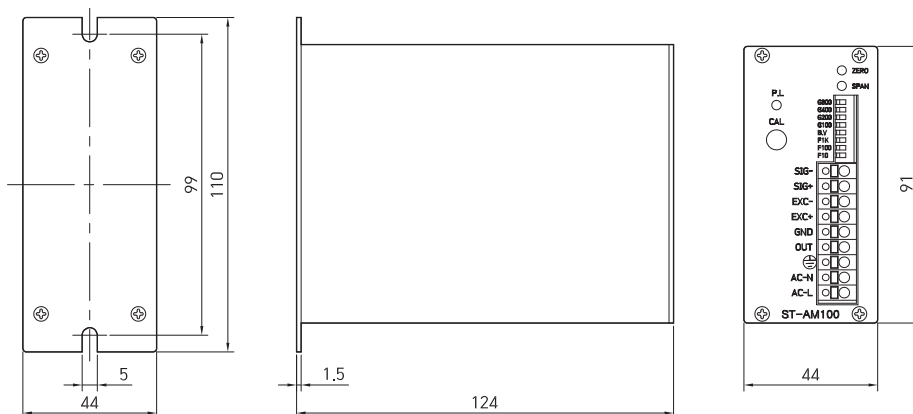
- ▶ Available for All bridge sensors (1/4,1/2,Full Bridge)
- ▶ Gain adjustment range from 1 to 11,000
- ▶ Single shunt calibration
- ▶ built-in Low-pass filter for signal conditioning
- ▶ Wide frequency response (10KHz, -0.5dB)
- ▶ Selectable excitation voltage (DC 2 V, 5V, 10V)
- ▶ Excitation remote sense installed
- ▶ Various output signal type

## SPECIFICATIONS

모델명	LTC PRO
Input	Full Bridge Transducer
Output	0~±10V
Power	DC18~24V
Gain	x1, x10, x100, x1000, x1 ~ x11 (Fine Volume) (Loadcell 0.1mV/V~100mV/V)
Filter	Low-pass filter 1Hz,10Hz,100Hz,1KHz, 10KHz selectable
Input Impedance	≤10 <sup>10</sup> Ω
Excitation voltage	2V,5V,10V selectable (Remote Sense)
Zero Balance	±100% (R.O)
Span Balance	±10% (R.O)
Linearity	±0.01% (F.S)
Accuracy	±0.01% (F.S)
Operating Temp.	-25 ~ 85°C, 85%
Mea. Impedance	1.7 KΩ<
Cutting size	64 x 123.5 x 110mm
Panel Cutting Size (WxH)	60 x 104mm
Weight	0.6kg

## OPTION

▶ LCTPRO



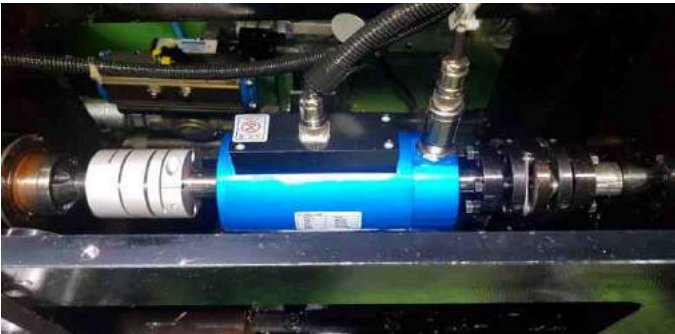
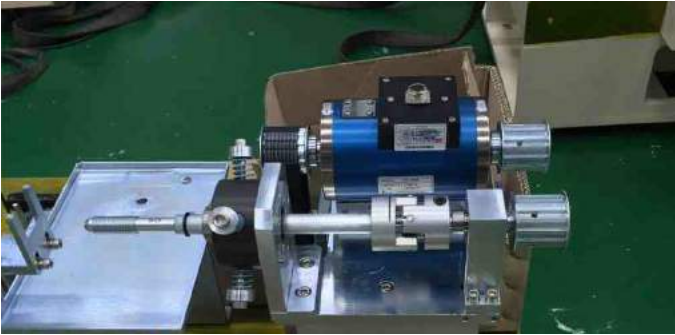
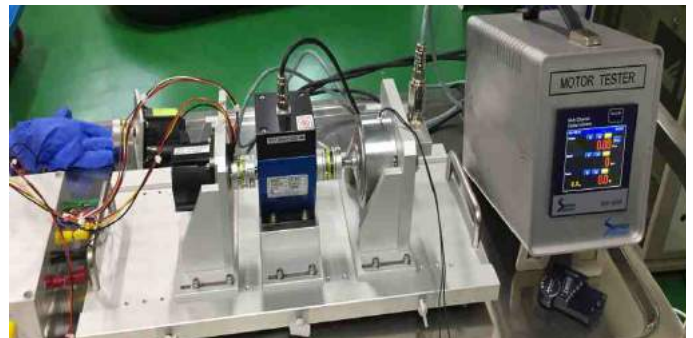
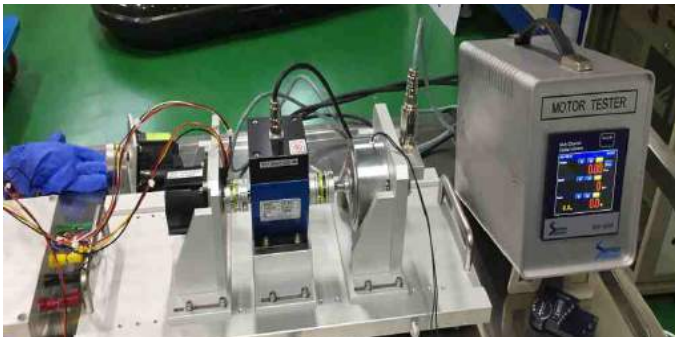
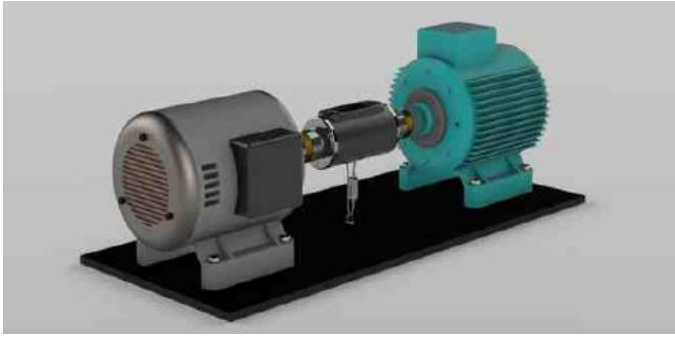


# Applications

## Dynamometer Torque Measurem

CAS weighing indicators, controllers and components provide the best solution for various industrial fields with high performance & high resolution, and excellent performance with various interface.

• Dynamometer Torque Measurement





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\* Specifications are subject to change without notice improvement.

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