

# LCW-D-S/E-S

## Washer-Type Load Cells

● For Rolling/Depressing Pressure Measurement under Harsh Environment ● 1 to 5 MN

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TRANSDUCERS



Hermetically-sealed structure with inert gas filled in ensures highly reliable, stable operation for a long period of time under harsh conditions. The flat washer-type structure requires only fabrication of screw nuts for installation to existing rolling mills. Load cells which meet individual rolling mills can also be manufactured. Inquiries are welcome.

### Features

- Hermetically-sealed structure with inert gas filled in
- Heat- and oil-resistant cable
- High reliability

### Specifications

#### Performance

- Rated Capacity: See table below.
- Nonlinearity: Within  $\pm 1\%$  RO
- Hysteresis: Within  $\pm 1\%$  RO
- Repeatability: 0.3% RO or less
- Rated Output: 1 mV/V (2000  $\mu\text{m}/\text{m}$ ) or more

#### Environmental Characteristics

- Safe Temperature Range:  $-20$  to  $100^\circ\text{C}$
- Compensated Temperature Range:  $-10$  to  $80^\circ\text{C}$
- Temperature Effect on Zero Balance: Within  $\pm 0.01\%$  RO/ $^\circ\text{C}$
- Temperature Effect on Output: Within  $\pm 0.01\%$ / $^\circ\text{C}$

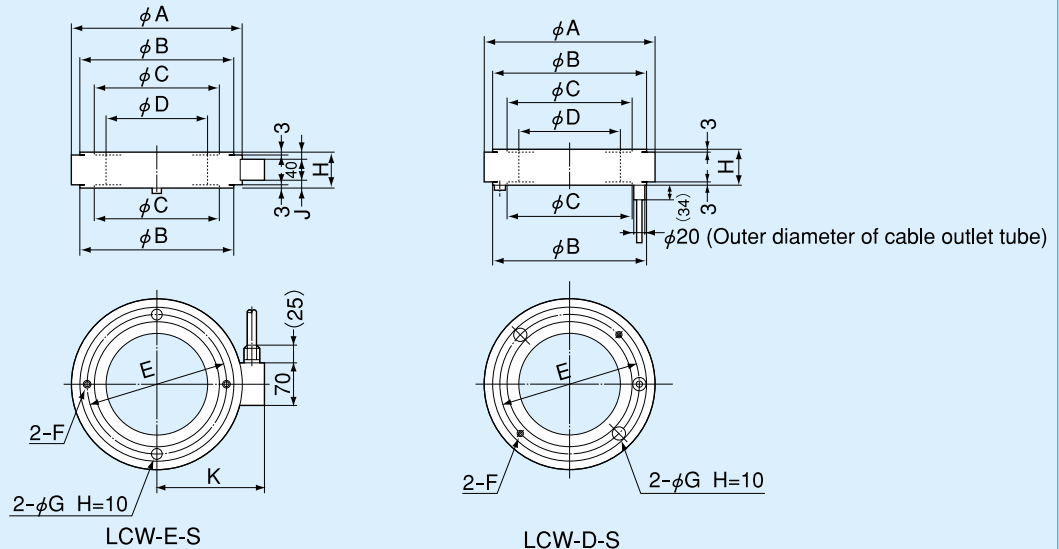
#### Electrical Characteristics

- Safe Excitation Voltage: 15 VAC or DC
- Recommended Excitation Voltage: 1 to 10 VAC or DC
- Input Resistance:  $350 \Omega \pm 1\%$
- Output Resistance:  $350 \Omega \pm 1\%$
- Cable: 4-conductor (0.75 mm<sup>2</sup>) fluonlex shielded cable, 8 mm diameter by 15 m long, bared at the tip (Shield wire is not connected to mainframe.)

#### Mechanical Properties

- Safe Overload Rating: 150%
- Natural Frequency: See table below.
- Weight: See table below.
- Protection Rating: IP64  
(Splashproof type conforming to JIS C 0920)

### Dimensions



Model	Rated Capacity	Natural Frequency (Approx.)	$\phi A$	$\phi B$	$\phi C$	$\phi D$	E	F	$\phi G$	H	J	K	Weight (Approx.)
LCW-D-1MNS	1 MN	16 kHz	241	202	178	140	190	M8 d=8	8	64	—	—	7 kg
LCW-D-2MNS	2 MN	14 kHz	355	307	277	230	292	M10 d=10	12	70	—	—	15 kg
LCW-D-3MNS	3 MN	15 kHz	355	314	270	230	292	M10 d=12	20	70	—	—	17 kg
LCW-D-5MNS	5 MN	16 kHz	355	312	252	210	282	M10 d=12	20	70	—	—	20 kg
LCW-E-1MNS	1 MN	16 kHz	241	202	178	140	190	M8 d=8	8	64	16	155	7 kg
LCW-E-2MNS	2 MN	14 kHz	355	307	277	230	292	M10 d=10	12	70	18	213	15 kg
LCW-E-3MNS	3 MN	15 kHz	355	314	270	230	292	M10 d=12	20	70	18	213	17 kg
LCW-E-5MNS	5 MN	16 kHz	355	312	252	210	282	M10 d=12	20	70	18	213	20 kg