

INTRINSICALLY SAFE LOW PROFILE LOAD CELLS FOR HAZARDOUS LOCATIONS STANDARD AND METRIC MODELS

Tension or Compression
7.5 to 500,000 lb Capacities
5000 kg to 10,000 kg Metric Models

LCHD/LCMHD-IS Series



- ✓ FM Intrinsically Safe Rating Standard
- ✓ 4 to 20 mA Output
- ✓ 5-Point NIST Traceable Calibration Included
- ✓ 0.25% Interchangeability
- ✓ All Stainless Steel Construction for Harsh Industrial Environments
- ✓ Heavy-Duty Industrial Design
- ✓ Low Profile for Easy Installations



LCHD-7.5K1C2IS,
twist-lock
termination shown.



Please Note:
Not for export,
USA and Canada only

The LCHD Series intrinsically safe load cells are FM rated Intrinsically safe for use in Hazardous locations. They are available with 5 different electrical terminations: Three connector options and 2 cable options, one of which is a submersible waterproof cable. Standard models have an amplified 4 to 20 mA output for uni-directional applications and a 4-12-20 mA output for bi-directional applications.

SPECIFICATIONS

Excitation Voltage: 10 to 28 Vdc
Nonlinearity (%F.S.O.): 0.10
Hysteresis (%F.S.O.): 0.10
Repeatability (%F.S.O.): 0.05
Zero Balance: 4 mA +10%,
 -2% adjustable
Operating Temperature:
 -40 to 75°C (-40 to 167°F)
Compensated Temperature:
 16 to 71°C (60 to 160°F)

Temperature Effects:

Zero (%FSO/°F):
 ±0.005 (±0.009%FSO/°C)
Span (%Reading/°F):
 ±0.005 (±0.009%Reading/°C)
Safe Overload (% of Capacity): 150
Ultimate Overload (% of Capacity):
 300
Material: Stainless Steel 17-4

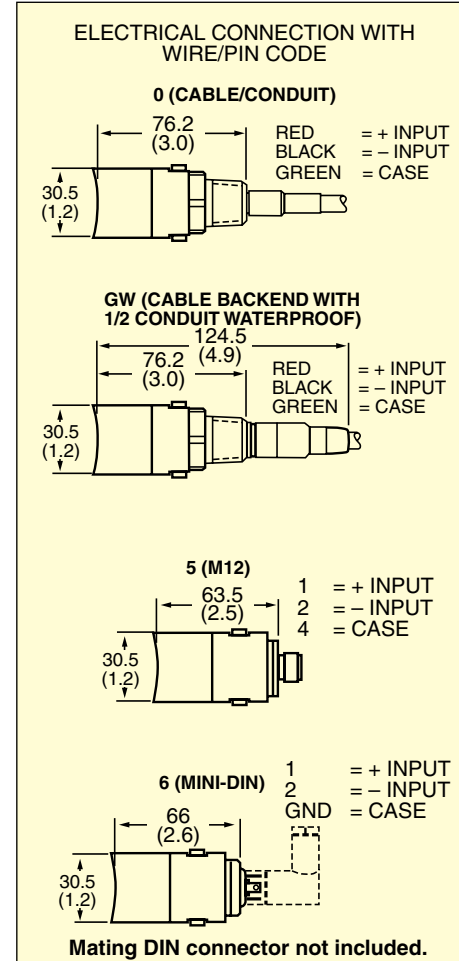
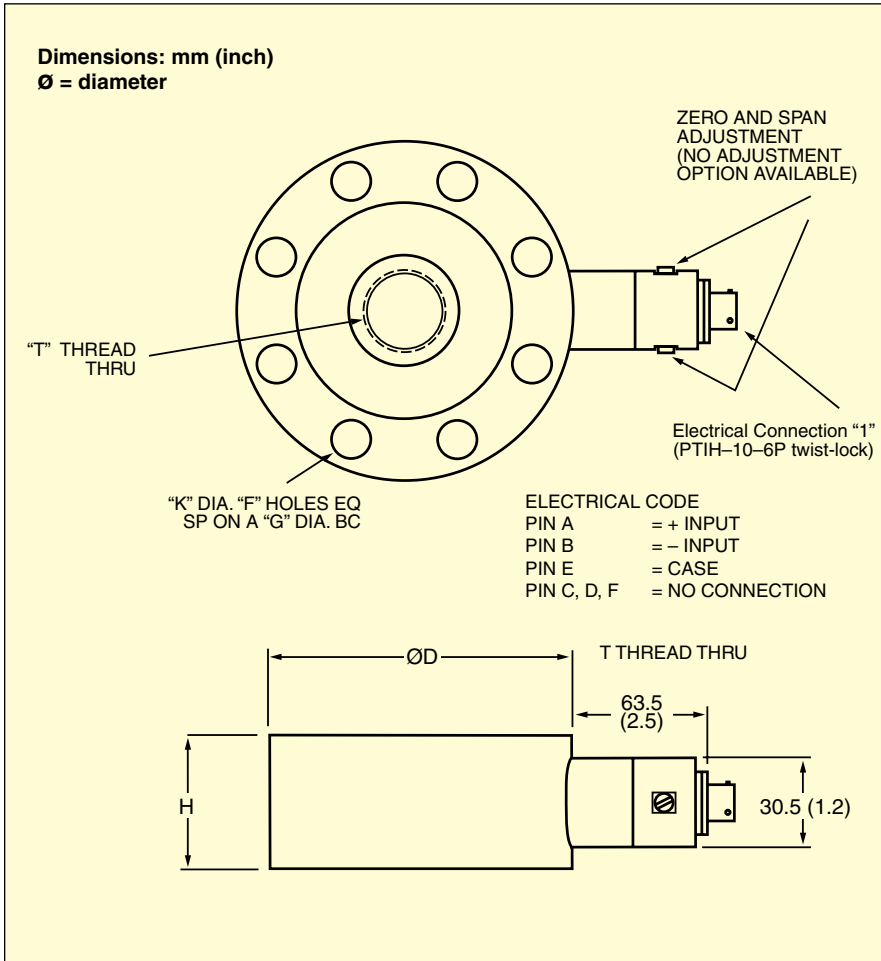
AGENCY APPROVALS

TYPE	AGENCY	APPROVAL LISTINGS
Intrinsically Safe (US and Canada)	FM	Hazardous (Classified) Location, Rated Intrinsically Safe, Securite Intrinsic Class I, II, III, Division 1 Gr A, B, C, D, E, F, G Class I, Zone 0 Aex ia IIc (US), Class I, Zone 0 Ex ia IIC (Canada), T4, Ta = -40 to 75°C
Non-Incendive	FM	FM Hazardous (Classified) Location, Rated Non-Incendive Class I Division 2 Groups A, B, C, D (US and Canada) T4, Ta = -40 to 75°C, Conduit electrical connections only

NOTE: Please refer to www.omega.com/approvals/ for downloadable copies of FM Approvals Certificate of Compliance and installation control drawings.

INTRINSICALLY SAFE LOAD CELLS

Any cable or connector must meet the requirements of the environment where it is being installed. The safety engineer should specify the cables and connectors.



CAPACITY (lbs)	D	H	K	G	F	T
STANDARD MODEL (LCHD)						
7500 – 15,000	140 (5.50)	46 (1.80)	10 (0.40)	115 (4.50)	8	1-14UNS-2B
20,000 – 50,000	152 (6.00)	46 (1.80)	13 (0.53)	124 (4.88)	8	1½-12UNF-2B
75,000 – 100,000	229 (9.00)	64 (2.50)	17 (0.66)	197 (7.75)	12	2-12UN-2B
150,000 – 200,000	279 (11.00)	76 (3.00)	20 (0.78)	241 (9.50)	12	2½-12UN-2B
300,000 – 500,000	356 (14.00)	108 (4.25)	25 (1.00)	298 (11.75)	12	3½-8UN-2B
METRIC MODEL (LCMHD)						
CAPACITY (kg)						
5000 – 7500	140 (5.50)	46 (1.80)	10 (0.40)	114 (4.50)	8	M24 x 2.0-6H
10,000	152 (6.00)	46 (1.80)	13 (0.53)	124 (4.88)	12	M36 x 2.0-6H

INTRINSICALLY SAFE STANDARD MODELS

To Order

CALIBRATED CAPACITY		MODEL NO.	COMPATIBLE METER	LOAD BUTTON	ROD END
lb	kg (Ref)				
INTRINSICALLY SAFE STANDARD MODELS					
7500	3403 kgf	LCHD-7.5K [*] [**] [***]	DP41-E, DP25B-E, DPi8	LBC-100	REC-100M
10,000	4537 kgf	LCHD-10K [*] [**] [***]	DP41-E, DP25B-E, DPi8	LBC-100	REC-100M
15,000	6806 kgf	LCHD-15K [*] [**] [***]	DP41-E, 6-digit display	LBC-100	REC-100M
20,000	9074 kgf	LCHD-20K [*] [**] [***]	DP41-E, 6-digit display	LBC-112	REC-112M
30,000	13,612 kgf	LCHD-30K [*] [**] [***]	DP41-E, 6-digit display	LBC-112	REC-112M
50,000	22,686 kgf	LCHD-50K [*] [**] [***]	DP41-E, 6-digit display	LBC-112	REC-112M
75,000	34,029 kgf	LCHD-75K [*] [**] [***]	DP41-E, 6-digit display	-	-
100,000	45,372 kgf	LCHD-100K [*] [**] [***]	DP41-E, 6-digit display	-	-
150,000	68,058 kgf	LCHD-150K [*] [**] [***]	DP41-E, 6-digit display	-	-
200,000	90,744 kgf	LCHD-200K [*] [**] [***]	DP41-E, 6-digit display	-	-
300,000	136,116 kgf	LCHD-300K [*] [**] [***]	DP41-E, 6-digit display	-	-
400,000	181,488 kgf	LCHD-400K [*] [**] [***]	DP41-E, 6-digit display	-	-
500,000	226,860 kgf	LCHD-500K [*] [**] [***]	DP41-E, 6-digit display	-	-

All models come complete with 5-point NIST traceable calibration certificate.

Note: Ranges over 300,000 lb are calibrated at 300,000 lb.

Ordering Example: LCHD-100K0BC2IS, 100,000 lb capacity, bidirectional, with PVC cable and FMIS approvals.

[*] ELECTRICAL TERMINATIONS

TERMINATIONS	SUFFIX
4.6 m (15') PVC cable	0
PTIH-10-6P twist-lock	1
M12 4-pin	5
mini-DIN	6
3 m (10') submersible cable	GW

[**] OUTPUT OPTIONS

INTRINSICALLY SAFE AMPLIFIERS	SUFFIX
FM Intrinsically Safe 4 to 20 mA Output (calibrated 0 to full scale in tension)	C2IS
FM Intrinsically Safe 4-12-20 mA Output [calibrated (-)full scale to (+)full scale] Bidirectional	BC2IS

[***] FINAL SUFFIX OPTIONS

DESCRIPTION	SUFFIX
Potentiometers Standard (No Suffix)	
No Potentiometers	NP



DP41-E, shown smaller than actual size.

TENSION PLATES

MODEL NO.	DESCRIPTION
LCHD-TP200	Tension plate, 5 to 25 lb ranges
LCHD-TP225	Tension plate, 50 to 1000 lb ranges
LCHD-TP263	Tension plate, 2000 to 5000 lb ranges
LCHD-TP450	Tension plate, 7500 to 15,000 lb ranges
LCHD-TP488	Tension plate, 20,000 to 50,000 lb ranges
LCHD-TP775	Tension plate, 75,000 to 100,000 lb ranges

INTRINSICALLY SAFE METRIC MODELS

To Order				
CALIBRATED CAPACITY		MODEL NO.	COMPATIBLE METER	LOAD BUTTON
kg	lb (Ref)			
INTRINSICALLY SAFE METRIC MODELS				
5000	11,023	LCMHD-5K [*] [**] [***]	DP41-E, DP25B-E, DPi8	MLBC-M24
7500	16,535	LCMHD-7.5K [*] [**] [***]	DP41-E, DP25B-E, DPi8	MLBC-M24
10,000	22,046	LCMHD-10K [*] [**] [***]	DP41-E, 6-digit display	MLBC-M36

All models come complete with 5-point NIST traceable calibration certificate.

Note: Ranges over 300,000 lb are calibrated at 300,000 lb.

Ordering Example: LCMHD-5K1C2IS, 5000 kg capacity load cell.

[*] ELECTRICAL TERMINATIONS

TERMINATIONS	SUFFIX
2 m (6.6') PVC cable with ½ NPT conduit†	0
PTIH-10-6P twist-lock mating connector PT06F10-6S (sold separately)	1
M12 4-pin	5
mini-DIN	6
3 m (10') submersible cable	GW

† Other cable lengths are available; please contact Factors for price and availability



DP41-E, shown smaller than actual size.

[**] OUTPUT OPTIONS

INTRINSICALLY SAFE AMPLIFIERS	SUFFIX
FM Intrinsically Safe 4 to 20 mA Output (calibrated 0 to full scale in tension)	C2IS
FM Intrinsically Safe 4-12-20 mA Output [calibrated (-)full scale to (+)full scale]	BC2IS

[***] FINAL SUFFIX OPTIONS

DESCRIPTION	SUFFIX
Potentiometers Standard (No Suffix)	
No Potentiometers	NP



DP25B, shown smaller than actual size.

To Order	
TENSION PLATES	
MODEL NO.	DESCRIPTION
LCMHD-TP450	Tension plate, 7500 to 15,000 lb ranges
LCMHD-TP488	Tension plate, 20,000 to 50,000 lb ranges