tech	nical
data	sheet

## Description

Range of precision electronic dynamometers appliances with removable display unit. The radio connection (2.4 G.Hertz) with 80 m in open field, working range is permanent between the unit and removable display unit.

The specific, patented shape of the attaching head enables either standard shackles or standardised accessories for chains.

The dynamometers of this range function in all positions for the measurement of force and suspended for weighing purposes.

The LLX 2 is available in two versions: Standard version with interlinking anchoring rings in the perpendicular surfaces, or an optional version with the anchoring rings both on the same side.

The standard version enables articulation of lifting accessories on both sides, thus avoiding stresses due to load movements and enhancing appliance precision. These assemblies are put together in our production line and cannot be modified later by the user.

## **Operating Principle**

Strain gauge measurement of the extension, within its limits of elasticity, of a metal body subjected to traction stress.

The sensor generates an electrical signal that is proportional to the load. This signal is processed by a micro-processor analyser and then transmitted via radio waves to the display unit, which immediately displays the load applied to the sensor to which it is linked. The display unit is compatible with all of the LLX 2 model sensors, irrespective of their capacity.

## **Technical Specisfications:**

Precision: 0.1 % (ISO 376 . 21 °C) Coefficient safety: minimum 4 Power supply: 3 x 1.5 V "AA" batteries. Removable Display 1 x LI ONE battery (delivered with charger) The standard version of the equipment comes with batteries and power pack in a carrying case. Protection : IP 66, NEMA 4 (sensor) More details are available on page 2.

## **Optional Accessories**

PC connection Kit Chain accessories with rapid connection Connecting shackles I.P. 67 Protection

Provisions applied : Machine Directives : 98/37/CEE European Standards : EN 12100-1 and 12100-2 CEM Directive : 89/336/CEE Electrical Safety : IEC 61010-1 2de Edition 2001 Radio certifications : CE :Radio test EN 300 440-2 V1.1.1 / USA & Canada : FCC part 15 / Australia : C-Tick ID R&TTE Directive (1999/5/CE)



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MODEL		G LLX2	LLX2	LLX2	LLX2	LLX2	LLX2	LLX2	Display Unit
	t	<b>LLX2</b> 0.5 t	<b>LLX2</b> 1 t 1	2 t	3.2 t	<b>LLX2</b> 5 t 5	6.3 t	10 t	Display Unit
MODEL Maximum capacity Test load	t	LLX2	1 t			5 t			
Maximum capacity		<b>LLX2</b> 0.5 t 0.5	1 t 1	2 t 2 3	3.2 t 3.2	5 t 5 7.5	6.3 t 6.3	10 t 10	All
Maximum capacity Test load Safety coefficient		<b>LLX2</b> 0.5 t 0.5	1 t 1 1.5	2 t 2 3	3.2 t 3.2 4.8 Minimum 4	5 t 5 7.5	6.3 t 6.3 9.6	10 t 10	All -
Maximum capacity Test load		<b>LLX2</b> 0.5 t 0.5	1 t 1 1.5	2 t 2 3	3.2 t 3.2 4.8 Minimum 4	5 t 5 7.5	6.3 t 6.3 9.6	10 t 10	All - -
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Maximum capacity Test load Safety coefficient Precision Increment Max. Display	t daN	LLX2 0.5 t 0.5 0.75	1 t 1 1.5 0,1 % ac	2 t 2 3 ccording to Is 2	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2	5 t 5 7.5 1°C (I.P. 67 5	6.3 t 6.3 9.6 = 0,2 %) 6.3	10 t 10 15 10	All
Maximum capacity Test load Safety coefficient Precision Increment Max. Display Number height	t daN daN	LLX2 0.5 t 0.5 0.75 0.5 0.1	1 t 1 1.5 0,1 % ac 1 0.2 1100 -	2 t 2 3 ccording to 15 2 0.5 2200 -	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2 0.5 3520 -	5 t 5 7.5 1°C (I.P. 67 5 1 5500 -	6.3 t 6.3 9.6 = 0,2 %) 6.3 1 6930 -	10 t 10 15 10 2	All
Maximum capacity Test load Safety coefficient Precision Increment Max. Display Number height Autonomy	t daN daN daN mm	LLX2 0.5 t 0.5 0.75 0.5 0.1	1 t 1 1.5 0,1 % ac 1 0.2 1100 -	2 t 2 3 coording to 18 2 0.5 2200 - m 300 to 10	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2 0.5 3520 - 00 h depend	5 t 5 7.5 1°C (I.P. 67 5 1 5500 - Jing of functi	6.3 t 6.3 9.6 = 0,2 %) 6.3 1 6930 - ions	10 t 10 15 10 2	All
Maximum capacity Test load Safety coefficient Precision Increment Max. Display Number height Autonomy Radio scope	t daN daN daN	LLX2 0.5 t 0.5 0.75 0.5 0.1	1 t 1 1.5 0,1 % ac 1 0.2 1100 -	2 t 2 3 coording to 18 2 0.5 2200 - m 300 to 10	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2 0.5 3520 - 00 h depend 0 (in open fi	5 t 5 7.5 1°C (I.P. 67 5 1 5500 - ding of functi ield) (I.P. 67	6.3 t 6.3 9.6 = 0,2 %) 6.3 1 6930 - ions	10 t 10 15 10 2	All
Maximum capacity Test load Safety coefficient Precision Increment Max. Display Number height Autonomy Radio scope RF Technology	t daN daN daN mm m	LLX2 0.5 t 0.5 0.75 0.5 0.1	1 t 1 1.5 0,1 % ac 1 0.2 1100 - Fro	2 t 2 3 ccording to IS 2 0.5 2200 - m 300 to 100 8	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2 0.5 3520 - 00 h depend 0 (in open fi	5 t 5 7.5 1°C (I.P. 67 5 1 5500 - Jing of functi ield) (I.P. 67 4 Ghz	6.3 t 6.3 9.6 = 0,2 %) 6.3 1 6930 - ions = 60)	10 t 10 15 10 2 11000 -	All - - - - - - - - - - - - -
Maximum capacity Test load Safety coefficient Precision Increment Max. Display Number height Autonomy Radio scope RF Technology Weight	t daN daN daN mm	LLX2 0.5 t 0.5 0.75 0.5 0.1	1 t 1 1.5 0,1 % ac 1 0.2 1100 - Fro	2 t 2 3 coording to IS 2 0.5 2200 - m 300 to 100 8 300	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2 0.5 3520 - 00 h depend 0 (in open fi 2.	5 t 5 7.5 1°C (I.P. 67 5 1 5500 - ding of functi ield) (I.P. 67 4 Ghz 3.3	6.3 t 6.3 9.6 = 0,2 %) 6.3 1 6930 - ions	10 t 10 15 10 2	All - - - - - - - - - - - - -
Maximum capacity Test load Safety coefficient Precision Increment Max. Display Number height Autonomy Radio scope RF Technology Weight IP Protection	t daN daN daN mm m	LLX2 0.5 t 0.5 0.75 0.5 0.1	1 t 1 1.5 0,1 % ac 1 0.2 1100 - Fro	2 t 2 3 coording to IS 2 0.5 2200 - m 300 to 100 8 300	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2 0.5 3520 - 00 h depend 0 (in open fi 2. MA 4 (optio	5 t 5 7.5 1°C (I.P. 67 5 1 5500 - ding of functi ield) (I.P. 67 4 Ghz 3.3 n : I.P. 67)	6.3 t 6.3 9.6 = 0,2 %) 6.3 1 6930 - ions = 60) 350	10 t 10 15 10 2 11000 -	All
Maximum capacity Test load Safety coefficient Precision Increment Max. Display Number height Autonomy Radio scope RF Technology Weight IP Protection Usage	t daN daN daN mm m	LLX2 0.5 t 0.5 0.75 0.5 0.1	1 t 1 1.5 0,1 % ac 1 0.2 1100 - Fro	2 t 2 3 coording to IS 2 0.5 2200 - m 300 to 100 8 8 300 I.P. 66 NE	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2 0.5 3520 - 00 h depend 0 (in open fi 2. MA 4 (option From -	5 t 5 7.5 1°C (I.P. 67 5 1 5500 - ding of functi ield) (I.P. 67 4 Ghz 3.3 n : I.P. 67) 20° to 40°C	6.3 t 6.3 9.6 = 0,2 %) 6.3 1 6930 - ions = 60) 350	10 t 10 15 10 2 11000 -	All - - - - - - - - - - - - -
Maximum capacity Test load Safety coefficient Precision Increment Max. Display Number height Autonomy Radio scope RF Technology Weight IP Protection	t daN daN daN mm m	LLX2 0.5 t 0.5 0.75 0.5 0.1	1 t 1 1.5 0,1 % ac 1 0.2 1100 - Fro	2 t 2 3 coording to IS 2 0.5 2200 - m 300 to 100 8 8 300 I.P. 66 NE	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2 0.5 3520 - 00 h depend 0 (in open fi 2. MA 4 (optio	5 t 5 7.5 1°C (I.P. 67 5 1 5500 - ding of functi ield) (I.P. 67 4 Ghz 3.3 n : I.P. 67) 20° to 40°C	6.3 t 6.3 9.6 = 0,2 %) 6.3 1 6930 - ions = 60) 350	10 t 10 15 10 2 11000 -	All - - - - - - - - - - - - -
Maximum capacity Test load Safety coefficient Precision Increment Max. Display Number height Autonomy Radio scope RF Technology Weight IP Protection Usage Sensitivity to T°	t daN daN daN mm m	LLX2 0.5 t 0.5 0.75 0.5 0.1	1 t 1 1.5 0,1 % ac 1 0.2 1100 - Fro	2 t 2 3 cording to IS 2 0.5 2200 - m 300 to 100 8 300 I.P. 66 NE 0.1	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2 0.5 3520 - 00 h depend 0 (in open fi 2. MA 4 (option From - 05% per 100	5 t 5 7.5 1°C (I.P. 67 5 1 5500 - ding of functi ield) (I.P. 67 4 Ghz 3.3 n : I.P. 67) 20° to 40°C	6.3 t 6.3 9.6 = 0,2 %) 6.3 1 6930 - ions = 60) 350	10 t 10 15 10 2 11000 -	All
Maximum capacity Test load Safety coefficient Precision Increment Max. Display Number height Autonomy Radio scope RF Technology Weight IP Protection Usage Sensitivity to T° Head Material	t daN daN daN mm m	LLX2 0.5 t 0.5 0.75 0.5 0.1	1 t 1 1.5 0,1 % ac 1 0.2 1100 - Fro	2 t 2 3 cording to IS 2 0.5 2200 - m 300 to 100 8 300 I.P. 66 NE 0.1	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2 0.5 3520 - 00 h depend 0 (in open fi 2. MA 4 (option From - 05% per 10° Steel	5 t 5 7.5 1°C (I.P. 67 5 1 5500 - ding of functi ield) (I.P. 67 4 Ghz 3.3 n : I.P. 67) 20° to 40°C	6.3 t 6.3 9.6 = 0,2 %) 6.3 1 6930 - ions = 60) 350	10 t 10 15 10 2 11000 -	All
Maximum capacity Test load Safety coefficient Precision Increment Max. Display Number height Autonomy Radio scope RF Technology Weight IP Protection Usage Sensitivity to T° Head Material	t daN daN daN mm m kg kg A B	LLX2 0.5 t 0.5 0.75 0.1 550 -	1 t 1 1.5 0,1 % ac 1 0.2 1100 - Froi 2.3	2 t 2 3 coording to IS 2 0.5 2200 - m 300 to 100 8 300 I.P. 66 NE 0.1	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2 0.5 3520 - 00 h depend 0 (in open fi 2. MA 4 (option From - 05% per 10° Steel inium	5 t 5 7.5 1°C (I.P. 67 5 1 5500 - ding of functi ield) (I.P. 67 4 Ghz 3.3 n : I.P. 67) 20° to 40°C °C	6.3 t 6.3 9.6 = 0,2 %) 6.3 1 6930 - ions = 60) 350	10 t 10 15 10 2 11000 - 6.45 6.45	All
Maximum capacity Test load Safety coefficient Precision Increment Max. Display Number height Autonomy Radio scope RF Technology Weight IP Protection Usage Sensitivity to T° Head Material	t daN daN daN mm m kg	LLX2 0.5 t 0.5 0.75 0.1 550 -	1 t 1 1.5 0,1 % ac 1 0.2 1100 - From 2.3 248	2 t 2 3 coording to IS 2 0.5 2200 - m 300 to 100 8 300 I.P. 66 NE 0.1 Alum 248	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2 0.5 3520 - 00 h depend 0 (in open fi 2. MA 4 (option From - 05% per 10° Steel inium 248	5 t 5 7.5 1°C (I.P. 67 5 1 5500 - Jing of functi ield) (I.P. 67 4 Ghz 3.3 n : I.P. 67) 20° to 40°C °C	6.3 t 6.3 9.6 = 0,2 %) 6.3 1 6930 - - ions = 60) - 350	10 t 10 15 10 2 11000 -	All
Maximum capacity Test load Safety coefficient Precision Increment Max. Display Number height Autonomy Radio scope RF Technology Weight IP Protection Usage Sensitivity to T° Head Material	t daN daN daN mm m kg kg A B C D	LLX2 0.5 t 0.5 0.75 0.1 550 - - - - - - - - - - - - - - - - - -	1 t 1 1.5 0,1 % ac 1 0.2 1100 - From 2.5 2.5 248 224 Ø 20 10	2 t 2 3 coording to 13 2 0.5 2200 - m 300 to 100 8 300 I.P. 66 NE 0. Alum 248 224 Ø 20 10	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2 0.5 3520 - 00 h depend 0 (in open fi 2. MA 4 (option From - 05% per 10° Steel inium 248 224 Ø 20 10	5 t 5 7.5 1°C (I.P. 67 5 1 5500 - ding of functi ield) (I.P. 67 4 Ghz 3.3 n : I.P. 67) 20° to 40°C °C 290 254 ∅ 28 16	6.3 t 6.3 9.6 = 0,2 %) 6.3 1 6930 - ions = 60) - - - - - - - - - - - - -	10 t 10 15 10 2 11000 - 6.45 6.45 5 8 5 8 40 20	All
Maximum capacity Test load Safety coefficient Precision Increment Max. Display Number height Autonomy Radio scope RF Technology Weight IP Protection Usage Sensitivity to T° Head Material Sensor Material	t daN daN mm m kg kg A B C D E	LLX2 0.5 t 0.5 0.75 0.1 550 - - - - - - - - - - - - - - - - - -	1 t 1 1.5 0,1 % ac 1 0.2 1100 - From 2.3 248 224 Ø 20 10 24	2 t 2 3 coording to IS 2200 - m 300 to 100 8 000 I.P. 66 NE 0.1 Alum 248 224 Ø 20 10 24	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2 0.5 3520 - 00 h depend 0 (in open fi 2. MA 4 (option From - 05% per 10° Steel inium 248 224 Ø 20 10 24	5 t 5 7.5 1°C (I.P. 67 5 1 5500 - Jing of functi ield) (I.P. 67 4 Ghz 3.3 n : I.P. 67) 20° to 40°C °C 290 254 Ø 28 16 35	6.3 t 6.3 9.6 = 0,2 %) 6.3 1 6930 - - ions = 60) 350 250 250 250 254 Ø 28 16 35	10 t 10 15 10 2 11000 - - 6.45 6.45 5 4 341 296 Ø 40 20 54	All
Maximum capacity Test load Safety coefficient Precision Increment Max. Display Number height Autonomy Radio scope RF Technology Weight IP Protection Usage Sensitivity to T° Head Material	t daN daN mm m kg kg A B C D E F	LLX2 0.5 t 0.5 0.75 0.1 550 - - - - - - - - - - - - - - - - - -	1 t 1 1.5 0,1 % ac 1 0.2 1100 - From 2.3 248 224 Ø 20 10 24 80	2 t 2 3 coording to IS 2200 - m 300 to 100 8 000 I.P. 66 NE 0.0 Alum 248 224 Ø 20 10 24 80	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2 0.5 3520 - 00 h depend 0 (in open fi 2. MA 4 (option From - 05% per 10° Steel inium 248 224 Ø 20 10 24 80	5 t 5 7.5 1°C (I.P. 67 5 1 5500 - Jing of functi ield) (I.P. 67 4 Ghz 3.3 n : I.P. 67) 20° to 40°C °C 290 254 Ø 28 16 35 80	6.3 t 6.3 9.6 = 0,2 %) 6.3 1 6930 - ions = 60) 350 290 254 Ø 28 16 35 80	10 t 10 15 10 2 11000 - - 6.45 6.45 5 6.45 5 4 341 296 Ø 40 20 54 80	All
Maximum capacity Test load Safety coefficient Precision Increment Max. Display Number height Autonomy Radio scope RF Technology Weight IP Protection Usage Sensitivity to T° Head Material Sensor Material	t daN daN mm m kg kg kg C D E F G	LLX2 0.5 t 0.5 0.75 0.1 550 - - - - - - - - - - - - - - - - - -	1 t 1 1.5 0,1 % ac 1 0.2 1100 - Fro 2.3 248 224 Ø 20 10 24 80 100	2 t 2 3 cording to IS 2200 - m 300 to 100 8 00 I.P. 66 NE 0. Alum 248 224 Ø 20 10 24 80 100	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2 0.5 3520 - 00 h depend 0 (in open fi 2. MA 4 (option From - 05% per 10° Steel inium 248 224 Ø 20 10 24	5 t 5 7.5 1°C (I.P. 67 5 1 5500 - Jing of functi ield) (I.P. 67 4 Ghz 3.3 n : I.P. 67) 20° to 40°C °C 290 254 Ø 28 16 35	6.3 t 6.3 9.6 = 0,2 %) 6.3 1 6930 - - ions = 60) 350 250 250 250 254 Ø 28 16 35	10 t 10 15 10 2 11000 - - 6.45 6.45 5 4 80 100	All
Maximum capacity Test load Safety coefficient Precision Increment Max. Display Number height Autonomy Radio scope RF Technology Weight IP Protection Usage Sensitivity to T° Head Material Sensor Material	t daN daN mm m kg kg A B C D E F	LLX2 0.5 t 0.5 0.75 0.1 550 - - - - - - - - - - - - - - - - - -	1 t 1 1.5 0,1 % ac 1 0.2 1100 - From 2.3 248 224 Ø 20 10 24 80	2 t 2 3 coording to IS 2200 - m 300 to 100 8 000 I.P. 66 NE 0.0 Alum 248 224 Ø 20 10 24 80	3.2 t 3.2 4.8 Minimum 4 SO 376 at 2 3.2 0.5 3520 - 00 h depend 0 (in open fi 2. MA 4 (option From - 05% per 10° Steel inium 248 224 Ø 20 10 24 80	5 t 5 7.5 1°C (I.P. 67 5 1 5500 - Jing of functi ield) (I.P. 67 4 Ghz 3.3 n : I.P. 67) 20° to 40°C °C 290 254 Ø 28 16 35 80	6.3 t 6.3 9.6 = 0,2 %) 6.3 1 6930 - ions = 60) 350 290 254 Ø 28 16 35 80	10 t 10 15 10 2 11000 - - 6.45 6.45 5 6.45 5 4 341 296 Ø 40 20 54 80	All