



# High-Performance Digital Load Cell Interface

## FEATURES

- Serial interface (RS-485)
- All settings made through the serial interface
- Simple calibration, test and setting via HyperTerminal programming, or via Revere’s software
- Automatic unit conversion, zero tracking
- Gravity factor compensation
- Tare function
- Suitable for PC-base,  $\mu$ C, PLC application
- Weight result format: six digits, eight annunciators
- Up to 64 nodes
- ESD protection up to 15 kV
- **Optional**
  - Tilt sensor



## APPLICATIONS

- OEM machinery
- Load cell digitizers
- Inventory and level control

## DESCRIPTION

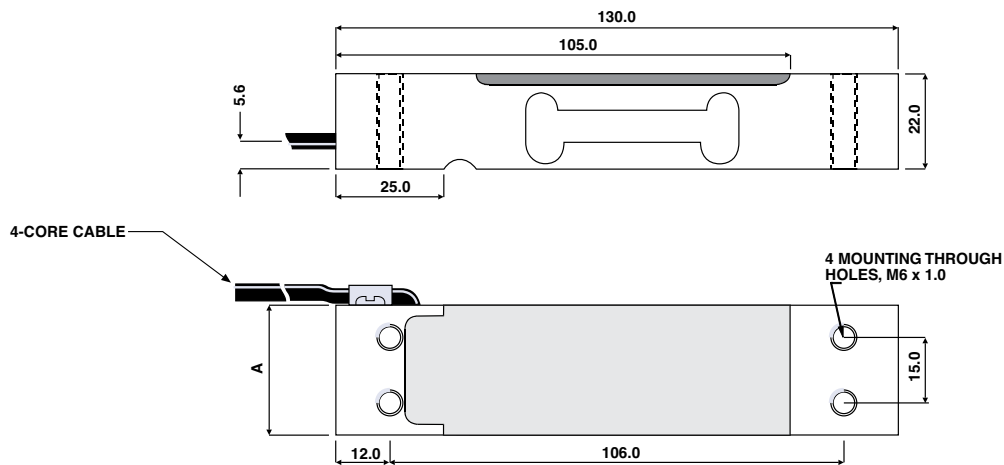
The Model 710D8 is a high-performance, digital load cell interface for precision measurement of strain gage transducers. With Digital technology, any analog load cell can be converted to a full-function digital load cell. The

interface circuit board can either be embedded in the load cell (space permitting), or installed in a 9 pin “D” type connector at the load cell cable end.

Simple RS-485 wiring connects the 710D8 to any PC, PLC, or DCS device. All calibration and operating procedures are fully documented on the accompanying installation CD ROM. Open architecture 710D8 software provides instant access to all configuration and calibration parameters.

710D8-enabled summing junction boxes offer digital interfacing for multiple load cell scales via an RS-485 bus.

## OUTLINE DIMENSIONS in millimeters



CAPACITY	A
3, 5, 7 kg	25.4
10, 15, 20, 30 kg	30.0
35–200 kg	40.0



## High-Performance Digital Load Cell Interface

SPECIFICATIONS					
PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
<b>Bridge input</b>					
Bridge excitation	$V_{exc}$	4.8	5.0	5.2	V
Bridge resistance	$R_{LC}$	315	350		$\Omega$
Full scale input sensitive	$F_S$				
PGA = 1				3.50	mV/V
PGA = 2				1.85	mV/V
PGA = 4				0.90	mV/V
PGA = 8				0.45	mV/V
Common mode voltage		1.50	2.50	3.50	V
Input impedance		$10^9$			$\Omega$
<b>Digital Bus - RS-485 protocol defined by Revere</b>					
Baud rate			19,200		Bit/sec
Communication mode		Point-to-point or RS-485 multi-drop communication			
Built-in termination resistor			8,870		$\Omega$
Cable length (with suitable Rt)				1,000	m
<b>Performance</b>					
Internal resolution			24		Bits
Noise (Ref to input, filter 4/4/4)				0.30	$\pm\mu V$ RMS
Digital filters		3 filters, software selectable			
Nonlinearity (in $T_S$ )			0.008	0.011	% $F_S$
Sample rate	$C_S$		15		Hz
Zero stability (in $T_S$ )			10	15	$\pm ppmF_S/^\circ C$
Span stability (in $T_S$ )			1.6	2.3	$\pm ppmF_S/^\circ C$
<b>Environmental conditions</b>					
Specification temperature (Full performance)	$T_S$	-10	+20	+40	$^\circ C$
Operating temperature		-40		+85	$^\circ C$
Storage temperature		-40		+85	$^\circ C$
<b>Power supply - DC only</b>					
Supply voltage	$V_p$	7.5	12	15	V
Supply current			32	45	mA
Maximum rating power supply ( $T \leq 500$ ms)				30	V
Reverse power protection				-60	V

All specifications subject to change without notice.



Model 710D8

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## High-Performance Digital Load Cell Interface

### FEATURES

- Capacities: 3–200 kg
- Only 22 mm high
- Aluminum construction
- Single-point 350 x 350 mm platform
- IP66 protection
- OIML R60 and NTEP approved
- **Optional**
  - EEx ia IIC T4 - ATEX hazardous area approval
  - FM approval
  - Symmetric configuration available



### APPLICATIONS

- Bench scales
- Counting scales
- Grocery scales

### DESCRIPTION

Model 710D8 is a low profile single-point load cell designed for direct mounting in low cost weighing platforms.

Its small physical size, combined with high accuracy and aluminum construction, makes this low cost load cell ideally suited for retail, bench and counting scales.



PROCESS WEIGHING CONTROL SOLUTIONS

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