

Digital Junction Box



FEATURES

- OIML R-76 approved to 10,000d
- Up to 4 load cells interface
- Two setpoints (Option)
- RS-485 serial interface with networking capabilities
- IP65 stainless steel enclosure
- Digital corner correction
- Easy setup and calibration using Windows-based utility or VT 150 remote terminal

DESCRIPTION

VTDJB junction boxes are designed for digital networked weighing systems. Each unit offers the benefits of digital signal processing and communication, providing calibrated weight results in a digital format. Up to 30 VTDJB modules may be connected to a single VT 150 display terminal over the RS-485 serial interface.

Each unit is calibrated and operated individually. The weight results from multiple units, however, can be summed by

the VT 150 terminal to support large platforms with more than 4 load cells.

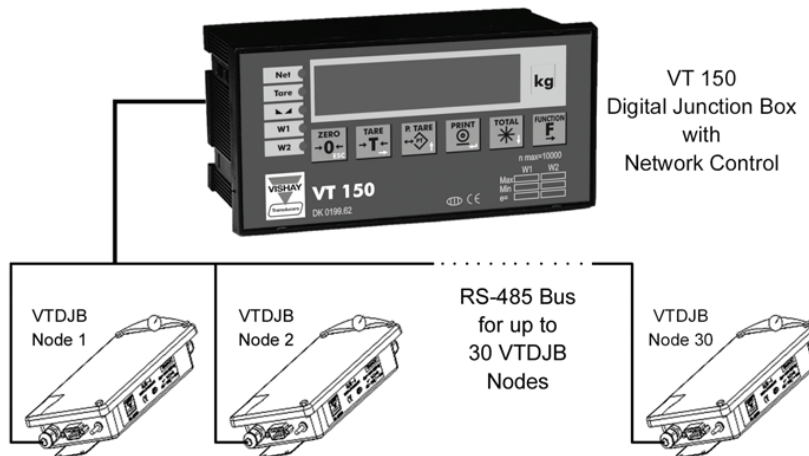
Each load cell is sampled individually, allowing improved accuracy and digital corner compensation with easy maintainability.

The VTDJB is complemented by a VT 150 digital terminal or by a Windows-based user interface application. Both interfaces allow weight display, calibration, setup and all functions common to platform weighing applications.

APPLICATIONS

- Platform scales
- Silo weighing
- Weighbridges
- Scale networks
- PC-based weighing systems

CONFIGURATION



ORDERING INFORMATION

Item Number	Description
VTDJB-2100085	EU-approved version with RS-485 serial interface
VTDJB-2100083	Non-approved version with either RS-232 or RS-485 serial interface



SPECIFICATIONS

PERFORMANCE

Resolution:	selectable up to 99,000 dd (Internal - 550,000)
Conversion Speed:	8 to 80 samples per second (for all active inputs)
Sensitivity:	0.4 μ V/Vsi
Full Scale Range:	-0.25 to 4mV/V for each load cell
Linearity:	0.002% of full scale
Long Term Stability:	0.005% of full scale per year
Excitation:	+5V VDC 4wires
Number of Cells:	Up to 4, 350 ohm load cells
Offset Drift:	2ppm/ $^{\circ}$ C
Span Drift:	2ppm/ $^{\circ}$ C
A/D Converter Type:	Sigma-Delta, ratiometric
Filter:	FIR, automatically adjusted to conversion speed; rolling average
Count By:	x1, x2, x5, x10, x20, x50
Decimal Point Setting:	between any digits of the weight display
Calibration Methods:	dead load and span, or data sheets calibration, via the mV/V output values of the load cell.
Digital corner compensation	
Weighing Functions:	automatic zero tracking, no motion detection, auto-zero on power-up, zero tare, net mode, multiple test functions

ENVIRONMENTAL

Operating Temp:	-10 $^{\circ}$ C to +40 $^{\circ}$ C [14 $^{\circ}$ F to 104 $^{\circ}$ F]
Storage Temp:	-20 $^{\circ}$ C to +55 $^{\circ}$ C [-4 $^{\circ}$ F to 158 $^{\circ}$ F]

ELECTRICAL

Voltage:	7-10VAC or 7-12VDC by external power supply
Current:	300mA with 4 load cells connected
EMC:	In accordance with the EN45501 regulations

ISOLATED ANALOG OUTPUT (OPTIONAL)

Resolution:	16 bit DAC
Current:	0-20mA or 4-20mA

INPUT & OUTPUT (OPTIONAL)

(x1) Logic Input:	24VDC +20%, negative common, opto-isolated to 2.5KV, input impedance 3.3k Ohm On/Off delay – 2ms
(x2) Logic Output:	24VDC \pm 10%, transistor negative (sink) common, maximum current - 10mA, opto- isolated to 2.5KV, maximal off-state voltage – 30VDC, leakage current – 50 μ A, On/Off delay – 2 ms

SERIAL COMMUNICATION

Serial Output:	RS-485
Baud Rate:	2400-115200 baud, half duplex
Applications:	master-slave protocols

ENCLOSURE

Type:	stainless steel
Dimensions:	200 x 105 x 45mm (LxWxH) (7.9 x 4.1 x 1.75in.) (LxWxH)
Protection:	IP67
Wiring Connections:	cable glands

APPROVALS

	10,000d, OIML R-76
	EU-type approval no. DK0199.62
Accuracy class	III

Vishay Transducers is continually seeking to improve product quality and performance. Specifications may change accordingly.



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