

MULTI-SCALE, MULTI-RANGE WEIGHT CONTROLLER

*For Truck Scale / Weighbridge Applications and
Multi-Speed Dosing / Filling*



The Matrix II instrument is available in two versions, for either digital or analogue load cells. It is a versatile stainless steel weight controller with OIML / EN (NAWI) approvals, an alphanumeric keyboard and a graphic display. Up to 2 analogue or digital weighing systems (scales) can be connected simultaneously and the Matrix II can be used in a multi-range, multi-interval configuration. Both the analogue version and the digital versions can be powered by AC or DC and it can be panel or table mounted.

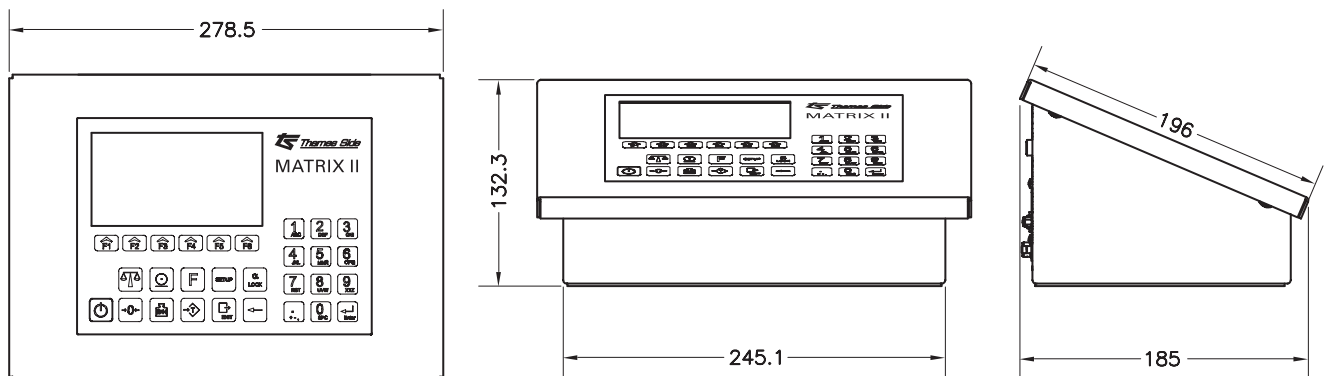
It offers a configurable printed ticket layout, mechanical/software metrological sealing, internal data management system, battery powered memory and multi-lingual capability, therefore it is ideal for complete truck scale / weighbridge vehicle management. It is also a purpose designed solution for 'weights-and-measures' approved filling and dosing, with multiple speeds and setpoints. Linearity correction is also available if desired.

Connectivity options include opto-isolated RS232 and RS485 communications, digital inputs/outputs and analogue outputs.

- Alphanumeric keyboard with graphic display
- OIML R76 and EN 45501:2015 (NAWI) approved, mono-range or multi-range
- Calibration/configuration by keyboard or remote communications port
- Single or dual connection of either analogue or digital load cells (not both on the same unit)
- Multi-language capability with 6 language options
- Complete truck scale / weighbridge vehicle management
- Stainless steel construction
- Linearity correction function
- Metrological sealing by software or mechanical method
- Configurable printed ticket and start-up logo
- Database can be manipulated using a PC
- Excellent flexibility for multi-speed filling and dosing applications

MATRIX II

technical specification...



All dimensions in mm.

Matrix II Weight Controller

| Analogue Load Cell Version (MATRIX-II-ANALOGUE) | |
|---|---|
| Load cell sensitivity range | +3 to -3 mV/V |
| Internal Resolution | ADC 24-bit; 16 700 000 divisions |
| Measuring rate | Internal: 50 measurements/second |
| Linearity error | ≤ 0.01 % of measurement range |
| Thermal stability | Zero: 150 nV / °C max. Span: 3.5 ppm / °C max. |
| Load cell excitation voltage | 6.0 ± 0.3 VDC |
| Minimum load cell resistance | 43Ω (8 cells of 350Ω, 16 cells of 700Ω) |
| Maximum load cell resistance | 1000 kΩ |
| Pre-calibration options | With masses or using load cell capacity and average sensitivity in mV/V |

| Digital Load Cell Version (MATRIX-II-DIGITAL) | |
|---|--|
| Load cell type | Thames Side T34D or T35D models or compatible |
| Load cell power supply | 18 VDC / 1.5 A (external adaptor) |
| Load cell communication | Bus RS-485 full duplex, 38400 bauds |
| Maximum number of load cells | 16 |
| Pre-calibration options | With masses or using factory pre-calibration of digital load cells |
| Corner adjustment | Automatic or manual |

| Inputs & Outputs | |
|---|--|
| Serial communications modules | RS-232C bi-directional (1 as standard, without opto-isolation) |
| | RS-232C bi-directional (optional item, opto-isolated) Part No. MATRIX-89404-RS232-EXP |
| | RS-485 half duplex (optional item, opto-isolated) |
| Optional logic inputs and outputs module (DIN rail mounted board). Part No. MATRIX-89406-DIG-IN-OUT | Transmission rates: 115200, 57600, 38400, 19200, 9600 and 4800 bauds |
| | Number of bits and parity: 7 and 8 bits, both with no parity, even parity or odd parity |
| | 8 digital inputs with status LEDs (max. 24 VDC) |
| Optional analogue output module (DIN rail mounted board) | 8 digital contact relay outputs with status LEDs, 125 VAC/1 A or 30 VDC/1 A |
| | I/O module communicates with Matrix II via RS485 bus (max. 15 modules per bus) |
| | External power supply is required: 12-28VDC, 2.5 W |
| Optional analogue output module (DIN rail mounted board) | Analogue output options: 0-5 V, 0-10 V, 0-20 mA, 4-20 mA |
| | Analogue output module communicates with Matrix II via RS485 bus (max. 2 modules per bus; 1 per scale) |
| | External power supply is required: 12-28 VDC, 2.5 W |

| Additional Data and Functions | |
|-------------------------------|---|
| Power supply | 90-260 VAC, 50-60 Hz, 18 W max. / 10-24 VDC |
| Operating Temperature Range | -10°C to +40°C |
| Storage Temperature Range | -25°C to +70°C |
| Nominal shipping weight | 3.2 kg |
| Weighbridge mode functions | First & second weighing control - Database management of registration numbers, products, company names, entrance/exit records, truck pre-fixed tares - Printing of tickets and listings (ticket is totally configurable using PC software) - System database (using an Excel spreadsheet) with fully editable fields and downloading to a PC - Vehicle barrier and traffic light control by Matrix II - Integrated truck filling application (at 1 or 2 speeds) with inflight material correction factors |
| Industrial mode functions | Weight taring - Piece counting by weight or unit - Totalizations (accumulation of multiple weights) - Programmable tickets for gross/net/totalize functions - Programming of up to 20 pre-fixed tares and management of database |
| Dosing mode functions | Charge, discharge or both in sequence - One product dosing at either 1 or 2 speeds, programmable up to 99 cycles - Inflight material correction factors - Matrix II controls the dosing which releases the PLC for performing other tasks - Digital I/O to initiate and end the process, by controlling valves and other components - Dosing either by weight or by pieces |



KANTA KING TECHNOLOGIES PVT LTD.

Channel Partner

+91.9560915555

info@kantaking.com

C-25, 2nd Floor, DSIDC Complex, Kirti Nagar, New Delhi - 110015

www.kantaking.com

Our policy is one of continuous product enhancement. We therefore reserve the right to incorporate technical modifications without prior notification.



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