
1. THE WEIGHING HAND PALLET TRUCK RPW-IT3000Ex

with option wireless in Exd enclosure (12VDC battery supplied terminal only)

1.1. SYMBOLS



Warning!

This symbol indicates advice which, if ignored, puts your health or the ability of the device or devices to function at risk.



Note:

This symbol indicates important additional information, tips and recommendations.

1.2. SAFETY INSTRUCTIONS

The most important safety instructions are summarised in this chapter. It is intended to supplement the relevant regulations which must be studied by the personnel responsible.

When working in hazardous areas, the safety of personnel and plant depends on complying with all relevant safety regulations. Assembly and maintenance staff working on installations therefore have a particular responsibility. They require precise knowledge of the applicable standards and regulations.



As user, please observe:

- *National safety and accident prevention regulations.*
- *National installation regulations (e.g. EN 60079-14)*
- *Generally recognised technical regulations.*
- *Safety guidelines and information in these operating instructions as well as the enclosed mechanical assembly drawings, wiring diagrams and operating instructions of the subassembly devices.*
- *Characteristic values and rated operating conditions on the rating and data plates.*
- *Additional instruction plates / labels on the devices.*
- *That any damage can invalidate the Ex-protection.*

Use the devices in **accordance with the regulations** and for their intended purpose.

Incorrect and impermissible use or non-compliance with these instructions invalidates our warranty provision. No changes to the devices and components impairing their explosion protection are permitted.

1.3. CONFORMITY TO STANDARDS

The devices comply with the following standards and directives:

- Directive 94/9/EG;
EN 60079-0, EN 60079-7, EN 60079-11, EN 60079-18, EN 60079-31,
EN 1755



The devices are approved for use in hazardous area Zones 1, 2, 21, 22.

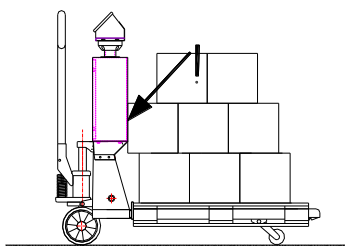
1.4. TAKING THE SYSTEM INTO OPERATION

To activate the weighing system, turn it on using the on/off (①) button on the terminal.

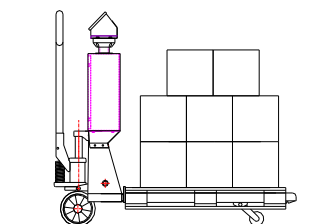
After 3 to 5 minutes the electronics and load cells have reached the operational temperature. Before this, inaccuracies of up to ca. 0.3% may occur.

It is recommended not to lift loads before the zero-point correction has been executed.

The weight must be lifted freely: without touching the housing of the indicator or other pallets:



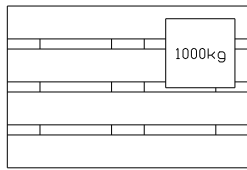
Wrong way of lifting the load



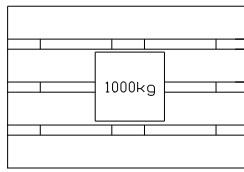
Correct way of lifting the load

The accuracy of the weighing system diminishes with circa 0.1% per degree starting from a tilted position of 2°. This effect also occurs with pits/pot-holes in the floor. An even floor is optimal.

The most accurate weighing result is obtained when the centre of gravity of the load is placed between the forks. With a non-centric loading, the forks will torque and bend. This may result in a higher inaccuracy.



Non-optimal placement of the load



Optimal placement of the load

Temperature range: between -10 and +40° C the maximum inaccuracy is 0.1% of the weighed load. Outside this range, inaccuracies of up to 0.3% may occur.

Fast temperature changes must be avoided because it will cause condensation in the electronics. During acclimatisation the weighing system must be switched off.

- Because the steering wheels are mounted in the front, pulling of the pallet truck is preferred above pushing it.
- When the lifting mechanism is not used, the handle should be kept in the neutral, middle, position. This prolongs the life span of the sealing.

1.5. INFORMATION ON STORAGE BATTERY OPERATION



EXPLOSION HAZARD!

- ▶ Always charge the battery pack in a safe area!
- ▶ Only use chargers approved by Systec GmbH!

Applicable only to IT3000Ex-12VDC: The connection of the power supply is protected to increased safety Ex-de, the supply voltage is 12VDC. This voltage must be supplied from one of the following external rechargeable batteries:

1) AkkuBox Ex; 12VDC, with miniCLIX socket, for use in Ex zone 1 and 2, 21 and 22, article-No. E3AKK001;

2) AkkuBox Ex; 12VDC, with DXN1 socket, for use in Ex zone 1 and 2, 21 and 22 article-No. E3AKK002;

3) Equivalent 12V rechargeable battery as per following specification:

- Um=14.2VDC, max. DC voltage in compliance with EN60079-0 and EN 60079-7
- Battery incorporated in metal housing (observe instructions on equipotential bonding, see chapter 'Equipotential Bonding' of manual IT3000EX_THE);
- If the rechargeable battery is installed in hazardous area, it must comply with the required Ex type of protection.
- Connecting cables from the rechargeable battery to the weighing terminal must be shielded. The shield must be connected on both sides. Only use suitable cable in compliance with EN60079-14:2008 section 9. Observe the Technical Manual of the external rechargeable battery and Operating Instructions DXN.

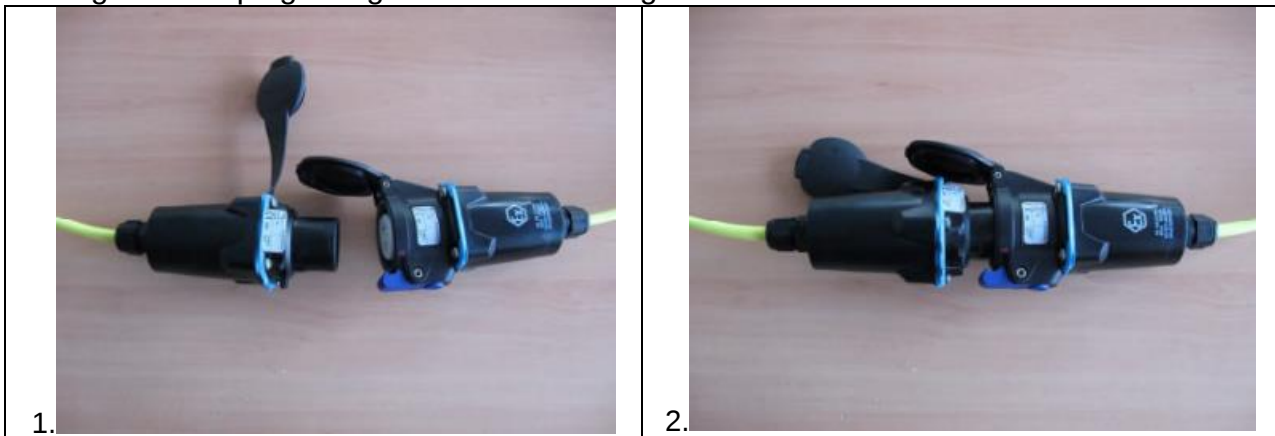
For more information regarding the different 12VDC supplies see chapter 6.6 of the technical manual IT3000EX_THE.

Instructions For Connecting And Separating Coupler

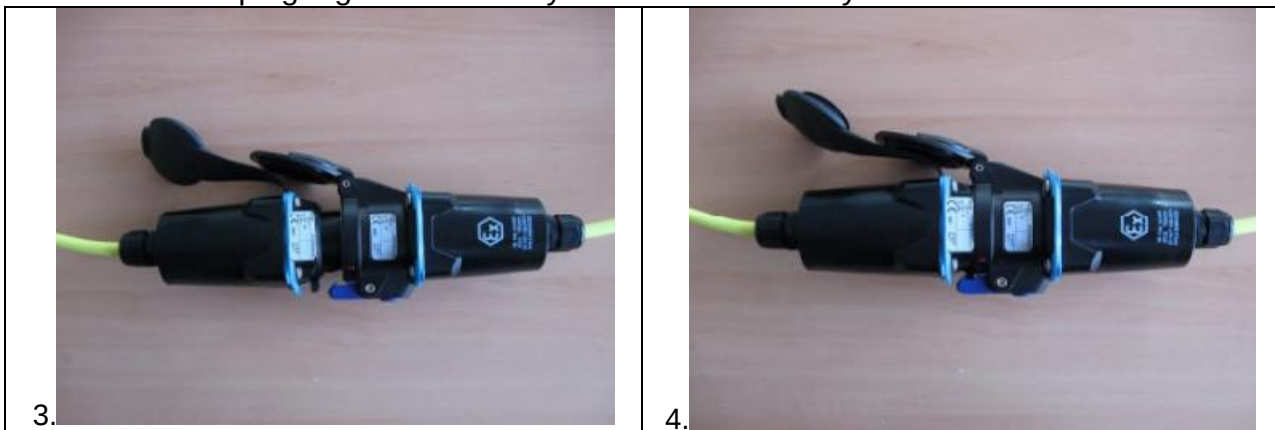


For older units with the miniCLIX socket please see the technical manual IT3000EX_THE.

1. Before plugging, open protective caps and check plug/socket for possible damages.
2. Align socket/plug along the red arrows in groove.



3. Turn socket/plug right by approx. 45° to stop.
4. Push socket/plug together until they lock and are held by the blue hook.



Disconnect in reverse order.

	Absolutely adhere to operating instructions 'DXN' supplied by Marechal.
	Components must have identical coding to avoid damages to connector/socket.
	The supply cable to the plug-and-socket connection must be firmly installed and sufficiently protected against mechanical damage. Cables must comply with the thermic and mechanical requirements at the site of installation.
	When connectors are not connected correctly, protection against risk of explosion is no longer warranted. Strictly follow the instructions!
	After separating, immediately cover components of the plug-and-socket connection conducting voltage with protective cap!

Powersave Function

By means of the selectable powersave function, backlighting can be switched off after time when the terminal is not in use. This function must be enabled in the configuration of the terminal, and it is done by entering a time in minutes after which the backlighting of the display is to be switched off when the terminal is not in use (powersave for battery operated terminals).

Press any key to switch on again. The (residual) operating life during storage battery operation depends on the operating mode.

The following operating life applies for fully charged new storage battery:

Sleep mode	min. 70 h.
Normal weight display	min. 60 h.
Normal weight display and interface operation	min. 50 h.

When the battery indication is not lit the battery is OK. When the battery rectangle is blinking in the display, the battery should be charged. Weighing actions can still be performed until the timer reaches the LowBat Off time which is set in the Servicemode (default = 30 min.). When the battery is completely empty, the weighing system switches off. This should be prevented because it damages the battery and could shorten the battery life-time.

When charging, it is necessary to charge the battery for at least 8 hours. This will prevent loss of battery capacity. If you use the system in shift work, the autonomy of 70 hours should be sufficient.

The battery can be charged on the adapter supplied with the charger.

Charging cycle: Fast charging until full (about 8 hours), next trickle charging.

It is not possible to overload the battery because the charger automatically switches over to trickle charging.

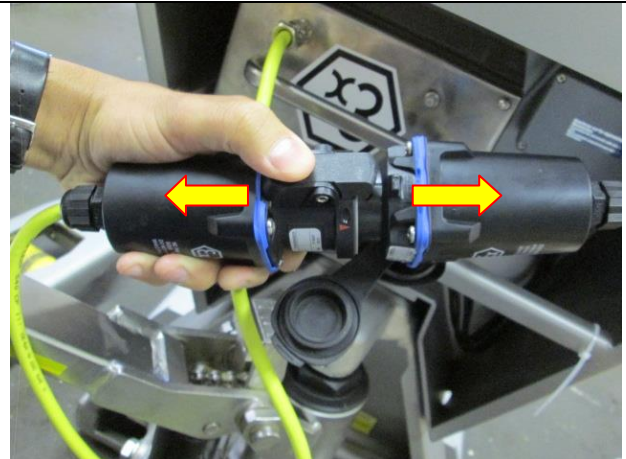
A green led indicates that the battery is charged and ready for reuse.

A yellow led indicates that the battery is being charged and not ready for use.

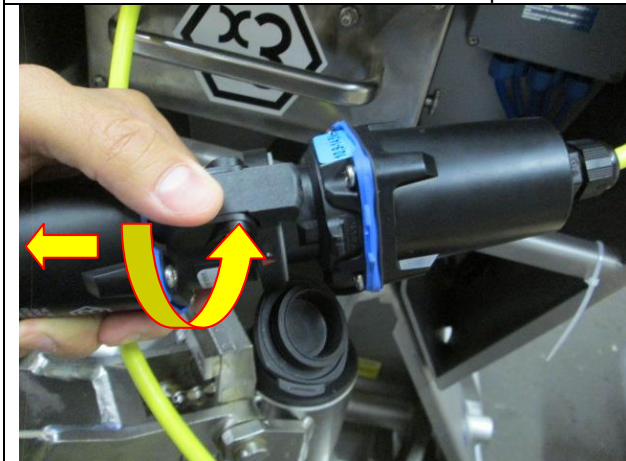
Note

Depending on the age and the charging state of the storage battery, the operation life may vary downwards.

1.6. Battery change.



Take out the connector and press the red button while pulling on both connector parts



Remove the plug by turning the connector counterclockwise and pulling it. Close the cap of the battery plug.



Close the cap of the housing connector. Loosen the screw which secures the battery and Lift up the battery pack slightly before taking it out.

- For replacing the battery reverse this working order.

2.1. MAINTENANCE AND SERVICING



Please pay attention to the national regulations applicable in the country of deployment!

Maintenance, repair and servicing work on the devices must only be performed by personnel who are both authorised and suitably trained for this purpose.

To prevent defects in the system, perform maintenance work regularly. The intervals between inspections should however not exceed a maximum of three years.

Maintenance and calibration may only be executed in a safe area.

2.2. MAINTENANCE PALLET TRUCK

The maintenance guidelines for normal pallet trucks apply to the chassis of the mobile weighing system. From experience we know that the integrated weighing system still functions when the chassis is damaged by overloading.

Main guidelines:

- The weighing system meets up to the protection class IP65. This means that dust or moisture (rain or water beam from all sides), will not influence the operation of the electronics. However, high-pressure cleansing in combination with warm water or chemical cleansers will lead to the entry of moisture and therefore negatively influence the operation of the system.
- Only specialists may undertake any welding. This is to avoid damage to electronics and load cells.
- The bearings of the wheels (non-polyurethane) and the pivoting points of the levelling bar of the loading wheels must be cleansed and greased regularly.
- For maintenance of the weighing terminal see the technical manual of the weighing terminal (IT3000EX_THE.pdf)

2.3. INSPECTION INTERVALS

Consider the following conditions when determining the inspection interval:

- The ambient conditions:
 - Set-up in the open
 - Degree of wind, rain and sunlight exposure
- The operating conditions:
 - Duty cycle of the system
 - Operator errors
- Manufacturer information in the technical documentation:

- Mechanical and electrical service life

2.4. INSPECTION CONTENT

Perform the inspections as determined by the local requirements. The inspections include visual examinations, general checks and detailed inspections.



If defects which affect explosion protection are discovered during inspections, then the equipment is to be taken out of service until the defect is remedied.

2.5. INSPECTIONS/MAINTENANCE CHECKLIST

Date:	Name:	Yes	No	Action performed
Date last inspection:				
General inspections				
Are the wires in the terminal blocks clamped properly?				
Are the permissible temperature specifications (in accordance with EN 60079-0) complied with?				
Are seals, cable glands and cable entries free of damage?				
Inspecting the outer condition of enclosures				
Are the enclosures free of ruptures, holes, bumps, material brittleness or corrosion spots?				
Inspecting the condition of cable glands				
Are the threaded joints tightened properly?				
Is the sealing within the threaded joint in satisfactory condition?				
Inspecting the condition of windows:				
Are the windows intact? a)				
Inspection of the interiors				
Are the interior spaces of the devices in flawless condition?				
Are the electrical points of contact in flawless condition?				
Is the mechanical attachment of the battery intact?				
Do the electrical contact points make contact properly?				
Calibration:				
Is the device within the tolerances as stated by the manufacturer?				
Recommended interval: once a year				
Inspection of the age and condition				
Is the device still within the electrical or mechanical service life as specified by the manufacturer?				
Inspecting the device prior to operating				
Is the device intact?				
Has the device been checked that no extraneous particles are present within?				
Is the battery connection performed correctly?				
Do cable entries and stopping plugs sit correctly?				
Are all unused openings sealed with certified sealing elements?				

Table 2-6

3.1. FUNCTIONALITY OF THE WEIGHING TERMINAL

For details on touch panel and functions of the weighing terminal please refer to the Systec operation manual (IT3000EX_BAE.pdf)

4.1. TECHNICAL DATA



Please consult the manufacturer if operating conditions are non-standard.

Additional technical data can be obtained upon request.

4.2. Ex PROTECTION

	RWS-Ex, RPW-IT3000Ex
Explosion protection, device group and category	 II 2 (2) G II 2 (2) D
Test certification	DEKRA 13 ATEX 0044
Type of explosion protection to EN 60079-0	Ex e ib mb IIC T4 Gb Ex ib tb IIIC T125°C Db

Table 2-8: Ex protection data

4.3. ACCESSORIES AND SPARE PARTS



Use only original accessories and spare parts from Systec GmbH or RAVAS Europe b.v.. Use of another company's accessories and spare parts invalidates the warranty of Systec GmbH/ RAVAS Europe b.v..

5.1. DECLARATION OF CONFORMITY (complete weighing system)

EG-Conformiteitsverklaring

EG-Konformitätserklärung

EC-Declaration of Conformity

Déclaration de Conformité CE

Electromach bv , Jan Tinbergenstraat 193, 7559 SP Hengelo, Nederland

Verklaard op eigen verantwoording, erklärt in alleiniger Verantwortung, declares in its sole responsibility, declare sous sa seule responsabilité

Dat het product: Dass das Produkt: That the product: Que le produit:	Niet-automatisch weeginstrument Nicht-automatische Waage Non-automatic weighing instrument Instrument de pesage non-automatique
Type, Typ, type, type :	Type RWS-Ex, RPW - IT3000Ex Ravas 21405584.143201 – 02 Electromach 433824 / 541409
Voldoet aan de eisen van de volgende Richtlijnen en normen Mit den Anforderungen der folgende Richtlinien und Normen übereinstimmt Is in conformity with the requirements of the following directives and standards Est conforme aux exigences des directives et des normes suivantes	
Richtlijn Richtlinie Directive Directive	Normen Normen Standards Normes
94/9/EEG : ATEX Richtlijn 94/9/EG : ATEX Richtlinie 94/9/EC : ATEX Directive 94/9/CE : Directive ATEX	EN 60079-0 : 2009 EN 60079-7 : 2007 EN 60079-11 : 2012 EN 60079-18 : 2009 EN 60079-31 : 2009 EN 1755 : 2000 + A1
Markering, Kennzeichnung, marking, marquage :	Ex II 2 (2) G Ex e mb ib IIC T4 Gb Ex II 2 (2) D Ex ib tb IIIC T125°C Db IP65
EG-Certificaat van Overeenstemming : EG-Baumusterprüfbescheinigung : EC Type Examination Certificate : Attestation d'examen CE de type :	Dekra 13 ATEX 0044 Dekra Certification B.V. Utrechtseweg 310, 6812 AR Arnhem, Nederland

2004/108/EEG : EMC Richtlijn 2004/108/EG : EMV-Richtlinie 2004/108/EC : EMC Directive 2004/108/CE : Directive CEM	
2006/42/EEG : Machine Richtlijn 2006/42/EG : Maschinen-Richtlinie 2006/42/EC : Machinery Directive 2006/42/CE : Directive Machines	
2009/23/EEG : Richtlijn niet-automatische weegwerktuigen 2009/23/EG : Nichtselbsttätige Waagen Richtlinie 2009/23/EC : Non-automatic weighing instruments Directive 2009/23/CE : Directive de pesage à fonctionnement non-automatique	
Option: These RPW's are executed with a bluetooth, built into an Ex "d" enclosure and on-off switch. Installed as per EN 60079-14	Ex"d" enclosure : Stahl 8265 On-off switch : Stahl 8003

Hengelo, 04-08-2014

Plaats en datum
Ort und Datum
Place and date
Lieu et date



P.Boers
Directeur
General Manager
Geschäftsführer
Directeur



C.Cameron
Kwaliteits manager
Leiter Qualitätssicherung
Quality Manager
Manager Assurance de Qualité

We would like to inform you about the fact that this RAVAS product is 100 % recyclable on the basis that the parts are processed and disposed off in the right manner.
More information can be found on our website www.ravas.com.

