

**RAVAS 2560 Exi**



**User Manual**

PLEASE RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE

If you have any queries concerning the duration and terms of the guarantee, please contact your supplier. We would also refer you to our General Sale and Supply Conditions, which are available on request.

The manufacturer accepts no liability for any damage or injury caused by failure to follow these instructions, or from negligent operation or assembly, even if this is not expressly stated in this instruction manual.

In light of our policy of continuous improvement, it is possible that details of the product may differ from those described in this manual. For this reason, these instructions should only be treated as guidelines for the installation of the relevant product. This manual has been compiled with all due care, but the manufacturer cannot be held responsible for any consequences of errors. All rights are reserved and no part of this manual may be reproduced in any way.

# User manual

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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](http://www.ravas.com).



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Printing/typographical errors and model changes reserved

## 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.*

## 2. Safety instructions

The most important safety instructions are summarized 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.



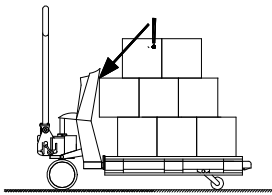
As user, please observe:

- *National safety and accident prevention regulations.*
- *National installation regulations (e.g. IEC 60079-14)*
- *Generally recognized 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.*

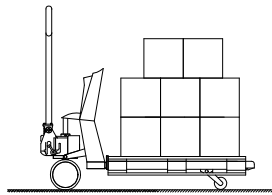
Use the devices in **accordance with the regulations** and for their intended purpose. Incorrect and impermissible use or non-compliance with these instructions invalidates our warranty provision. No changes to the devices and components impairing their explosion protection are permitted.

### 3. Use

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



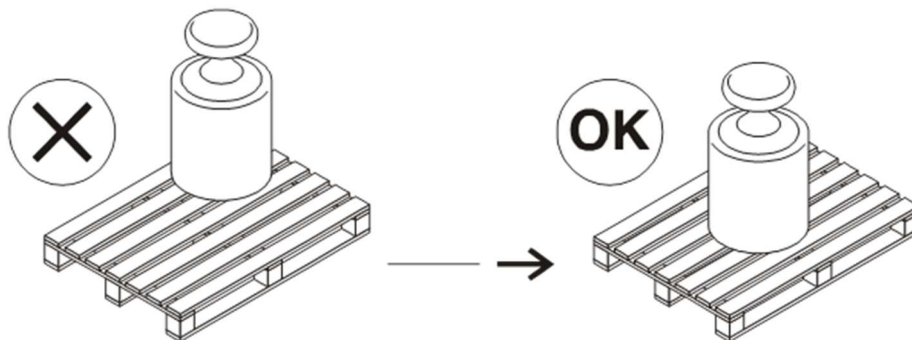
Wrong way of lifting the load



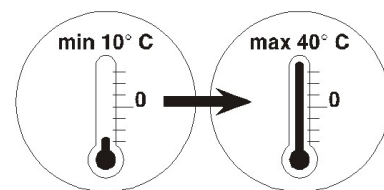
Correct way of lifting the load

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 system will be produced with an electrical level switch. When the forks are out of level with more than 2 degrees, the indicator will display -----.

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. With legal for trade versions, the level control will switch off the indicator with a non-centric loading or a tilted position that influences the weighing accuracy.



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.

## 4. Conformity to standards

The devices comply with the following standards and directives:

- Directive  
94/9/EG; EN  
60079-0:  
2009  
EN 60079-7: 2007  
EN 60079-11: 2012  
EN 60079-18: 2009  
EN 60079-31: 2009



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

## 5. Technical data





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

*Additional technical data can be obtained upon request.*

### 5.1 Ex protection RWS-Ex-PJA43\*X-IND256x

Ex protection RWS-Ex-2560-Exi

Ex protection RWS-Ex-ProLine-2560-Exi

<b>EG-type research certificate:</b>	DEKRA 13ATEX0044
<b>Explosion protection, device group and category</b>	 II 2G Ex ib IIB T4 Gb or  II 2D Ex ib IIIC T135°C Db
<b>May be used in temperature range:</b>	-10°C - +40°C

### 5.2 Electrical data

Supply by battery type BU-2560-Exi and BU-2560-w-Exi (certificate DEKRA 13ATEX0043).

The battery may only be recharged outside the hazardous area. The charging instructions, stipulated in the battery-manual must be observed.

## 6. Opening and closing of the enclosure



*Only open the enclosure to change battery type BU-2560-Exi or BU-2560-w-Exi. After the battery is connected the housing has to be closed.*



*The battery can't be changed in areas which contain flammable dust.*

## 7. Commissioning



*Before commissioning, ensure that the device is not damaged.*

The power supply to the system takes place through an exchangeable battery pack. With a completely charged battery pack the total weighing time is about 100 hours.

When the voltage level of the battery is running low, the display will show "LO-BA". When the battery is completely empty, the weighing system switches off. When charging, it is necessary to charge the battery for at least 6 hours. This will prevent loss of battery capacity.

If you use the system in shift work, it is recommended to purchase a supplementary battery pack. By means of a special clasp system, the battery can be removed and replaced easily.

### **Remark: Exchanging the battery can be done inside the EX-zone!**

The battery can be charged on the adapter supplied with the charger. When the charger is connected to 220 Vac, the red light is on. When the battery is charging, the yellow LED on the charger is lit. When the LED turns off, the battery is charged and can be used. After a while the yellow LED will start blinking. The blinking will slow down after some time. This shows that the charger is keeping the battery fully charged. It is not possible to overload the battery.

### **Warning: Charging the battery has to be done outside the EX-zone!**

## 8. Maintenance and service



*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 authorized 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.*

*Main guideline:*

- *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, it should be kept in the neutral, middle position. This prolongs the life span of the sealings.*
- *The bearings of the wheels and the pivoting points of the levelling bar of the loading wheels must be cleansed and greased regularly.*
- *The oil containers must be checked every six months.*

*An antistatic protection screen is available for polluted environments. Please contact your supplier.*

### 8.1 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

## 8.2 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.*

## 8.3 Inspection/maintenance checklist

Date:	Name:	Yes	No	Action performed
<b>Date last inspection</b>				
<b>General inspections</b>				
Are the wires in the terminal blocks clamped properly?				
Are the permissible temperature specifications (in accordance with EN 50014) complied with?				
Are seals, cable glands and cable entries free of damage?				
<b>Inspecting the outer condition of enclosures</b>				
Are the enclosures free of ruptures, holes, bumps, material brittleness or corrosion spots?				
<b>Inspecting the condition of cable glands</b>				
Are the threaded joints tightened properly?				
Is the sealing within the threaded joint in satisfactory condition?				
<b>Inspecting the condition of windows:</b>				
Are the windows intact? a)				
<b>Inspecting the condition of the wheels</b>				
Are the wheels in satisfactory condition?				
<b>Inspection of the interiors</b>				
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?				
<b>Calibration:</b>				
Is the device within the tolerances as stated by the manufacturer?				
Recommended interval: once a year				
<b>Inspection of the age and condition</b>				
Is the device still within the electrical or mechanical service life as specified by the manufacturer?				
<b>Inspecting the device prior to operating</b>				
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?				

## 8.4 Transportation and storage

Transport and storage are only permissible in the original packaging.

## 8.5 Disposal



*Please observe the national waste-disposal regulations.*

Should you require the operating instructions in one of the other European Community languages, please feel free to contact your RAVAS representative.

## 9. The indicator



Front indicator

See attached manual of the indicator.