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MANUAL

Document Version 3.0 / March 2020

ACS-CB-**SENS**

Valid for:

LOG-PRT-DMS-300

LOG-PRT-DMS-LD

DMS Cover

LOGICDATA
MOTION FOR YOUR LIFE

ACS-CB-SENS - Operating Manual

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CONTENTS

1 GENERAL INFORMATION

Documentation for the ACS-CB-SENS Collision Sensor consists of this Operating Manual and several other documents (Other applicable documents, page 5). Assembly personnel must read all documentation before starting assembly. Keep all documentation for as long as the product is in your possession. Ensure that all documentation is provided to subsequent owners. Go to www.logicdata.net for more information and support. This Manual may change without notice. The most recent version is available on our website.

1.1 OTHER APPLICABLE DOCUMENTS

This Operating Manual contains assembly and operation instructions for the ACS-CB-SENS Collision Sensor. Other applicable documents include:

- Datasheet for the ACS-CB-SENS
- Datasheet for the LOG-PRT-DMS
- Datasheet for the DMS Cover (if applicable)
- Datasheet and Operating Manual for the Control Box in the Table System

1.2 COPYRIGHT

1.3 ROYALTY-FREE USE OF IMAGES AND TEXT

After purchase and full payment of the product, all text and images in Chapter 2 “Safety”, may be used free of charge by the customer for 10 years after delivery. They should be used to prepare end user documentation for Height-Adjustable Table Systems. The license does not include logos, designs, and page layout elements belonging to LOGICDATA. The Reseller may make any necessary changes to the text and images to adapt them for the purpose of end user documentation. Texts and images may not be sold in their current state, and may not be published or sublicensed digitally. The transfer of this license to third parties without permission from LOGICDATA is excluded. Full ownership and copyright of the text and graphics remain with LOGICDATA. Texts and graphics are offered in their current state without warranty or promise of any kind. Contact LOGICDATA to obtain text or images in an editable format (documentation@logicdata.net).

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2 SAFETY

2.1 TARGET AUDIENCE

This Operating Manual is intended for Skilled Persons only. Refer to Chapter 2.8 Skilled Persons on page 9 to ensure that personnel meet all requirements.

2.2 GENERAL SAFETY REGULATIONS

In general, the following safety regulations and obligations apply when handling the product:

- Do not operate the product unless it is in a clean and perfect condition
- Do not remove, change, bridge, or bypass any protection, safety, or monitoring equipment
- Do not convert or modify any components without written approval from LOGICDATA
- In the event of malfunction or damage, faulty components must be replaced immediately
- Unauthorized repairs are prohibited
- Do not attempt to replace hardware unless the product is in a de-energized state
- Only Skilled Persons are allowed to work with ACS-CB-SENS Collision Sensors
- Ensure that national worker protection conditions and national safety and accident prevention regulations are observed during operation of the system

2.3 INTENDED USE

The ACS-CB-SENS is a Collision Sensor Unit for electrically Height-Adjustable Tables. It is installed by Resellers into Height-Adjustable Table systems. It is used to recognize collisions between the Table System and other objects. It is intended for indoor use only. It may only be installed in compatible Height-Adjustable Table Systems and with LOGICDATA-approved accessories. Contact LOGICDATA for further details. Use beyond or outside the intended use will void the product's warranty.

2.4 REASONABLY FORESEEABLE MISUSE

Usage outside of the intended use may lead to minor injury, serious injury, or even death. Reasonably foreseeable misuse of the Collision Sensor includes, but does not extend to:

- Connecting unauthorized parts to the product. If you are unsure as to whether a part can be used with a Collision Sensor, contact LOGICDATA for further information

DANGER

The RJ sockets on the ACS-CB-SENS may only be used to accommodate LOGICDATA-approved sensor units. Inserting other telecommunication-type sensors into these terminals may cause damage to the Control Box or other products in the system.

For telecommunication type connectors not used for connection to the telecommunication network should be provided with a marking identifying the specific function or circuit characteristic the connector or terminal is used for.

2.5 EXPLANATION OF SYMBOLS AND SIGNAL WORDS

Safety Notices contain both symbols and signal words. The signal word indicates the severity of the hazard.

DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE	Indicates a situation which, if not avoided, could result in damage to the product through electrostatic discharge (ESD).
NOTICE	Indicates a situation that will not lead to personal injury, but could lead to damage to the device or the environment.
INFO	Indicates the protection class of the device: Protection Class III. Protection Class III devices may only be connected to SELV or PELV power sources.
INFO	Indicates important tips for handling the product.

2.6 LIABILITY

LOGICDATA products comply with all currently applicable health and safety regulations. However, risk can result from incorrect operation or misuse. LOGICDATA is not liable for damage or injury caused by:

- Improper product use
- Disregard of the documentation
- Unauthorized product alterations
- Improper work on and with the product
- Operation of damaged products
- Wear parts
- Improperly performed repairs
- Unauthorized changes to the operating parameters
- Disasters, external influence, and force majeure

The information in this Operating Manual describes the characteristics of products without assurances. Resellers assume responsibility for the LOGICDATA products installed in their applications. They must ensure their product complies with all relevant directives, standards, and laws. LOGICDATA shall not be held liable for any damage that is directly or indirectly caused by the delivery or use of this document. Resellers must observe the relevant safety standards and guidelines for each product in the Table System.

2.7 RESIDUAL RISKS

Residual risks are the risks that remain after all relevant safety standards have been complied with. These have been evaluated in the form of a risk assessment. Residual risks associated with the installation of ACS-CB-SENS Collision Sensors are listed here and throughout this Operating Manual. See also Chapter 1.1 Other Applicable Documents on page 5. The symbols and signal words used in this Operating Manual are listed in Chapter 2.5 Explanation of Symbols and Signal Words on page 7.

WARNING

Risk of death or serious injury through electric shocks

ACS-CB-SENS Collision Sensors are electrical devices. Although you will not have to connect the Collision Sensor to the Control Box during assembly, basic safety precautions must be taken at all times. Failure to observe electrical safety precautions may lead to death or serious injury through electric shocks.

- Ensure that the Collision Sensor is not connected to the Control Box during assembly
- Do not convert or modify the Collision Sensor in any way
- Do not immerse the Collision Sensor or its components in liquid. Clean only with a dry or slightly damp cloth
- Do not place the Cable of the Collision Sensor on heated surfaces
- Check the housing and cables of the Collision Sensor for visible damage. Do not install or operate damaged products.

WARNING

Risk of death or serious injury in explosive atmospheres

Operating the Collision Sensor in potentially explosive atmospheres may lead to death or serious injury through explosions.

- Read the relevant directives to determine if an atmosphere is potentially explosive
- Do not operate the Collision Sensor in potentially explosive atmospheres

CAUTION

Risk of minor or moderate injury through tripping

During the assembly process, you may have to step over Cables. Tripping over Cables may lead to minor or moderate injury.

- Ensure that the assembly area is kept clear of unnecessary obstructions
- Be careful not to trip over Cables

CAUTION

Risk of minor or moderate injury through crushing

The ACS-CB-SENS is not intended as a user safety device. Failure to observe basic safety precautions may lead to minor ot moderate injury through crushing.

- Keep all body parts away from the table's range of motion while it is moving
- Ensure the table's range of motion is free from obstructions (open windows, etc.)
- Read the Operating Manual of the installed Control Box for safety advice and operating instructions.

2.8 SKILLED PERSONS

CAUTION

Risk of injury through incorrect assembly

Only Skilled Persons have the expertise to complete the assembly process safely. Assembly by Unskilled Persons may lead to minor or moderate injury.

- Ensure that only Skilled Persons are allowed to complete assembly
- Ensure that persons with limited ability to react to danger do not take part in the assembly process

Collision Sensors may only be installed by Skilled Persons. A Skilled Person is defined as someone who:

- Is authorized for installation planning, installation, commissioning, or servicing of the product
- Has read and understood all documentation relevant to the Collision Sensor
- Has the technical education, training, and/or experience to perceive risks and avoid hazards
- Has knowledge of the specialist standards applicable to the product
- Has the expertise to test, assess, and manage electrical and mechatronic products and systems in accordance with the generally accepted standards and guidelines of electrical engineering and furniture manufacturing

2.9 NOTES FOR RESELLERS

Resellers are companies that purchase LOGICDATA products for installation in their own products.

INFO	For reasons of EU conformity and product safety, Resellers should provide end users with an Operating Manual in their native EU official language.

INFO	The Charter of the French Language (**La charte de la langue française**) or Bill 101 (**Loi 101**) guarantees the right of the population of Quebec to conduct business and commercial activities in French. The bill applies to all products sold and used in Quebec. For table systems that will be sold or used in Quebec, Resellers must provide all product-relevant texts in French. These include, but are not limited to: • Operating Manuals • All other product documentation, including datasheets • Inscriptions on the product (such as labels), including those on product packaging • Warranty certificates The French inscription may be accompanied with a translation or translations, but no inscription in another language may be given greater prominence than that in French.

INFO	Operating Manuals must include all the safety instructions that end users require to handle the product safely. They must also include an instruction to always keep the Operating Manual in the immediate vicinity of the product.

INFO	No unauthorized persons (young children, persons under the influence of medications, etc.) should be allowed to handle the product.

INFO	Resellers must perform a risk assessment on their product that covers residual hazards. It must include measures to mitigate risk, or reference the product's Operating Manual.

3 SCOPE OF DELIVERY

The standard scope of delivery for the ACS-CB-SENS consists of:

1. LOG-PRT-DMS Collision Sensor
2. ACS-CB-SENS Processing Unit
3. LOG-CBL-CB-SENS Connection cable

All other components necessary for installing the Collision Sensor are supplied separately by the reseller.

4 UNPACKAGING

To unpackage the product:

1. Remove all components from the packaging
2. Check the contents of the package for completeness and damage
3. Provide the Operating Manual to the operating personnel
4. Dispose of the packaging material

NOTICE	Dispose of the packaging material in an environmentally friendly manner. Remember to separate plastic parts from the cardboard packaging.

NOTICE	Ensure proper ESD handling during unpackaging. Damage that can be attributed to electrostatic discharge will void warranty claims.

5 PRODUCT

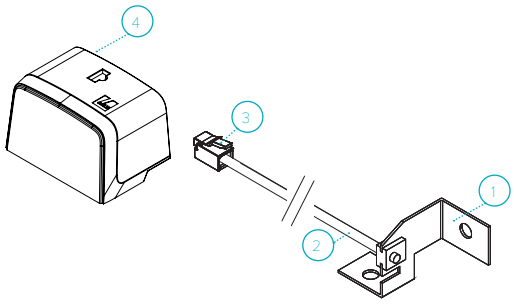
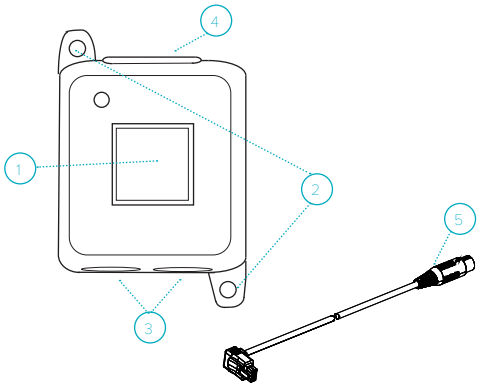
Chapter 5.2 shows a standard model of the ACS-CB-SENS Collision Sensor, including additional products. The exact variant of the ACS-CB-SENS is denoted by the product's order code. Consult the accompanying data sheet to ensure that you have received the correct variant.

5.1 ABOUT INTELLIGENT SYSTEM PROTECTION

Intelligent System Protection (ISP) is LOGICDATA's collision detection system. It aims to reduce the risk of system damage when using LOGICDATA products. When a collision is detected, all Actuators stop immediately and move back slightly in the opposite direction (Drive Back Function). The following points must be observed regarding the ISP function:

- ISP sensitivity and ISP shutdown values depend on the complete system (mechanical and electronic components). Contact LOGICDATA to determine the ISP suitability of your Table System.
- If no mechanical brake is installed, ISP shutdown sensitivity will be reduced when the table is loaded. However, if there is no load on the table top, ISP will function properly without a brake.
- After ISP is activated, the next movement of the system can only be in the opposite direction.
- ISP shutdown values can be adjusted in the system parameters. Contact LOGICDATA for further details.

5.2 KEY PRODUCT FEATURES

LOG-PRT-DMS		
1	Collision Sensor	
2	Cable	
3	RJ10 Connector	
4	DMS Cover (purchased separately)	
ACS-CB-SENS		
1	ACS-CB-SENS Processing Unit	
2	Mounting Points	
3	RJ Ports (for LOG-PRT-DMS)	
4	DIN Port (for LOG-CBL-CB-SENS)	
5	LOG-CBL-CB-SENS Connection cable	

5.3 DIMENSIONS ACS-CB-SENS

Length (with mounting points)	74.2 mm | 2.921 “
Width	50.0 mm | 2.165 "
Height (to underside of Table Top)	30.0 mm | 1.181 "

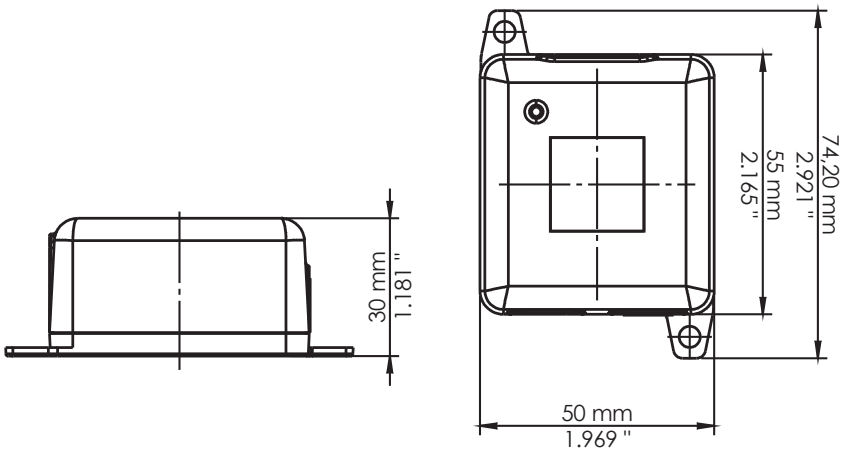


Fig. 1: Product dimensions, ACS-CB-SENS

5.4 DIMENSIONS LOG-PRT-DMS

Length	48.3 mm | 1.902 “
Width	31.8 mm | 1.252 "
Height (to underside of Table Top)	29.0 mm | 1.142 "

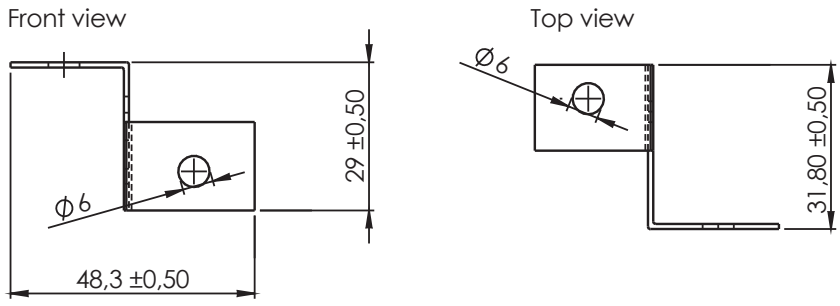


Fig. 2: Product dimensions, LOG-PRT-DMS

6 ASSEMBLY

This chapter describes the process of installing the ACS-CB-SENS processing unit and the LOG-PRT-DMS Collision Sensor into the Height-Adjustable Table System.

6.1 SAFETY DURING ASSEMBLY

WARNING **Risk of death or serious injury through electric shocks**
Collision Sensors and their components are electrical devices. Basic safety precautions must be taken at all times. Failure to observe electrical safety precautions may lead to death or serious injury through electric shocks.
- Ensure that the Collision Sensor is not connected to the Control Box during assembly
- Do not convert or modify the Collision Sensor in any way
- Check the Collision Sensor and its Cables for visible damage. Do not install or operate damaged products.

CAUTION **Risk of minor or moderate injury through improper handling**
Improper handling of the product during assembly may lead to minor or moderate injury through cutting, pinching, and crushing.
- Avoid contact with sharp edges
- Be careful while handling tools that may cause personal injury
- Ensure assembly complies with the generally accepted standards and guidelines of electrical engineering and furniture manufacturing
- Read all instructions and safety advice carefully

CAUTION **Risk of minor or moderate injury through tripping**
During assembly and operation, poorly routed Cables may become a trip hazard. Tripping over Cables may lead to minor or moderate injury.
- Ensure that Cables are routed properly to avoid trip hazards
- Be careful not to trip over Cables when installing the Collision Sensor

NOTICE Ensure proper ESD handling during assembly. Damage that can be attributed to electrostatic discharge will void warranty claims.

NOTICE To avoid damage to the product, measure the dimensions of the Collision Sensor before assembly.

NOTICE Before assembly, all parts must be acclimatised to the ambient conditions.

NOTICE Do not lift the Collision Sensor by its cable. This will cause irreparable damage to the product.

INFO Perform a product risk assessment so that you can respond to potential residual hazards. Assembly instructions must be included in your end user Operating Manual.

6.2 REQUIRED COMPONENTS

1	ACS-CB-SENS Processing Unit
1	LOG-PRT-DMS Collision Sensor
4	Mounting Screws (developed by Reseller: contact LOGICDATA for specifications)
Tool	Torque Screwdriver
Tool	Drill or Drilling Machine

6.3 NOTES FOR ASSEMBLY

NOTICE	In this configuration, the RJ10 Connector of the External Collision Sensor may only be connected to the ACS-CB-SENS. Connecting the External Collision Sensor to other devices or Plug Ports, including external telecommunication ports, may damage the Sensor irreparably. Contact LOGICDATA if you are unsure whether the External Collision Sensor is compatible with your device.
INFO	Exact dimensions for the LOG-PRT-DMS and ACS-CB-SENS can be found in the product's datasheet.

6.4 MOUNTING THE ACS-CB-SENS

NOTICE	Ensure the ACS-CB-SENS is mounted in a place from which the cables can easily reach the Control Box and LOG-PRT-DMS Sensor. Stretching or straining cables or connectors may lead to system damage.
INFO	**Screw specifications** The Mounting Screws should hold the unit safely and securely in place. Exact specifications can be provided by LOGICDATA on request.

1. Position the ACS-CB-SENS under the table top and mark the position of the Mounting Points.
2. Drill the holes for the Mounting Screws into the Table Top at the marked points.
3. Use the screwdriver and 2 Mounting Screws to attach the ACS-CB-SENS at the drilled holes.

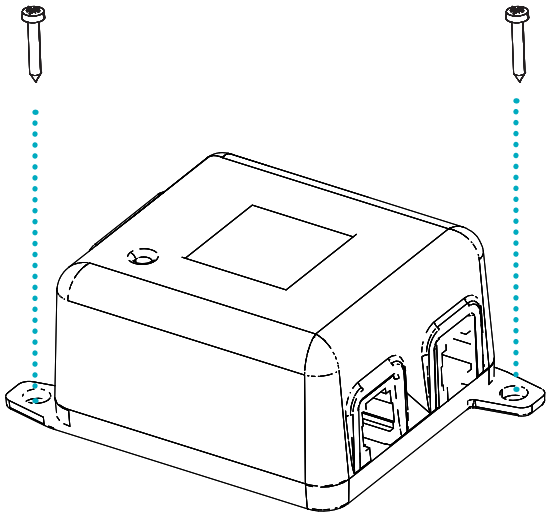


Fig. 3: Mounting the ACS-CB-SENS

6.5 MOUNTING THE LOG-PRT-DMS

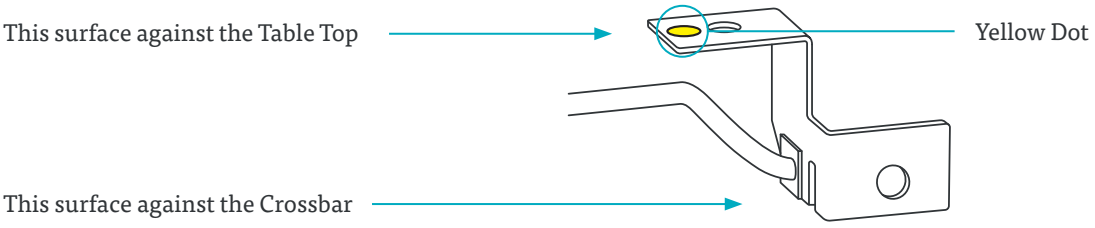
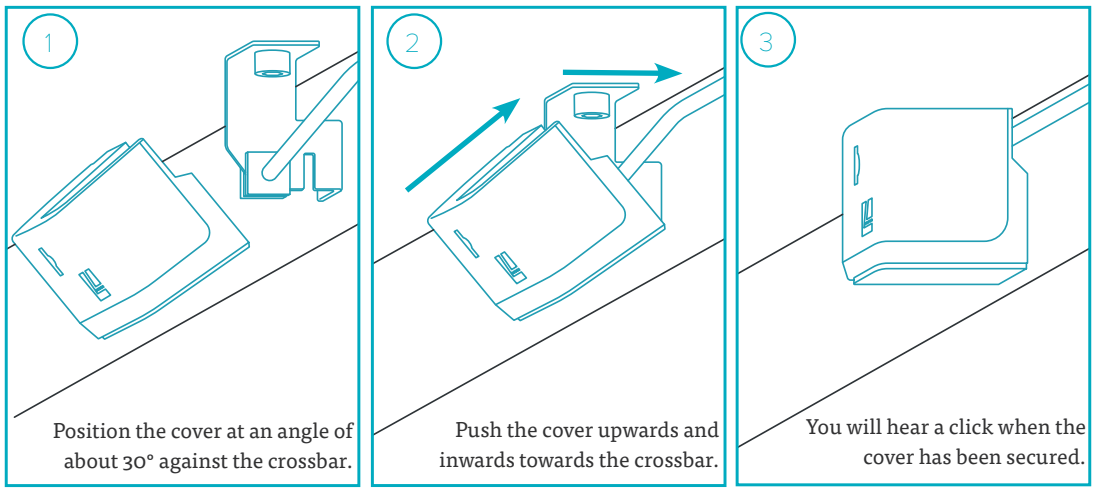


Fig. 4: Location of the Yellow Dot. This must be placed against the Table Top.

NOTICE	If the components are mounted incorrectly, Intelligent System Protection may not work properly. This could lead to damage to the Table System. • Use both screws to attach the sensor • Ensure the screws have been tightened properly • Ensure the screws cannot be released • Ensure the surface of the Sensor with the yellow dot is placed against the Table Top
INFO	The sensor can be attached to the Crossbar using a bolt with a nut and a washer or a self-tapping screw. Contact LOGICDATA for exact specifications.
INFO	LOGICDATA recommends a tightening torque of 3 Nm for the connection to the Crossbar and 2 - 2.5 Nm for the connection to the table top, depending on material used.

1. Place the surface of the Sensor with the yellow dot against the Table Top, the other against the Crossbar. Use Fig. 4 to help you place the Sensor correctly.
2. Hold the Sensor in the desired position and mark the points for drilling.
3. Pre-drill the holes into the Crossbar and Table Top.
4. Use the Mounting Screws to attach the sensor to the Crossbar and Table Top.

6.5.1 ATTACHING THE DMS COVER



6.6 CONNECTING THE LOG-PRT-DMS TO THE ACS-CB-SENS

NOTICE	To avoid strain on Cables, ensure the LOG-PRT-DMS is mounted a suitable distance from the ACS-CB-SENS.

DANGER	The RJ sockets on the ACS-CB-SENS may only be used to accommodate LOGICDATA-approved sensor units. Inserting other telecommunication-type sensors into these terminals may cause damage to the Control Box or other products in the system. *For telecommunication type connectors not used for connection to the telecommunication network should be provided with a marking identifying the specific function or circuit characteristic the connector or terminal is used for.*

INFO	If your system is not parametrized to support Intelligent System Protection, you will need to alter the parameters so that the LOG-PRT-DMS Collision Sensor functions correctly. You may also need to adjust parameters if extra sensor units are added to the system. Contact LOGICDATA for further advice on system parameters.

1. Ensure the ACS-CB-SENS is not connected to the Control Box.
2. Insert the RJ10 connector(s) of the LOG-PRT-DMS Sensor(s) into the Sensor Port(s).

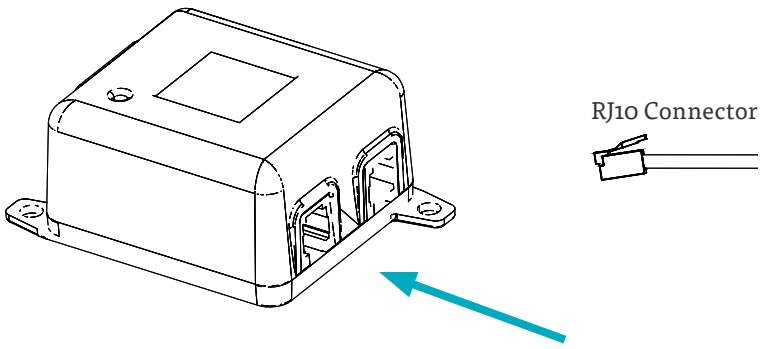


Fig. 5: Connecting the LOG-PRT-DMS to the ACS-CB-SENS

NOTICE	In Cascading Systems, only one LOG-PRT-DMS sensor may be connected

NOTICE	If only one LOG-PRT-DMS is used, connect it to the plug port marked "1".

6.7 CONNECTING THE ACS-CB-SENS TO THE CONTROL BOX

NOTICE To avoid strain on Cables, ensure the ACS-CB-SENS is mounted a suitable distance from the Control Box.

1. Ensure the Control Box is not connected to the power source.
2. Insert the round DIN connector of the LOG-CBL-CB-SENS into the ACS-CB-SENS (Fig. 6).
3. Insert the cranked, 8-pin cable into the Port on the top of the Control Box (Fig. 7).
4. Reconnect the Control Box to the power source.

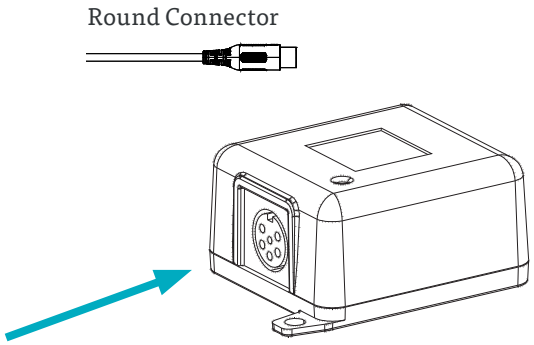


Fig. 6: Connecting the LOG-CBL-CB-SENS to the ACS-CB-SENS and Control Box

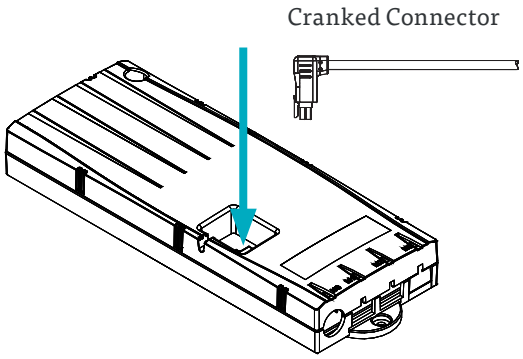


Fig. 7: Connecting the LOG-CBL-CB-SENS to the Control Box

7 SYSTEM INFORMATION

E60	ISP Activated	Release all Keys and wait for the Drive Back function to be completed.
E71	Collision Sensor Defective	Perform a Factory Reset. Contact LOGICDATA if the problem persists.

8 ADDITIONAL INFORMATION

8.1 SOFTWARE-DEPENDENT FUNCTIONS

A full list of Software-Dependent Functions can be found in the Manual of the installed Control Box.

8.2 DISASSEMBLY

To disassemble, disconnect the Control Box from the mains. Then, follow the assembly instructions in reverse order.

8.3 MAINTENANCE

The ACS-CB-SENS and LOG-PRT-DMS are maintenance-free for their entire service lifetime.

WARNING **Risk of death or serious injury through electric shocks and other hazards**

Using a Collision Sensor alongside unauthorized spare or accessory parts may lead to death or serious injury through electric shocks and other hazards.

- Only use accessory parts produced or approved by LOGICDATA
- Only use replacement parts produced or approved by LOGICDATA
- Only allow Skilled Persons to perform repairs or install accessory parts
- Contact customer services immediately if the system malfunctions

The use of unauthorized spare or accessory parts may cause system damage. Warranty claims are void in this scenario.

8.3.1 CLEANING

1. Disconnect the Control Box or DYNAMIC MOTION system from the mains.
2. Wait 30 seconds for residual voltage to dissipate.
3. Wipe the Collision Sensors with a dry soft cloth. Never immerse a Collision Sensor in liquid.
4. Wait for the Collision Sensors to dry completely.
5. Reconnect the Control Box system.

8.3.2 REPLACING A COLLISION SENSOR

1. Disconnect the Control Box from the Mains.
2. Disconnect the LOG-PRT-DMS from the ACS-CB-SENS
3. Remove the Collision Sensor from the Table Top.
4. Mount the new Collision Sensor onto the Table Top.
5. Plug the Collision Sensor back into the Control Box or Sensor Adapter Cable.
6. Reconnect the Control Box to the Mains.

8.4 TROUBLESHOOTING

A list of common problems and their solutions can be found in the Manual of the installed Control Box.

8.5 DISPOSAL

The LOG-PRT-DMS and ACS-CB-SENS are subject to the WEEE Directive 2012/19/EU.

- Dispose of all components separately from household waste. Use designated collection points or disposal companies authorized for this purpose

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