

# Operator control stations

Harmony<sup>®</sup> eXLhoist wireless remote control system

Catalog

August 2016



# How can you fit a 6000-page catalog in your pocket?

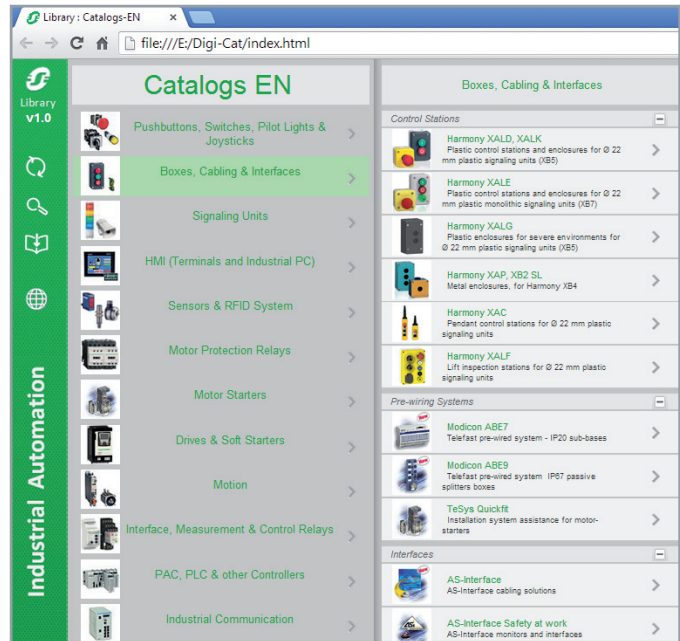
Schneider Electric provides you with the complete set of industrial automation catalogs all on a handy USB key for PC or in an application for tablets



Digi-Cat, a handy USB key for PC



- > Convenient to carry
- > Always up-to-date
- > Environmentally friendly
- > Easy-to-share format



Contact your local representative to get your own Digi-Cat



e-Library, the app for tablets

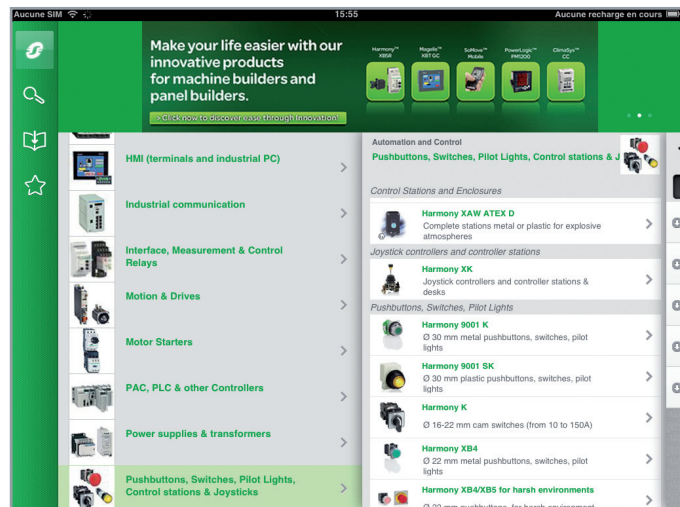
If you have an iPad®:

- > Go to the App Store and search for e-Library
- > or scan the QR code



If you have an Android tablet:

- > Go to the Google Play Store™ and search for eLibrary
- > or scan the QR code



# General contents

## Harmony® eXLhoist wireless remote control system

■ General presentation.....	page 2
<b>Selection guide</b> .....	<b>page 4</b>
■ <b>General</b>	
□ Presentation .....	page 8
□ Description .....	page 9
■ <b>References</b>	
□ Remote control device, base station, wireless remote control.....	page 10
□ Starting kit.....	page 11
□ Accessories .....	page 11
■ <b>Product reference index</b> .....	page 12

# Operator control stations

## Wireless remote control system

### Harmony eXLhoist

#### Innovative operator control offer for hoisting applications



The Harmony® eXLhoist range of wireless remote control systems is an operator control station used in hoisting and material handling applications. It is based on 2 types of device:

- > Remote control device, which is the operator interface with the machine.
- > Base station, which is hardwired to the machine. It receives control commands from the remote device and transmits information to the operator.

The remote control system is a combination of these devices which communicates via radio transmission.

#### Dedicated ergonomics

- > Its innovative design and the button positions on the remote device allow intuitive and easy one-hand operation.



Remote device design allows the operator to control the machine without focusing on the buttons, but concentrating on the load instead

#### Maximize application uptime

- > Advanced battery technology ensures quick charging time, a long working life and excellent autonomy.



30 hrs runtime (1) (2)  
15 min to recharge  
Up to 5 years of working life

Improve energy saving and optimize energy consumption while communicating via the remote control system

#### Operator protection

The Harmony eXLhoist station incorporates devices to prevent unexpected operation and helps to protect the operator, equipment, and load.

- > The wireless Emergency stop is compliant up to Performance Level 'e' according to EN ISO 13849-1, and SIL 3 in accordance with IEC 61508 and IEC 62061.
- > In-built protection against unintended operation is compliant with Performance Level 'c' according to EN ISO 13849-1, and SIL 1 in accordance with IEC 61508 and IEC 62061.
- > An accelerometer is embedded in the remote control device to detect and stop the system if the operator trips or falls.



Robust performance and safety compliance

(1) Typical at temperature of 25°C/77°F  
(2) Runtime will be slightly reduced in the MBC (Multi base control) application



First worldwide automation supplier to offer a complete range of hoisting solutions

#### Universal and reliable application

- > Harmony eXLhoist uses the globally-compatible 2.4 GHz frequency which is in unrestricted worldwide use.
- > It helps prevent interference between several remote control stations, allowing up to 50 systems to run simultaneously in a 100 x 100 m/328 x 328 ft area.



2.4GHz frequency

Unrestricted worldwide use with a global frequency



100 x 100 m area

Up to 50 systems running at the same time

#### Easy maintenance

- > Remote diagnostic capabilities to reduce machine downtime.
- > Discovering function allows the remote device to be replaced automatically without intervention by the base station.

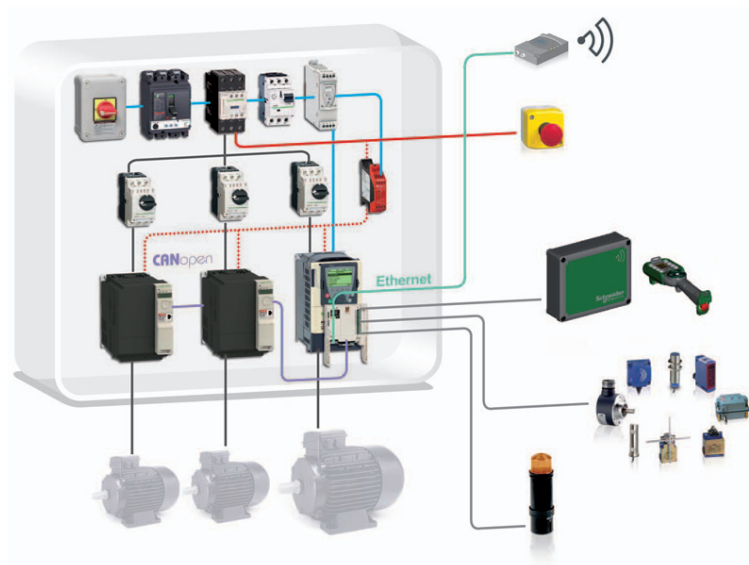


Pre alarm	Alarm	
		Over-load
		Over-wind
		Over-speed
		Generic

Key diagnostic data at the user's fingertips. Alarm notification by vibrate function

#### Complete offer

- > Tested, validated, and documented architectures for optimized results providing the right solution at every stage of the installation life cycle.



Unrestricted worldwide use with a global 2.4 GHz frequency

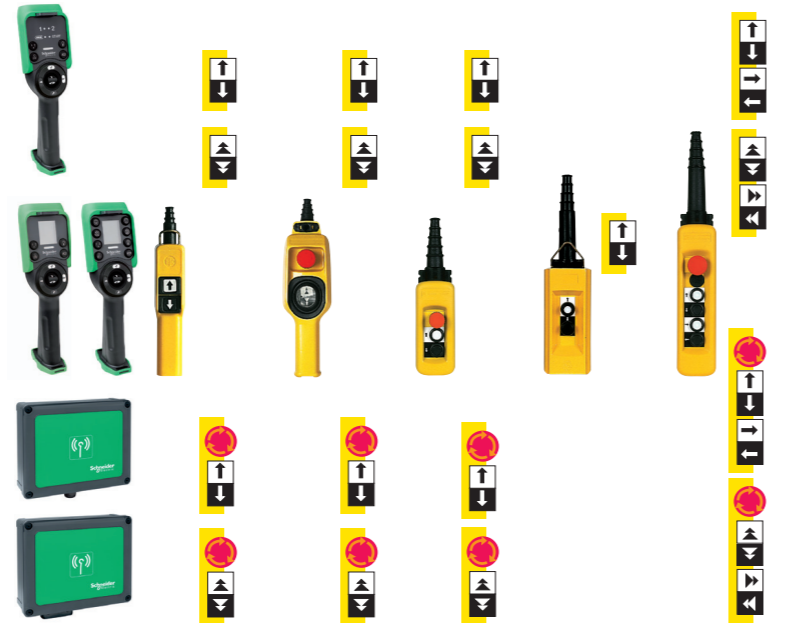
# Operator control stations

Complete stations "ready for use"

<b>Applications</b>	<b>Wireless remote control stations</b>	<b>Pendant control stations</b>	
	<b>Control circuits</b>	<b>Handling-hoisting: 3 movements</b>	<b>Simple hoisting: 1 movement</b> <b>Handling-hoisting: 2 movements</b>

Motor control

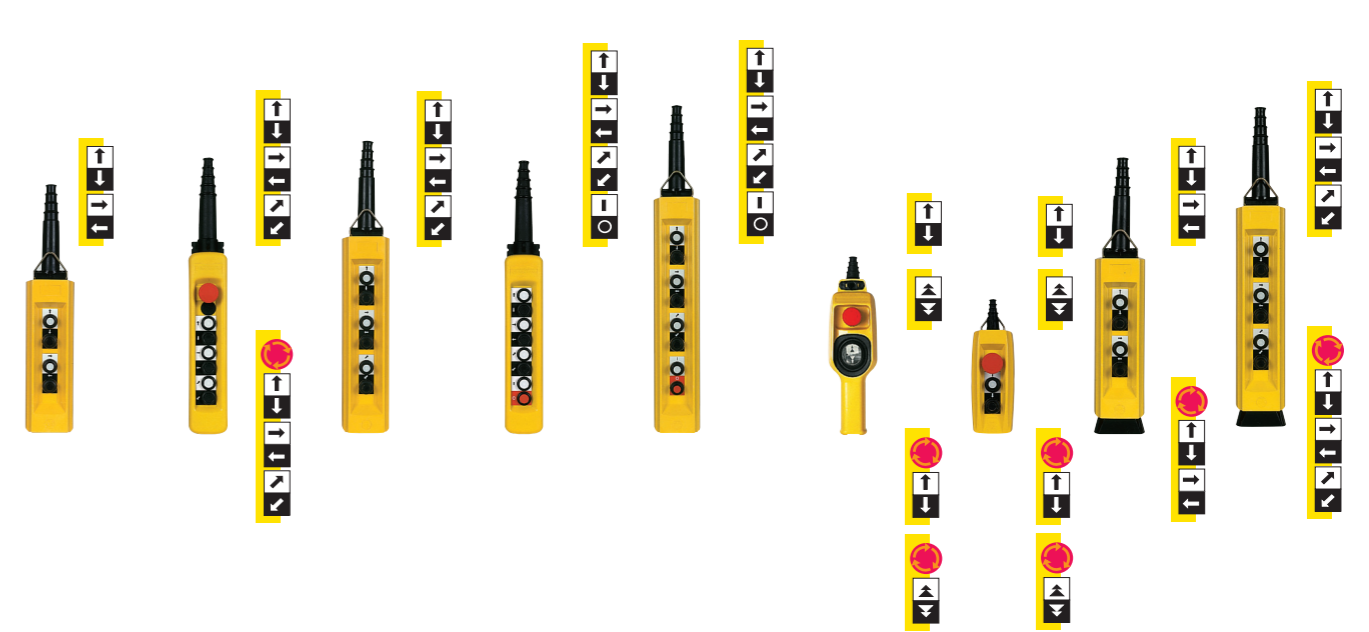
- Single-speed
- 2-speed
- Emergency stop



<b>Number of operators</b>	6	2	1 (2-directional)	2	2	4
<b>Enclosure material</b>	Polycarbonate (PBT)	Polypropylene			Polyester	Polypropylene
<b>Shock resistance</b>	Conforming to standard IEC 60068-2-27	100 gn	70 gn	100 gn		
<b>Conformity to standards</b>	EN/IEC 60947-5-1, EN/IEC 60204-32, UL 508, CSA 22-2 No. 14 and EN/ISO 13849-1, EN/IEC 62061, EN/IEC 61508, EN/ISO 13850 EN 13557, EN 15011	EN/IEC 60947-5-1, EN/IEC 60204-32, UL 508, CSA 22-2 N° 14 and EN/IEC 60947-5-5, EN/ISO 13850 (1)		EN/IEC 60947-5-1 CSA 22-2 N° 14	EN/IEC 60947-5-1, EN/IEC 60204-32, UL 508, CSA 22-2 N° 14 and EN/IEC 60947-5-5, EN/ISO 13850 (1)	
<b>Protective treatment</b>	Standard version, "TC"	Standard version, "TH"				
<b>Degree of protection</b>	Conforming to standard IEC 60529	IP 65				
	Conforming to standard EN 50102	IK 08				
<b>Cable entries</b>	-	Rubber sleeve with stepped entry diameter for cable Ø 7 to 15 mm /0.28 to 0.59 in.	Rubber sleeve with stepped entry diameter for cable Ø 7 to 18 mm /0.28 to 0.71 in.	Rubber sleeve with stepped entry diameter for cable Ø 8 to 26 mm /0.31 to 1.02 in.	Rubber sleeve with stepped entry diameter for cable Ø 7 to 13 mm/0.28 to 0.51 in., Ø 10 to 22 mm/0.39 to 0.87 in., Ø 22 to 35 mm /0.87 to 1.38 in.	Rubber sleeve with stepped entry diameter for cable Ø 8 to 26 mm /0.31 to 1.02 in.
<b>Operator control station type reference</b>	<b>XAR</b>	<b>XACA</b>	<b>XACD</b>	<b>XACA</b>	<b>XACB</b>	<b>XACA</b>

(1) For versions with trigger action Emergency stop.

<b>Pendant control stations</b>		<b>Power circuits</b>	
<b>Control circuits</b>	<b>Handling-hoisting: 3 movements</b>	<b>Simple hoisting: 1 movement</b>	<b>Handling-hoisting: 2 movements</b> <b>3 movements</b>



4	6	6	8	8	1 (2-directional)	2	4	6
Polyester	Polypropylene	Polyester	Polypropylene	Polyester	Polypropylene	Polyester		
100 gn					100 gn			
EN/IEC 60947-5-1 CSA 22-2 N° 14	EN/IEC 60947-5-1, EN/IEC 60204-32, UL 508, CSA 22-2 N° 14 and EN/IEC 60947-5-5, EN/ISO 13850 (1)	EN/IEC 60947-5-1 CSA 22-2 N° 14	EN/IEC 60947-5-1, EN/IEC 60204-32, UL 508, CSA 22-2 N° 14 and EN/IEC 60947-5-5, EN/ISO 13850 (1)	EN/IEC 60947-5-1 CSA 22-2 N° 14	EN/IEC 60947-5-1, EN/IEC 60204-32, UL 508, CSA 22-2 N° 14, EN/IEC 60947-3 and EN/IEC 60947-5-5, EN/ISO 13850 (1)			
Standard version, "TH"					Standard version, "TH"			
IP 65					IP 65			
IK 08					IK 08			
Rubber sleeve with stepped entry diameter for cable Ø 7 to 13 mm /0.28 to 0.51 in., Ø 10 to 22 mm /0.39 to 0.87 in., Ø 22 to 35 mm /0.87 to 1.38 in.	Rubber sleeve with stepped entry diameter for cable Ø 8 to 26 mm /0.31 to 1.02 in.	Rubber sleeve with stepped entry diameter for cable Ø 7 to 13 mm /0.28 to 0.51 in., Ø 10 to 22 mm /0.39 to 0.87 in., Ø 22 to 35 mm /0.87 to 1.38 in.	Rubber sleeve with stepped entry diameter for cable Ø 8 to 26 mm /0.31 to 1.02 in.	Rubber sleeve with stepped entry diameter for cable Ø 7 to 13 mm /0.28 to 0.51 in., Ø 10 to 22 mm /0.39 to 0.87 in., Ø 22 to 35 mm /0.87 to 1.38 in.	Rubber sleeve with stepped entry diameter for cable Ø 7 to 18 mm /0.28 to 0.71 in.	Rubber sleeve with stepped entry diameter for cable Ø 10 to 22 mm/0.39 to 0.87 in.		
<b>XACB</b>	<b>XACA</b>	<b>XACB</b>	<b>XACA</b>	<b>XACB</b>	<b>XACD</b>	<b>XACB</b>	<b>XACB</b>	<b>XACB</b>

(1) For versions with trigger action Emergency stop.

# Pendant control stations

## Variable composition stations

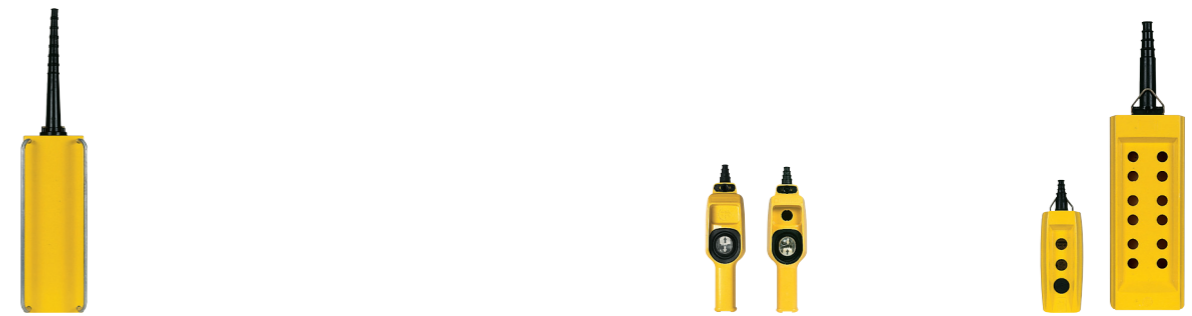
<b>Applications</b>	<b>Pendant control stations</b>		
<b>Number of cut-outs</b>	1 or 2	2, 3, 4, 5, 6, 8 or 12	2, 3, 4, 6, 8 or 12 in 1 row or 2 rows of 6



<b>Enclosure material</b>	Polypropylene	Polyester	
<b>Shock resistance</b> Conforming to standard IEC 60068-2-27	100 gn		
<b>Conformity to standards</b>	EN/IEC 60947-5-1, EN/IEC 60204-32, UL 508, CSA 22-2 N° 14, EN/IEC 60947-3 and EN/IEC 60947-5-5, EN/ISO 13850 (1)		
<b>Protective treatment</b>	Standard version, "TH"		
<b>Degree of protection</b> Conforming to standard IEC 60529	IP 65		
Conforming to standard EN 50102	IK 08		
<b>Equipment</b>	<ul style="list-style-type: none"> <li>Emergency stop (front mounted)</li> <li>Contact blocks for 1 or 2 speeds</li> </ul>	<ul style="list-style-type: none"> <li>Pushbuttons</li> <li>Selector/key switches</li> <li>Pilot lights</li> <li>Emergency stop (front or base mounted)</li> <li>Wobblesticks</li> <li>Contact blocks for 1 or 2 speeds</li> </ul>	<ul style="list-style-type: none"> <li>Pushbuttons</li> <li>Selector/key switches</li> <li>Pilot lights</li> <li>Emergency stop (front or base mounted)</li> <li>Wobblesticks</li> <li>Contact blocks for 1 or 2 speeds</li> </ul>
<b>Cable entries</b>	Rubber sleeve with stepped entry diameter for cable Ø 7 to 18 mm/0.28 to 0.71 in.	Rubber sleeve with stepped entry diameter for cable Ø 8 to 26 mm/0.31 to 1.02 in.	Rubber sleeve with stepped entry diameter for cable Ø 10 to 22 mm/0.39 to 0.87 in.
<b>Operator control station type reference</b>	XACD	XACA	XACB

(1) For versions with trigger action Emergency stop.

<b>Pendant control stations</b>	<b>Power circuits</b>	
<b>Control circuits</b>	<b>Power circuits</b>	
Up to 30	1 or 2	2, 3, 4, 6, 8 or 12 in 2 rows of 6

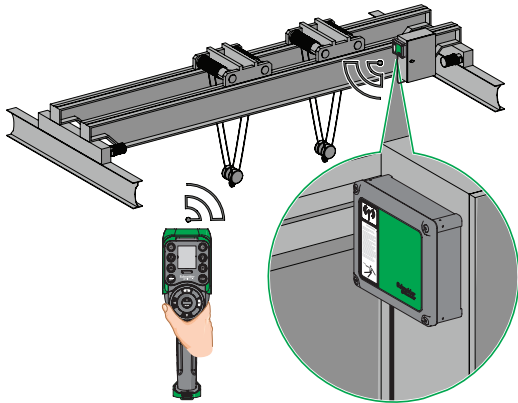


Polyester	Polypropylene	Polyester
100 gn	100 gn	
EN/IEC 60947-5-1, EN/IEC 60204-32, UL 508, CSA 22-2 N° 14, EN/IEC 60947-3 and EN/IEC 60947-5-5, EN/ISO 13850 (1)	EN/IEC 60947-5-1, EN/IEC 60204-32, UL 508, CSA 22-2 N° 14, EN/IEC 60947-3 and EN/IEC 60947-5-5, EN/ISO 13850 (1)	
Standard version, "TH"	Standard version, "TH"	
IP 65	IP 65	
IK 08	IK 08	
<ul style="list-style-type: none"> <li>Pushbuttons</li> <li>Selector/key switches</li> <li>Pilot lights</li> <li>Emergency stop (front or base mounted)</li> <li>Wobblesticks</li> <li>Contact blocks for 1 or 2 speeds</li> </ul>	<ul style="list-style-type: none"> <li>Emergency stop (front mounted)</li> <li>Contact blocks for 1 or 2 speeds</li> </ul>	<ul style="list-style-type: none"> <li>Pushbuttons</li> <li>Selector/key switches</li> <li>Pilot lights</li> <li>Emergency stop (front or base mounted)</li> <li>Wobblesticks</li> <li>Contact blocks for 1 or 2 speeds</li> </ul>
Rubber sleeve with stepped entry diameter for cable Ø 10 to 22 mm/0.39 to 0.87 in. and Ø 22 to 35 mm/0.87 to 1.38 in.	Rubber sleeve with stepped entry diameter for cable Ø 7 to 18 mm/0.28 to 0.71 in.	Rubber sleeve with stepped entry diameter for cable Ø 10 to 22 mm/0.39 to 0.87 in.
XACF	XACD	XACB

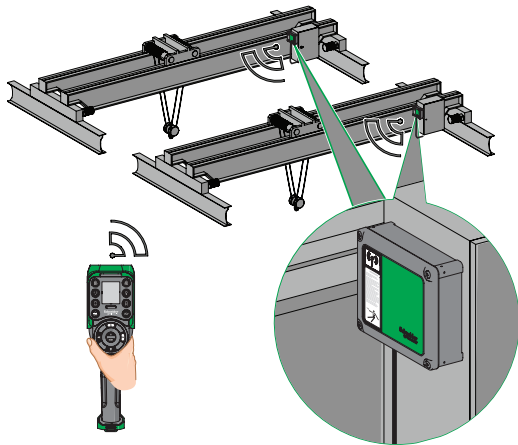
# Operator control stations

## Wireless remote control system

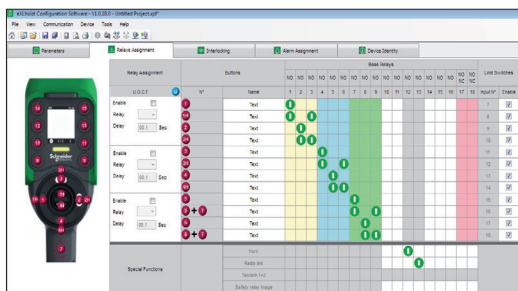
### Harmony eXLhoist



Example of single mode



Example of MBC mode



Configuration software window

### Presentation

The Harmony eXLhoist range of wireless remote control systems provides complete innovative crane operator control solutions to: improve machine and crane operator efficiency, enhance safety for people and equipment, and reduce installation and maintenance downtime.

The XARS remote control system is a combination of remote control device (or transmitter: XART) and base station (or receiver: XARB), which transmits commands and information from the operator to the machine and vice versa by wireless transmission.

The XARS system offers movement in 3 directions (for example: hoist, bridge, and trolley) at 2 speed levels (low and high) for each movement.

The 2 modes available in the system are:

- Single mode: the remote control device controls one base station.
- MBC mode (1): the remote control device controls 2 base stations simultaneously.

### Radio communication

Each base station has a unique identification code (2) managed by Schneider Electric. The radio communication frequency is 2.4 GHz and automatic frequency hopping allows up to 50 systems to run at the same time in a 100 x 100 m/328 x 328 ft area.

### eXLhoist Configuration software

Free software with a graphic user interface can be downloaded by the customer to configure the remote control station. This software has a standard Windows® interface. The configuration file is password protected and can be used to configure the following parameters:

- Base station pairing to the remote control device
- Relay-pushbutton assignment and interlocking
- Access and re-start sequence
- Standby time-out duration
- Machine number assignment

### Environment

Degree of protection:

- IP 65 for the base station
- IP 65 and NEMA 4 for the wireless control device

Product certification:

- for the base station: UL/CSA, CE, EAC
- for the wireless control device: UL/CSA, CE, EAC.

(1) MBC: Multi base control (tandem)

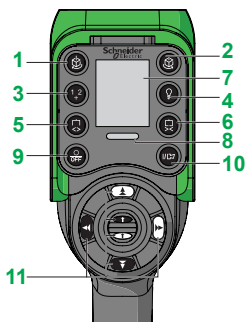
(2) Third-party devices cannot communicate with the remote control system



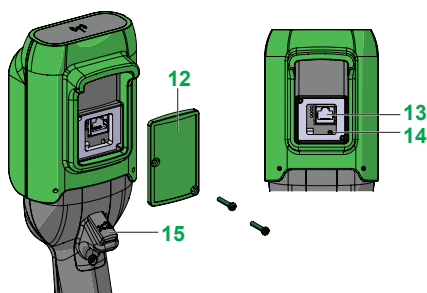
# Operator control stations

## Wireless remote control system

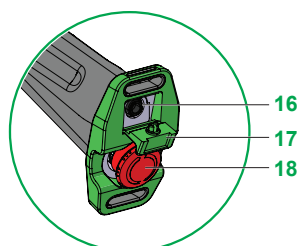
### Harmony eXLhoist



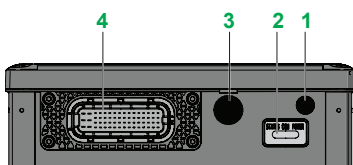
Front view of ZART12D remote device



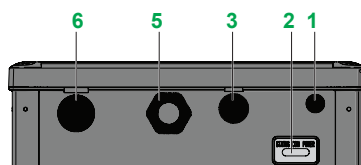
Rear view of remote device



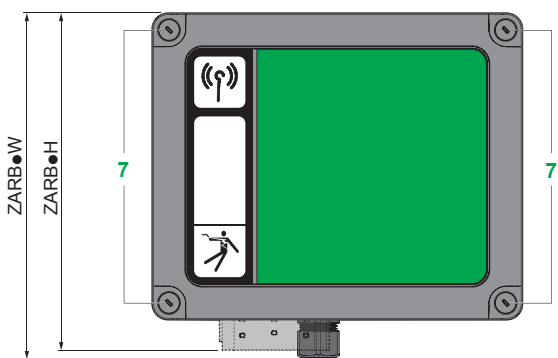
Underside view of remote device handle



Underside view of ZARB•H base station



Underside view of ZARB•W base station



Front view of base station with cover

#### Description

##### Remote control device

The remote control device has the following controls:

- 1-6 Auxiliary buttons (for **ZART8D** and **ZART8L** only buttons 5 and 6 are available)
- 7 Display (for **ZART8L** LED display only)
- 8 E-stop LED
- 9 OFF/Stop button
- 10 ON/Start/Horn button
- 11 Motion buttons
- 12 Cover
- 13 RJ45 connector
- 14 Reset button
- 15 Trigger button
- 16 Connector for charging remote device
- 17 Connector cover
- 18 E-stop button

##### Base station

The base station has the following controls:

- 1 M12 for external antenna (1)
- 2 Status LEDs
- 3 M20 for the Safeguarding function input wires (1)
- 4 62-pin connector (1)
- 5 M25 for output wires (2)
- 6 M25 for detected application alarm input wires (1)
- 7 4 holes for standard mounting on support (1)

- (1) Covered by an end cap
- (2) Covered by a cable gland

# Operator control stations

## Wireless remote control system

### Harmony eXLhoist



ZART8L



ZART8D



ZARB12H



ZARB18W



XARS12D18H



#### Remote control device

Description	Characteristics		Reference		Weight kg/lb
	Motion pushbuttons	Auxiliary pushbuttons	Standard	MBC (1)	
With LEDs	6	2	ZART8L	ZART8LM (slave)	0.650/1.433
With display	6	2	ZART8D	ZART8DM (master or slave)	0.650/1.433
With display	6	6	ZART12D	ZART12DM (master or slave)	0.650/1.433

#### Base station

Description	Characteristics			Reference		Weight kg/lb
	Outputs	Inputs	Power supply V	Standard	MBC (1)	
Wired connection-cable gland	12 relays + 2 safety relays	-	24...240 V	ZARB12W	-	1.450/3.197
Industrial plug connection	12 relays + 2 safety relays	-	24...48 V	ZARB12H	-	1.450/3.197
Wired connection-cable gland	18 relays + 2 safety relays	18 digital (12 limiters + 6 alarms)	24...240 V	ZARB18W	ZARB18WM	1.450/3.197
Industrial plug connection	18 relays + 2 safety relays	18 digital (12 limiters + 6 alarms)	24...48 V	ZARB18H	ZARB18HM	1.450/3.197

#### Wireless remote control

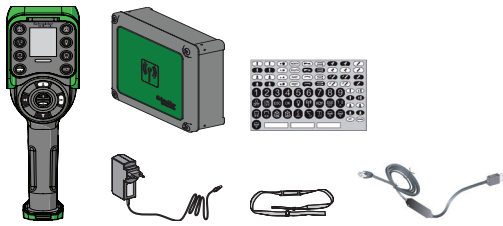
Description	Characteristics		Reference	Weight kg/lb
	Special functions	Connection		
Complete unit (without charger device)	-	Wiring	XARS8L12W (ZART8L + ZARB12W)	2.100/4.640
	-	Industrial plug	XARS8L12H (ZART8L + ZARB12H)	2.100/4.640
Limiter protection Movement monitoring	-	Wiring	XARS8D18W (ZART8D + ZARB18W)	2.100/4.640
		Industrial plug	XARS8D18H (ZART8D + ZARB18H)	2.100/4.640
	-	Wiring	XARS12D18W (ZART12D + ZARB18W)	2.100/4.640
		Industrial plug	XARS12D18H (ZART12D + ZARB18H)	2.100/4.640

(1) MBC: Multi base control (tandem)

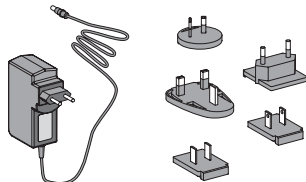
# Operator control stations

## Wireless remote control system

### Harmony eXLhoist



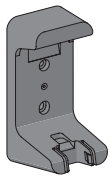
XARSK8L12W



ZARC01



ZARC02



ZARC04



ZARC07



TCSMCNAM3M002P

#### Kits

Description	Characteristics Components	Reference	Weight kg/lb
Starting kit comprising of Remote control system + accessories + USB/RJ45 cable + Configuration software	ZART8L + ZARB12W + ZARC01 + ZARC02 + TCSMCNAM3M002P	<b>XARSK8L12W</b>	2.800/6.173
	ZART8L + ZARB12H + ZARC01 + ZARC02 + TCSMCNAM3M002P	<b>XARSK8L12H</b>	2.800/6.173
	ZART8D + ZARB18W + ZARC01 + ZARC02 + TCSMCNAM3M002P	<b>XARSK8D18W</b>	2.800/6.173
	ZART8D + ZARB18H + ZARC01 + ZARC02 + TCSMCNAM3M002P	<b>XARSK8D18H</b>	2.800/6.173
	ZART12D + ZARB18W + ZARC01 + ZARC02 + TCSMCNAM3M002P	<b>XARSK12D18W</b>	2.800/6.173
	ZART12D + ZARB18H + ZARC01 + ZARC02 + TCSMCNAM3M002P	<b>XARSK12D18H</b>	2.800/6.173

#### Accessories

Description	Characteristics	Reference	Weight kg/lb
Charger for remote device	100...240 V ~ power supply	<b>ZARC01</b>	0.350/0.772
Shoulder belt for remote device	2 m/6.56 ft long	<b>ZARC02</b>	0.100/0.220
External antenna for Base station (1)	with 2 m/6.56 ft cable and bracket included	<b>ZARC03</b>	0.200/0.441
Holder for remote device	104 x 239 mm/ 4.09 x 9.41 in.	<b>ZARC04</b>	0.250/0.551
Female plug connector	with cable 1.5 m/4.92 ft	<b>ZARC05</b>	2.000/4.409
Cable gland kit with wire grommets	1 x M25 + 1 x M20	<b>ZARC06</b>	0.050/0.110
Adhesive label kit for remote device	black and white	<b>ZARC07</b>	0.150/0.331
Adhesive label kit for remote device and crane equipment	multicolored	<b>ZARC08</b>	0.250/0.551
Fixing kit	silent block (anti vibration) support	<b>ZARC09</b>	0.825/1.815
	magnet support	<b>ZARC091</b>	0.625/1.375
Female plug connector	with cable 3 m/9.84 ft	<b>ZARC12</b>	4.000/8.818
Female plug connector	with cable 5 m/16.40 ft	<b>ZARC18</b>	7.000/15.432
Connector cable	USB to RJ45	<b>TCSMCNAM3M002P</b>	0.100/0.220

(1) This accessory can be used to increase the radio range in severe environment conditions.

**T**

TCSMCNAM3M002P	11
----------------	----

**X**

XARS8D18H	10
XARS8D18W	10
XARS8L12H	10
XARS8L12W	10
XARS12D18H	10
XARS12D18W	10
XARSK8D18H	11
XARSK8D18W	11
XARSK8L12H	11
XARSK8L12W	11
XARSK12D18H	11
XARSK12D18W	11

**Z**

ZARB12H	10
ZARB12W	10
ZARB18H	10
ZARB18HM	10
ZARB18W	10
ZARB18WM	10
ZARC01	11
ZARC02	11
ZARC03	11
ZARC04	11
ZARC05	11
ZARC06	11
ZARC07	11
ZARC08	11
ZARC09	11
ZARC12	11
ZARC18	11
ZARC091	11
ZART8D	10
ZART8DM	10
ZART8L	10
ZART8LM	10
ZART12D	10
ZART12DM	10

Harmony Innovation



## Schneider Electric Industries SAS

Head Office  
35, rue Joseph Monier  
F-92500 Rueil-Malmaison  
France

[www.schneider-electric.com/control](http://www.schneider-electric.com/control)

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Design: Schneider Electric  
Photos: Schneider Electric