Remotus

Robust radio remote control
for mobile applications

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Remotus
T-Rx 1500

Content

INTRODUCTION 4

REMOTUS T-RX 6
TRANSMITTERS
CONTROL DEVICES
RECEIVERS

CARRYING DEVICES & ACCESSORIES 18

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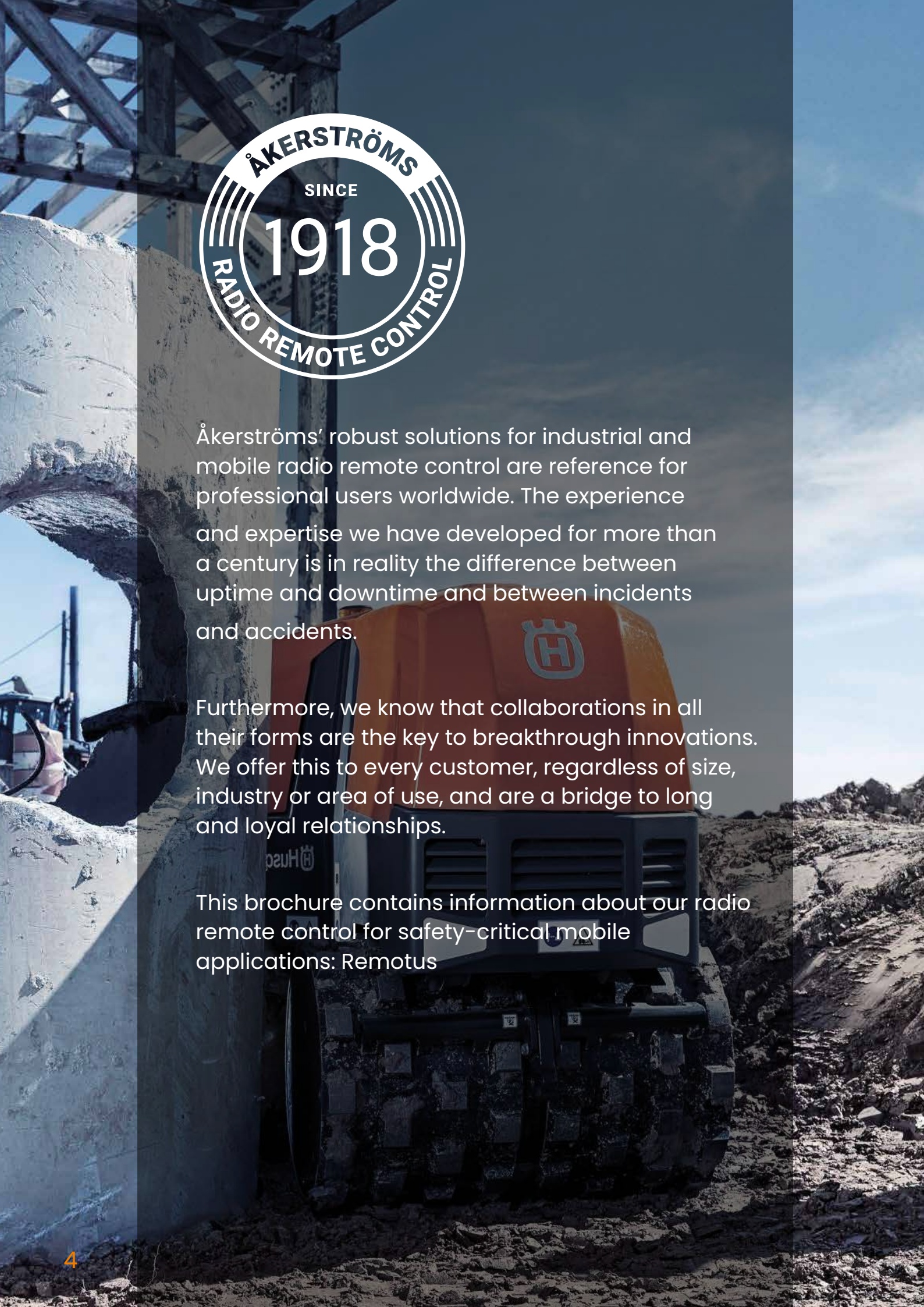

Åkerströms' robust solutions for industrial and mobile radio remote control are reference for professional users worldwide. The experience and expertise we have developed for more than a century is in reality the difference between uptime and downtime and between incidents and accidents.

Furthermore, we know that collaborations in all their forms are the key to breakthrough innovations. We offer this to every customer, regardless of size, industry or area of use, and are a bridge to long and loyal relationships.

This brochure contains information about our radio remote control for safety-critical mobile applications: Remotus

Remotus T-Rx is our robust remote-control product line for mobile applications such as suction vehicles, tow trucks, concrete pumps, concrete trucks and various different machines. The products within the T-Rx line provides the necessary safety, and reliability required for wireless control in challenging industrial environments.

The Remotus T-Rx line includes a complete receiver and transmitter line and comes in different standard and customized models suited for different usage areas.

Remotus T-Rx Era

Remotus T-Rx Era is the name of the latest member of the Remotus family. The T-Rx Era 100 waist transmitter has a modern, robust design. It has rubberized handles for a good grip and stands firmly on its protective metal feet when not in use. The T-Rx Era handheld transmitters have a modern, ergonomic design, clear display, and LEDs near each button that indicate the selected function. The handheld models are lightweight, easy to carry and availiable in standard or customized versions.

Dual CPUs for superior safety

The T-Rx Era 100 has dual CPUs, which means superior safety, even with movements/functions. It has an active stop function, means the receiver stops in less than 100 ms. T-Rx Era 100 also has a built-in tilt function, which means that it stops if you fall. T-Rx uses the frequency bands 433-434 MHz, 438-445 MHz and 2.4 GHz. The radio module 2.4 GHz can be used worldwide and has a range of about 200 m in a clear view. If necessary, you can adjust the range by lowering the output.

Distance restriction function

The T-Rx systems can be programmed with a distance restriction function for operating the object within a predefined distance.

Configurable display with alarm function

T-Rx Era 100 has a large, clear display, readable in bright sunlight. It also has a vibrator and buzzer, which can be individually configured to different alarm events via the display menu. The display's backlighting can also shift to red with different alarms that can be chosen from the menu.

High IP rating and unique battery solution

T-Rx Era 100 is of protection class IP65-67. It has an unique battery solution where the battery is well protected from water and dust in a replaceable module whose opening is located directly below the transmitter. The transmitter can be placed in deep water without affecting the battery.

Easily configured and functional

Personal settings or appropriate operating characteristics such as initial and maximum speed or sensitivity in the control lever can easily be adjusted and set with a software program running on an ordinary PC.

The safety stop function is approved according to PL d, Cat 3, EN ISO 13849-1.

REMOTUS T-RX

Remotus T-Rx is our robust remote-control product line for mobile applications.

T-Rx — Waist transmitters

Remotus T-Rx waist transmitter line is used for everything from standard solutions to highly sophisticated machine control. The transmitters are available in three models—depending on required functions and environments in which they'll be used. Their features are fully customizable to customer requirements. They can be equipped with indicators and display for displaying different types of information from the machine via two-way communication. The transmitters are adapted for tolerating tough conditions, such as drastic temperature differences, dust, vibrations, oil, and dampness.

REMOTUS T-Rx Era 100

No. of functions:
Up to six movements, 2-position, 4-position or stepless joystick (total max two joysticks) alt. six paddles

Type of transmission:
FM FSK/FM GMSK

Transmission speed:
4.800-19.200 baud depending on choice of radio

Operating temperature range:
-25°C to +55°C

Radio frequencies:
433-434 MHz, 438-445 MHz, 2.4 GHz

Output power:
Varies depending on application and licensing limitations. Usually 10 to 400 mW.

Range:
Up to 1 000 m

Antenna:
Internal

Battery:
3.7 V / 1.9 Ah

Operating time:
ca 14 hours

Protection class:
IP65-67

Dimensions:
260 x 165 x 150 mm

Weight:
1.3 kg

Display type:
Graphic LCD, 128 x 64 pixels

REMOTUS T-Rx 300

No. of functions:
Up to six movements, 2-position, 4-position or stepless joystick (total max three joysticks) alt. six paddles

Type of transmission:
FM FSK

Transmission speed:
Standard 4 800 baud

Operating temperature range:
-25°C to +55°C

Radio frequencies:
433-434 MHz, 438-445 MHz, 2.4 GHz

Output power:
Varies depending on application and licensing limitations; Normally 10 to 400 mW

Range:
Up to 1 000 m

Antenna:
Internal

Battery:
6 V / 2.4 Ah

Dimensions:
250 x 175 x 160 mm

Weight:
1.2 kg

Display type:
LCD, 1 row 8 characters, 1-3 rows 16 characters/row, 8 LEDs

REMOTUS T-Rx 500

No. of functions:
Up to eight movements, 2-position, 4-position or stepless joystick (total max four joysticks) alt. eight paddles

Type of transmission:
FM FSK

Transmission speed:
Standard 4 800 baud

Operating temperature range:
-25°C to +55°C

Radio frequencies:
433-434 MHz, 438-445 MHz, 2.4 GHz

Output power:
Varies depending on application and licensing limitations; Normally 10 to 400 mW

Range:
Up to 1 000 m

Antenna:
Internal

Battery:
6 V / 2.4 Ah

Dimensions:
340 x 175 x 160 mm

Weight:
2.5 kg

Display type:
LCD, 1 row 8 characters, 1-3 rows 16 characters/row, 8 LEDs

T-Rx Era — Hand held transmitters

T-Rx Era handheld transmitters have a modern, robust design. The transmitters weigh only 265 grams and fit easily in your hand, and are IP67 classified, which means they are completely dust and waterproof. They have large, easy-to-read two-stage buttons that enable double functions on each pushbutton. Era 8B is available incl or excl LCD. A separate LED indicates storage battery status and operation and all models except Era 8B (excl LCD) have LEDs at each button that indicate the selected function. The output of the transmitters is adaptive, i.e. if the signal strength is strong, then both transmitter and receiver "downshift" to a lower output to disturb others as little as possible.

REMOTUS T-Rx Era 8B

No. of buttons: 6 two-stage buttons	Battery: 3.7 V/1.9 Ah
Type of transmission: FM GMSK	Operating time: 40 hours
Transmission speed: 9 600 baud	Protection class: IP67
Operating temperature range: -25°C to +55°C	Dimensions: 183 x 67 x 45 mm
Radio frequencies: 433-434 MHz	Weight: 265 g
Output power: 10 mW	Display type: Graphic, 128x64 pixels. Up to four numerical values with unit can be displayed simultaneously. The values can be displayed numerically or as bars.
Antenna: Internal	

REMOTUS T-Rx Era 6B

No. of buttons: 8 two-stage buttons	Battery: 3.7 V/1.9 Ah
Type of transmission: FM GMSK	Operating time: 40 hours
Transmission speed: 9 600 baud	Protection class: IP67
Operating temperature range: -25°C to +55°C	Dimensions: 183 x 67 x 45 mm
Radio frequencies: 433-434 MHz	Weight: 265 g
Output power: 10 mW	Display type: Graphic, 128x64 pixels. Up to four numerical values with unit can be displayed simultaneously. The values can be displayed numerically or as bars.
Antenna: Internal	

REMOTUS T-Rx Era 4B

No. of buttons:
4 two-stage buttons

Type of transmission:
FM GMSK

Transmission speed:
9 600 baud

Operating temperature range:
-25°C to +55°C

Radio frequencies:
433-434 MHz

Output power:
10 mW

Antenna:
Internal

Battery:
3.7 V/1.9 Ah

Operating time:
40 hours

Protection class:
IP67

Dimensions:
183 x 67 x 45 mm

Weight:
265 g

Display type:
Graphic, 128x64 pixels. Up to four numerical values with unit can be displayed simultaneously. The values can be displayed numerically or as bars.

REMOTUS T-RX ERA 8B

T-Rx — Hand held transmitters

The T-Rx hand held transmitters are available in two robust models; T-Rx 12B and T-Rx 28J B. Both are available with or without graphic display. Remotus T-Rx 28J B has eight two-stage buttons and two joysticks. The transmitter is easily maneuvered with one hand, making it easier to use in situations that might otherwise require the functions of a traditional waist style transmitter. The transmitter can control 4 analog and 8 digital functions in 2 steps. You can also extend the functions with the help of a selection button. T-Rx 12B has 12, two-stage buttons that enable double function for each button. LEDs on each button indicate selected function and a separate LED indicates storage battery status and operation.

REMOTUS T-Rx 12B

No. of buttons:
12 two-stage buttons

Type of transmission:
FM FSK

Operating temperature range:
-25°C to +55°C

Radio frequencies:
433-434 MHz, 438-445 MHz,
2.4 GHz

Output power:
10 to 400 mW

Antenna:
Internal

Battery:
3.7 V / 1.8 Ah

Protection class:
IP65

Dimensions:
243 x 77 x 41 mm

Weight:
490 g

Display type:
Graphic, 102*64 pixles.
Up to 4 values with unit can be displayed simultaneously, such as numerical or bar.

REMOTUS T-Rx 28J B

No. of buttons:
8 two-stage buttons and 2 joysticks

Type of transmission:
FM FSK

Operating temperature range:
-25°C to +55°C

Radio frequencies:
433-434 MHz, 438-445 MHz,
2.4 GHz

Output power:
10 to 400 mW

Antenna:
Internal

Battery:
3.7 V / 1.8 Ah

Protection class:
IP65

Dimensions:
243 x 77 x 41 mm

Weight:
490 g

Display type:
Graphic, 102*64 pixles.
Up to 4 values with unit can be displayed simultaneously, such as numerical or bar.

SCANIA

T-Rx — Control devices

The T-Rx systems are tailored to customers' requirements. Functions, frequencies, design, and layout are all customized. Text and symbols are adapted and a large number of control devices are available i.e. joysticks, pushbuttons, rotary switches, toggle switches etc. They can also be equipped with indicators and a display for showing different types of information such as weight, pressure, engine speed, wind conditions, etc.

Example of control devices

Joysticks
Incl. steps/step less, button, 1, 2, 3 axis

Pushbuttons
Different colors, sizes, leds, locking/non-locking

LEDs
Different colors, high-power

Toggle switches
Locking/non-locking

Rotary switches
4, 8, 10, 12, 16 pos, potentiometers

Key switches

MC
BAT
SPEED F/B
TRACKING
BACKWARD

T-Rx — Receivers

The Remotus T-Rx receivers are available in three models. T-Rx 500 is a receiver controlling up to 24 on/off functions, T-Rx 1500 up to 8 analogue functions, PWM (0-3A) or analogue outputs (0-10V or 0-20 mA) and T-Rx 100 is a CANopen based receiver for control via existing PLCs. The receivers have a shock- and water resistant aluminum housing (IP67). They have double security outputs and transmitted radio messages are very secure. Double micro–processors monitor each other and each message is checked before it is accepted. Com-mand errors don't occur and security is increased. Two-way communication as standard.

REMOTUS T-Rx 100

No. of outputs:
RCSS: 2 outputs. 2 Amp source

CANopen
Baud rate: 50 kbits/s...1 Mbits/s (default 125 kbits/s)
CANopen Node-ID: 1..126 (default 32)
CANopen Com-profil: CiA DS 301 Version 4
CANopen Dev-profil: CiA 401 Generic I/O module
LSS support: Remote node-ID and baud rate
CAN terminering: On/Off

Connections:
External antenna: 1xSMA (2xSMA option)
Power supply and RCSS: M12 4-pin male
CAN: M12 5-pin male
Cable control: M12 8-pin female

Radio frequencies:
433-434 MHz, 438-445 MHz, 2.4 GHz

Operating temperature range:
-25°C to +55°C

Housing:
Aluminium

Protection class:
IP67

Dimensions:
152 x 141 x 36 mm

Weight:
0,65 kg

Operating voltage:
12/24 V DC, negative grounded system

Current consumption:
100 mA (without external load at 12 V)

REMOTUS T-Rx 500

No. of outputs:
RCSS: 2 outputs, 3 Amp source
Digital: Maximum 24 outputs 3 Amp on/off source
1 serial input: RS422/RS485

Connections:
Extern Antenna: 1xSMA
Outputs, power supply: Screw terminals

Radio frequencies:
433-434 MHz, 438-445 MHz, 2.4 GHz

Security:
Double processors, 2 "solid state" security outputs (RCSS)

Operating temperature range:
-25°C to +55°C

Housing:
Aluminium

Protection class:
IP67

Dimensions:
275 x 174 x 64 mm

Weight:
1.6 kg

Operating voltage:
12/24 V DC, negative grounded system

Current consumption:
100 mA (without external load at 12 V)

REMOTUS T-RX 1500

No. of outputs:
RCSS: 2 outputs, 3 Amp source
Digitala: Maximum 24 outputs 3 Amp source. 8 are always outputs. 16 shares function with PWM outputs.
PWM: Maximum 16 outputs 3 Amp source, 50-400 Hz, 12 bits resolution
External indication: 1 output 0.5 A
Analogue: 8 outputs 0-10V or 0-20mA, 12 bits resolution
10V ref: 10V, 100 mA reference output to sensors, potentiometers etc.

CANopen
Baud rate: 50 kbits/s...1 Mbits/s (default 125 kbits/s)
CANopen Node-ID:
1..126 (default 32)
CANopen Com-profile: CiA DS 301 Version 4
CANopen Dev-profil: CiA 401 Generic I/O module
LSS support: Remote node-ID and baud rate
CAN termination: On/Off

No. of inputs:
Digital: Maximum 16 inputs
Analogue: 2 inputs 0-10V or 0-20mA, 10 bits resolution

Connections:
External antenna:
1xSMA (2xSMA option)
In-/Outputs, power supply:
AMP MCP 62-pole
Cable control: M12 8-pin female

Radio frequencies:
433-434 MHz, 438-445 MHz, 2.4 GHz

Security:
Double processors, 2 "solid state" security outputs (RCSS)

Operating temperature range:
-25°C to +55°C

Housing:
Aluminium

Protection class:
IP67

Dimensions:
218 x 174 x 64 mm

Weight:
1.6 kg

Operating voltage:
12/24 V DC, negative grounded system

Current consumption:
100 mA (without external load at 12 V)

Carrying devices and accessories

Our carrying devices provides a comfortable and ergonomically working position and reduces the body burden of long hours. We have several different carrying devices to choose from that easily can be adapted to each user. A custom belt is included with each transmitter. We also offer a wide range of accessories and spare parts such as batteries, chargers, storage cabinets, signs etc. Visit our webshop at akerstroms.com for more information.

Shoulder strap

SHOULDER STRAP
Era 100, T-Rx 100
Art. No. 944204-000

SHOULDER STRAP
T-Rx 300/500
Art. No. 944204-001

Harness

HARNESS
Era 100, T-Rx 100,
Art. No. 947108-000

Belt holder

BELT HOLDER KIT
T-Rx 12B/T-Rx 28J B
Art. No. 934158-000

Belt holder

BELT HOLDER CLIP ON
Era 4/6/8B
Art. No. 952147-000

Protective bag

PROTECTIVE BAG
T-Rx 12B
Art. No. 951900-001

Protective bag

PROTECTIVE BAG
Era 4/6/8B,
Art. No. 951900-000

Vehicle bracket

VEHICLE BRACKET
J-M 8B/10B/12B
Art.nr: 935408-001

Vehicle bracket

VEHICLE BRACKET
Era 4/6/8B
Art. No. 952521-000

Wall bracket

WALL BRACKET
Era 4/6/8B
Art.nr: 952148-000

Vest

VEST
Era 100, T-Tx 100,
T-Rx 300/500
Adjustable size
Art. No. 951854-000

Belt

BELT
Era 100, T-Rx 100
Adjustable size
Art. No. 952704-000

Belt

BELT
T-Rx 300/500
Adjustable size
Art. No. 952705-000

Belt

BELT WITH RAIL
T-Rx 100
700-1100 mm
Art. No. 935537-000

Belt

BELT WITH FLIP-UP
T-Rx 12B/T-Rx 28J B
Art. No. 935537-004

Hook

HOOK
M-300/500
Art.nr: 926708-000

Hook

HOOK
J/M-100
Art.nr: 925563-000

ÅKERSTRÖMS

Welcome to the remote future

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