ARLENTUS
CONTROL

INDUSTRIAL **RADIO**
REMOTE CONTROL
SYSTEMS

PUMICE
PRODUCT CATALOG

ARLENTUS
CONTROL

Contents

A' DESIGN AWARD WINNER 2014

A' Design Award Winner
in Engineering and Technical Design Category, 2013 - 2014

Radio Remote Control Unit: "rock.RBST" is radio remote control transmitter unit for robust radio remote control of safety critical industrial and mobile applications. It includes everything from simple standard systems to advanced customized systems. The "rock.RBST" offers various transmitter models.

The waist transmitter comes in different versions, one is a simpler version, which handles some movements at different speeds and contains minimum function.

The other, a more sophisticated version, which handles more movements at different peds, and contains many extra functions.

![ARLENTUS CONTROL logo]

We Combine Control
with Innovation

Arlentus Control has carried out many projects within the scope of industry and university cooperation since its establishment. It operates in industrial areas where wireless communication systems, electronic, mechanical and industrial design, prototype production, industrial control, unmanned control, monitoring and reporting systems are used.

With its quality and innovative approach in product and production processes, it has a high standard of service understanding by aiming to reduce production costs and increase efficiency.

Radio Frequency Control Systems, which is developed as a result of innovative thinking structure and R&D studies, have unique designs that are registered worldwide. One of these models, the "Rock" model , was awarded the prize in the 2013-2014 "Design Award Winner In Engineering and Technical Design" category in Italy.

In addition to its R&D perspective Arlentus, brings together production, innovation and technologhy understanding combine control with innovation.

Right Controller in
Industrial Applications

Pumice is the first and most experienced hand held controller of Arlentus Control product family. It is designed to be used efficiently in harsh industrial environment conditions. With the help of outstanding menu features, ergonomic structure and robustness are the reasons why it is preferred. Its enclosure box, which is reinforced with polyamide and fibreglass, is resistant to falls and impacts. It has IP65 standards.

Pumice is suitable for maximum efficiency and long life use. It is resistant to variable environmental conditions such as dust, moist, oil, hot, cold, etc. It provides economical solutions in a short time for damage and malfunctions thanks to its modular structure based on production. It provides flexible and safe user experience which is fast and easy matching feature.

Frequence Setting

Pumice hand held controls can be set to 140 different frequencies. The system can be controlled if the PUMICE transmitters are paired to the frequency of any receiver. In this way, transmitters can replace each other.

Device ID

With 256 different IDs (encryption), device connections are secured against external interference. Even if it receives a signal at the same frequency, the system will not be activated without the correct encryption. In this way to prevent work accident that may occur.

Sleep Time

Sleep time feature is for reducing battery consumption after used. It can be set to max. 60 seconds in total in 15-second periods. At the end of the set time, the controller switches to stand-by position. Pressing any button is enough to wake it up again.

PIN Code

In order to prevent accidents password activation feature can be done on controller menu to avoid unauthorized uses and mistakes, with the help of 4 digit encryption.
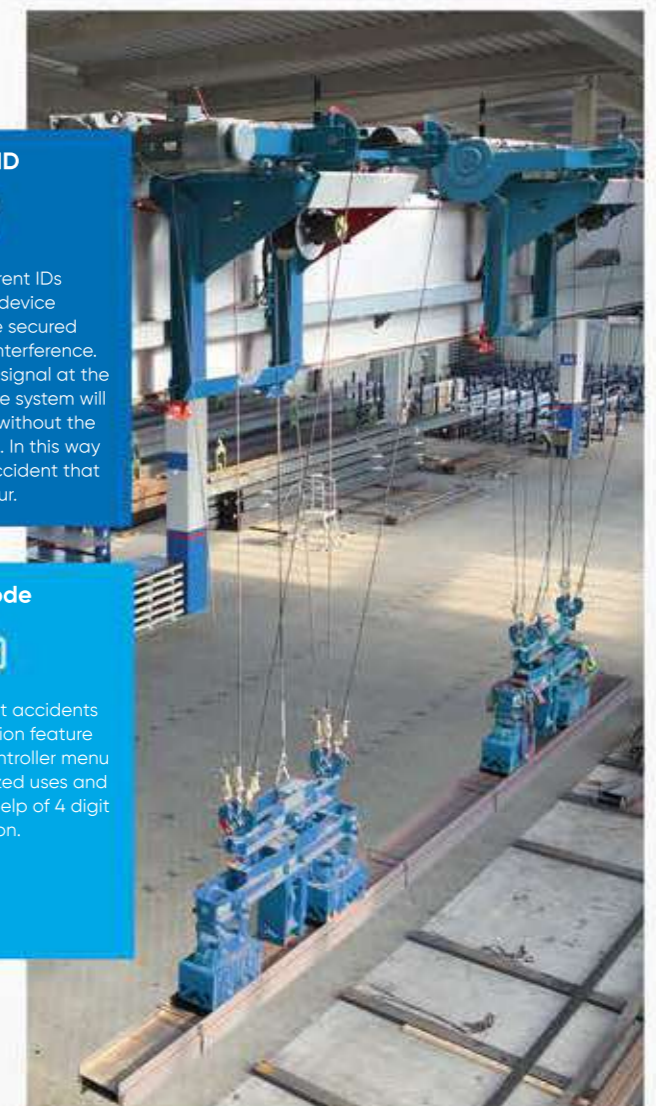
Who We Are?

Arlentus Control is an engineering company that produces its products at high quality standards with its dynamic and young staff in order to provide the solution and innovation in RF control systems. R&D works continue on a regular basis according to customer needs.

It carries out electronic, mechanical and embedded system software and design, monitoring and reporting systems, special design project and manufacturing activities as well as production and consultancy activities for industry and defense industry.

"Arlentus Control converts quality and standard into efficiency by combining them with innovative engineering solutions."

Arlentus Control produces RF communication systems with original and award-winning designs. They are used in many markets such as cranes, on-board equipment, railway vehicles, transportation-lifting equipment, in-factory wireless data transfer.

As Arlentus Control, our basic principle is to improve our ongoing experience with radio control systems and to combine it with our innovative perspective on design. Our products are designed to produce efficient solutions for all needs, from the simplest applications to the most complex systems.

Products with durable polyamide raw material, It produces in accordance with IP standards and without compromising quality.

According to the identified needs, it becomes a solution partner in many areas with innovation product and production processes, increasing quality, standard and efficiency, reducing production costs, and engineering services.

Customer satisfaction is the main purpose of its operations to increase a value and which is involved every project as a solition partner.

Unique Solutions in Various Business Areas

In addition to standard applications, it produces solutions with an engineer team with software and design capability that provides special demands. It provides production, adjustment and field application services of radio control systems used in machinery, construction, mining, logistics, agriculture, on-board equipment, industrial transportation and lifting sectors.

"Being able to carry out R&D activities and production stages in an integrated manner gives Arlentus Control strength and confidence in its solution partners."

INDUSTRIAL **RADIO CONTROL** *SYSTEMS*

Why
Arlentus Control ?

While Arlentus Control produces Industrial Radio Control Systems that are the most suitable for the needs of its users with its knowledge and experience, it prioritizes customer satisfaction and its special software, design and after-sales services. Arlentus Control continues the development of its products with the feedback it receives from all its users regularly within the scope of after-sales service. In addition to all these, it increases the brand value day by day with its service speed and experienced technical support team.

Arlentus Control produces maximum efficiency systems that are resistant to harsh working environments in order to provide long-lasting solutions to its users.

It provides fast and easy integration due to the special software it contains in the use of customizable menus in its systems. It takes the security of the users to the highest level in the field with the security precautions it has.

Modular structure based design, provides producing solutions with the lowest cost in a short time for possible failures, changes and integration processes that may occur in the systems within the after-sales services.

Customizable Solutions

Arlentus Control has the ability to produce customizable software and design that meets the demands that occur outside the standard sectoral needs. Provide these requirements is to facilitates the production and use process of solution partners and contributes to the development of their systems. In this way, it plays an active role in producing innovative systems with added value together with its solution partners.

Safety and Flexibility in the Workplace

At the present time, the rapid growth of the industry and the confusion in business processes cause an increase in occupational accidents. Arlentus Control systems prevent accidents that may occur in this process with te help of **"Safe Distance Control"** feature.

Our ISO 9001, ISO14001 ve ISO45001 Certificates

Arlentus Control has ISO 9001 quality management system, ISO 14001 environmental management system and ISO 45001 occupational health and safety system certificates. It carries out supply, production, sales and after-sales activities within the scope of approved standards.

PUMICE

Pumice, the most dynamic member of the Arlentus Control family, has been developed in accordance with all the challenging conditions that can be encountered in the field. Pumice, which stands out with its software and safety features as well as its polyamide outer structure strengthened with glass fiber, works in the field with maximum efficiency. There are 6 different models, with and without display, offered as standard in the product range, excluding special productions. All models of the Pumice controller are produced as standard double speed 8 buttons.

12 Different Menu
Usage On All Models

1 2 3 4 5

1.LED **Battery**

2.LED **Hook 1**

3.LED **Hook 2**

4.LED **Error**

5.LED **Communication**

Frequence Setting

Pumice hand held controls can be set to 140 different frequencies. The system can be controlled if the PUMICE transmitters are paired to the frequency of any receiver. In this way, transmitters can replace each other.

Pin Code

In order to prevent accidents that may occur due to misuse in the field, the controller can be accessed with a 4-digit password. In this way, it is intended that only the authorized operator can use the controller.

Device ID

The security of device connections against external interference is ensured by 256 different IDs (encryption). Even if it receives a signal at the same frequency, the system will not be activated without the correct encryption. In this way, it is aimed to prevent occupational accidents that may occur.

Pin Code Change
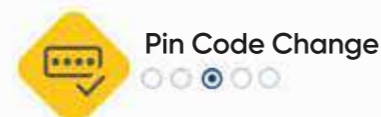
If desired, password changes can be made in the controller. Changing the password is only possible if the password used at that time is known. In case the password is forgotten, password reset can only be done through the service for security purposes.

Button Step Delay

1 > 2

2 > 1

The general purpose of this feature is save the machine life, can be used from 1st to 2nd step or vice versa in speed changes between buttons.

Cross Motion

It is not deemed appropriate within the scope of occupational safety that it causes occupational accidents caused by oscillation caused by the movement of the hook, car and bridge in the cranes. However, in some applications, single movement or multiple movement can be set from the cross movement menu because two or more movements have to be used together.

Language Selection

For display models menu usage is offered with different language options.

Sleep Time

It is used to reduce battery consumption after the use of the controller is finished. Adjustable in 15 seconds periods up to max. of 60 seconds. At the end of the set time, the controller switches to stand-by position. Pressing any button is enough to wake it up again.

Shut Down Time

It is used to prevent accidents that may occur after the use of the controller is finished and to extend the battery life. It can be set to max. 180 seconds in total in 15-second periods. At the end of the set time, an emergency stop button is sent to shutdown command and communication will interrupted. To be able to use it again, the emergency stop button is turned off and on again.

Loadcell Settings

Display models ability is, to show the kg value according to 0-10 V signal which come from the load cells. It provides convenience to the user loading where weight tracking is important.

Tare Setting

It is a feature used to calibrate the margins of error against voltage losses that may come from the loadcell.

Factory Settings

You can perform a factory reset to create a clean device for yourself by restoring your device to its original state from the factory.

PUMICE
Features & Options

Pumice is suitable for maximum efficiency and long life use. It is resistant to variable environmental conditions such as dust, moist, oil, hot, cold, etc. It provides economical solutions in a short time for damage andmalfunctions thanks to its modular structure based on production. It offers users a flexible and safe usage opportunity, through the fast matching feature of the receivers and transmitters.

Productive and Sustainable Areas

The demand for the use of radio control systems to increase efficiency and performance in industrial workplaces is increasing day by day. The main purpose of the use of radio remote control systems is to make the operation process safer and more consistent. Radio-controlled systems ensure the continuity and reliability of wireless communication, preventing unpredictable accidents. In addition, these systems show effective working performance under heavy-duty conditions such as high temperature and humidity.

Quick Setup & Easy Usage

Due to the modular structure of the receiver, the numbering of the output cables provides easy assembling to the electrical panels of the system. After that, the transmitter pairs with the reciever in seconds through its fast frequency adjustment feature and makes the system ready.

Wide Service Network

Easy & Quick Setup

Long Life & Economical

Unique Solutions in Various Areas

PUMICE is used in many hydraulic system controls beyond the remote control thanks to its customizable software and button structure. Key labels specially designed according to the request of the user contribute to the correct and reliable use of the system. The user is given vibration feedback and warned by the vibration motor within the scope of special scenarios. These capabilities make it a control system that offers superior solutions ahead of its competitors.

Customizable
Key Labels

Symbols related to the machine/equipment functions to be used can be specially designed. Thus, it ensures that the machine/equipment is controlled correctly, easily and safely.

Warning
Vibration Motor

Vibrating alert is given in case of user's incorrect/improper use of the machine/equipment. In noisy environments or within the scope of special scenarios, user can get feedback by vibration.

Rechargeable
/Alkaline

According to user preference, allows the rechargeable or alkaline batteries.
* Box content comes whith 3 alkaline batteries.

OLED
Display

Monitoring the operating mode on the screen with the sensor data coming from the system and viewing the standard menu features provide the users with an easy-to-use experience.

Step Button
Single/Double

It increases the number of standard movements and allows flexible usage in different scenarios. It is offered to users as an option.

Specialized
Software

Pumice remote controller offers different solutions in case of needs with the help of flexible software platform.

Extendable
Distance

In applications where the control distance is more than 150 meters, the control distance of Pumice can be optionally increased with external antenna alternatives.

Standard
Features

1. Modular structure
2. Number of buttons
3. Outer cover
4. Emergency stop
5. Feedback led
6. Easy pairing
7. Two-way communication
8. User friendly menu options

PUMICE
Multiple Systems

Main / Auxiliary

The Main/Auxiliary system consists of two transmitter units (Main Transmitter and Auxiliary Transmitter) and two receiver units (A and B). They can operate independently or simultaneously and can operate two machines separately or together when needed. While the main transmitter is capable of operating receivers A and B separately and simultaneously, the spare transmitter can only control receiver B.

Hook Selector

The hook selection model allows the use of two trolley on a crane. It operates with a transmitter and a receiver. With the selection of hooks, trolley can be used separately and together.

Tandem

The tandem system allows more than one receiver to be controlled by a single transmitter. It helps to distribute the weight proportionally by hanging the load on two or more cranes, especially when carrying wide and long loads. It prevents accidents that may occur due to dangerous swaying or overturning of the load.

Model Options

PMCGRV082

| PMC082 | GRV082 |

Standard Remote Control Set

It is designed for the use of systems that are desired to be controlled remotely. It provides up to 8 functions.

PMCGRV082LS

| PMC082LS | GRV082LS |

Hook Selector Remote Control Set

It is designed to use systems that are desired to be controlled remotely more than once. It provides the possibility to use up to 16 functions in total, including emergency stop.

PMCGRV082DSP

| PMC082DSP | GRV082DSP |

Display Remote Control Set

It is designed to use systems that are desired to be controlled remotely. It provides up to 8 functions. It allows to monitor the data received from the receiver and menu options with the display feature.

PMCGRV082DSPLS

| PMC082DSPLS | GRV082DSPLS |

Display and Hook Selector Remote Control Set

It is designed to use systems that are desired to be controlled remotely. It provides the possibility to use up to 16 functions in total, including emergency stop. It allows to monitor the data received from the receiver and menu options with the display feature.

PMCGRV082BTN

| PMC082BTN | GRV082BTN |

Function Button Remote Control

controlled remotely. It provides the possibility to use up to 16 functions in total, including emergency stop. It allows to monitor the data received from the receiver and menu options with the display feature.

PMCGRV082TND

| PMC082TND | GRV082TND |

Tandem Remote Control Set

It is designed to use systems that are desired to be controlled remotely. It allows multiple systems to be used with a single transmitter with the selection key.

TRANSMITTER
Technical specifications

Operating Frequency	863-870 MHz
Modulation Type	FSK, GFSK
Data Speed	35 - 50 kbps
Radio Communication	One- or two-way radio communication protocol, adjustable manual channel finding
Signal Output Power	868 Mhz -> 14 Dbm
Dimensions	76x193x55 mm
Weight	~298 gr
Protection Class	IP 65
Housing Material	Glass fiber reinforced polyamide
Transmitter Status Indicator	Available
Transmitter	Available (optional)
EEPROM	Available
Recommended Receiver	GRAVEL
Antenna	Internal/External
Battery	3 AA rechargeable batteries/3 AA Alkaline
Battery Warning System	Available
Stop Function	Available
Display Type	50 x 16 OLED (optional)
No. of Functions	6 movement and 2 function buttons
Button	8 (16) Double speed
Operating Distance	~150 M
Usage Time	~200 hours
Operating Temperature	-20 °C to 70 °C
Storage Temperature	-40 °C to 85 °C

76 mm

55 mm

193 mm
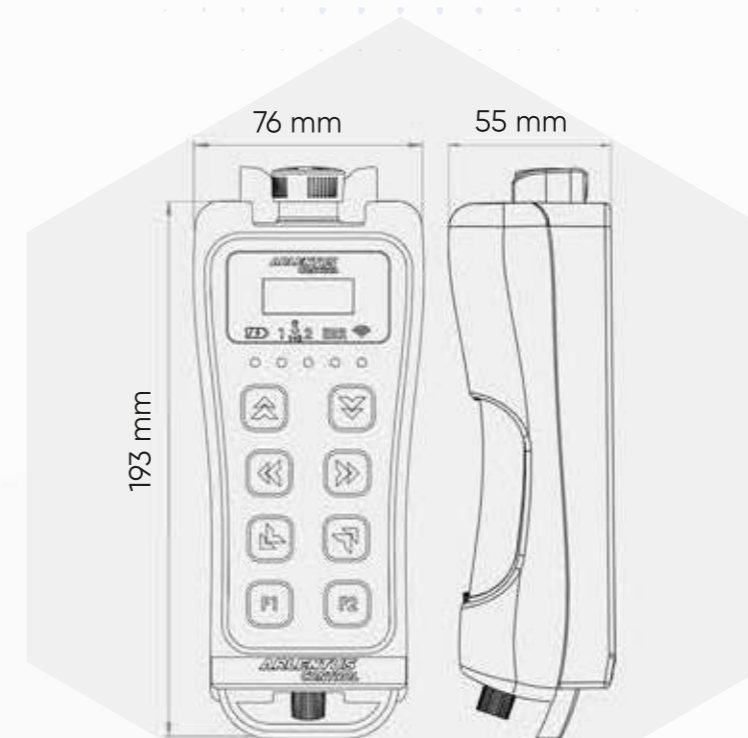
RECEIVER
Technical specifications

Operating Voltage	10 - 30VDC
Current	Max. 1 A
Dimensions	195x127x70
Protection Class	IP65
Receiver Status Indicator	Available
Recommended Transmitter	PUMICE
Connection	Union connection, multi-contact industrial plug
Communication	Radio frequency
Antenna	Internal / External
Housing Material	Glass fiber reinforced polyamide
Operating Temperature	-20 °C to 70 °C
Storage Temperature	-40 °C to 85 °C

Analog / Digital Input and Output

Digital Output	16 NO Contact
	1 NC Contact
Digital Input	4 pcs (10 - 30 VDC)
Analog Input	2 pcs (0 - 10 VDC)

127 mm   70 mm

195 mm
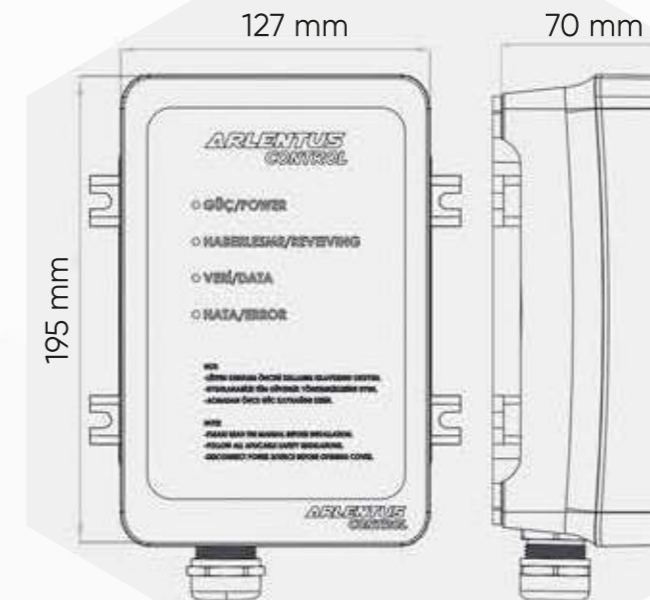
PUMICE

Transmitter Spare Parts List

Legend:
- 🟨 Elektronics Cards
- 🟩 Injection Parts
- ⬛ Lexan/Membrane
- 🟦 Other Spare Parts

Row 1

Button Circuit Board
Product Name PMBKDZG01
Product Code 501800-0001

Display Circuit Board
Product Name PMBKDZG02
Product Code 501800-0002

Main-Processor Circuit Board
Product Name PMAKDZG01
Product Code 501800-0003

Processor RF Module
Product Name PMGRDZG01
Product Code 991800-0001

Emergency Stop
Product Name 16LDEMC01
Product Code 991400-0018

Push Buton
Product Name 19PBX01YS
Product Code 991400-0007

On-Off Toggle
Product Name 12TGX01KS
Product Code 991400-0001

On-Mom Toggle
Product Name 12TGX01YS
Product Code 991400-0002

Row 2

Housing Upper Part
Product Name PMENUG01
Product Code 501500-0002

Housing Upper Part with Display
Product Name PMENUG02
Product Code 501500-0003

Housing Lower Part
Product Name PMENAG01
Product Code 501500-0005

Battery Cover
Product Name PMENPIL01
Product Code 501500-0007

On-Off-On Toggle
Product Name 12TG102YS
Product Code 991400-0003

Mom-Off-Mom Toggle
Product Name 12TG1021K2YS
Product Code 991400-0004

On-Off-Mom Toggle
Product Name 12TG102KS
Product Code 991400-0005

Protection Cap For Toggle Switch
Product Name 12TGPNSL01
Product Code 991400-0006

Row 3

Button Pad
Product Name PMENTUS01
Product Code 501500-0001

Keyboard Frame
Product Name PMENTUS02
Product Code 501500-0004

Protective Sleeve
Product Name PMENDIS01
Product Code 501500-0006

Front Panel Lexan
Product Name PMDSPLKS01
Product Code 501700-0001

Flat Seal
Product Name 12TGPNSL02
Product Code 991400-0008

Keylock Switch
Product Name 16BTNANHT01
Product Code 991400-0027

Single Step Button
Product Name PMEMKM02
Product Code 501400-0003

Dual Step Button
Product Name PMEMKM01
Product Code 501400-0004

Row 4

Display Front Panel Lexan
Product Name PMDSPLKS02
Product Code 501700-0002

Special Front Panel Lexan
Product Name PMDSPLKS03
Product Code 501700-0006

Key Lexan
Product Name PMLKSTUS01
Product Code 501700-0007

Custom Key Lexan
Product Name PMLKSTUS02
Product Code 501700-0008

Hook Selection Switch
Product Name 08RT10201
Product Code 991400-0014

OLED LCD Display
Product Name PMDS501601
Product Code 501700-0003

Battery Contact +
Product Name PMPK01
Product Code 501400-0005

Battery Contact -
Product Name PMPK02
Product Code 501400-0006

Page 20 Parts

Battery Contact Power Cord
Product Name: PMPKGK01
Product Code: 501400-0007

Internal Helical Antenna
Product Name: ARANT01
Product Code: 991400-0019

External Panel Type Antenna 90°
Product Name: ARANT02
Product Code: 991400-0023

Neck Strap
Product Name: PMASK01
Product Code: 501700-0004

AA Alkaline Battery
Product Name: ARPIL01
Product Code: 991400-0020

AA Rechargable Battery
Product Name: ARPIL02
Product Code: 991400-0021

Battery Charger
Product Name: PMPILS03
Product Code: 991400-0022

Battery Cover Screw
Product Name: PMPKV01
Product Code: 501700-0005

M3x6 Screw
Product Name: ARBV04
Product Code: 501700-0011

M3x6.8 Brass Standoff
Product Name: ARBV01
Product Code: 501700-0012

M3x8 Screw
Product Name: ARBV02
Product Code: 501700-0009

M3x12 Screw
Product Name: ARBV03
Product Code: 501700-0010

Receiver Spare Parts List

Main Processor and I/O Circuit Board
Product Name: GRFLR1DZG01
Product Code: 401800-0004

Power and I/O Circuit Board
Product Name: GRFLR2DZG02
Product Code: 401800-0005

RF Processor Module
Product Name: PMGRDZG01
Product Code: 991800-0001

Page 21 Parts

Legend:
- Electronics Cards
- Injection Parts
- Lexan/Membrane
- Other Spare Parts

Receiver Bottom Body
Product Name: GRENAG01
Product Code: 401500-0008

Receiver Top Body
Product Name: GRENUG01
Product Code: 401500-0009

Receiver Assembly Plate
Product Name: GRENMNT01
Product Code: 401500-0010

Receiver Lexan
Product Name: GRVDRMLKS01
Product Code: 401700-0005

Long Range External Antenna
Product Name: ARANT03
Product Code: 991400-0024

External Panel Type 180° Antenna
Product Name: ARANT04
Product Code: 991400-0026

Antenna Connector
Product Name: ARANTK01
Product Code: 991400-0025

2-Pieces 180° Connector
Product Name: GRPSCN0201
Product Code: 991400-0041

1A Glass Tube Fuse
Product Name: ARCSG01
Product Code: 991400-0028

3.15A Glass Tube Fuse
Product Name: ARCSG02
Product Code: 991400-0029

Glass Tube Fuse Holder
Product Name: ARCSGY01
Product Code: 991400-0030

3-Pieces 180° Connector
Product Name: GRPSCN0301
Product Code: 991400-0042

PG16 Plastic Cable Gland
Product Name: ARPG1601
Product Code: 991400-0031

PG16 Stainless Steel Cable Gland
Product Name: ARPG1602
Product Code: 991400-0032

PG16 Spral Gland
Product Name: ARPG1603
Product Code: 991400-0033

12V DC Relay
Product Name: ARRL01201
Product Code: 991400-0043

Legend

- 🟨 Electronics Cards
- 🟩 Injectşon Parts
- ◼ Lexan/Membrane
- 🟦 Other Spare Parts

24 Contacts Industrial Male Connector

Product Name	ARCKMF24
Product Code	991400-0037

24 Contacts Industrial Female Connector

Product Name	ARCKSP24
Product Code	991400-0038

32 Contacts Industrial Male Connector

Product Name	ARCKMF32
Product Code	991400-0039

32 Contacts Industrial Female Connector

Product Name	ARCKSP32
Product Code	991400-0040

Silent Block

Product Name	GRASSVBR01
Product Code	401700-0006

Receiver Connection Cable 1.5m

Product Name	ARKBL15
Product Code	991400-0034

Receiver Connection Cable 3m

Product Name	ARKBL30
Product Code	991400-0035

Receiver Connection Cable 5m

Product Name	ARKBL50
Product Code	991400-0036

M4x31.5 Brass Standoff

Product Name	ARRL01202
Product Code	991400-0049

Bolt Nut

Product Name	ARRL01203
Product Code	991400-0044

M3x10 Screw

Product Name	ARRL01204
Product Code	991400-0045

M4x6 Screw

Product Name	ARRL01205
Product Code	991400-0046

M4x8 Screw

Product Name	ARRL01206
Product Code	991400-0047

M4x12 Screw

Product Name	ARRL01207
Product Code	991400-0048

PUMICE
Transmitter

1- Display Front Panel Lexan
2- Housing Upper Part with Display
3- Emergency Stop Button
4- Button Pad
5- Keyboard Frame
6- OLED LCD Display
7- Button Circuit Board
8- Button Board Screw
9- Brass Standoff
10- Internal Helical Antenna
11- Main Processor Board
12- Housing lower Part
13- Brass Standoff
14- Battery Contact
15- AA Alkaline Battery
16- Protective Sleeve
17- Battery Cover
18- Battery Cover Screw
19- Hook Selection Switch

Receiver

1- Lexan
2- Housing Upper Part
3- I/O Board
4- Connection Screw
5- Brass Standoff
6- Processor + I/O Board
7- Housing lower Part
8- Assembly Plate
9- Assembly Plate Screw
10- Silent Block
11- Plastic Cable Gland

Our Products

arlentus.com