

ALFACHARGE WIRELESS CHARGER ALR1-H

12/24VDC WIRELESS CHARGER MODULE

ALR1 SERIES WIRELESS CHARGER MODULE FOR INTEGRATION INTO VEHICLE EQUIPMENT

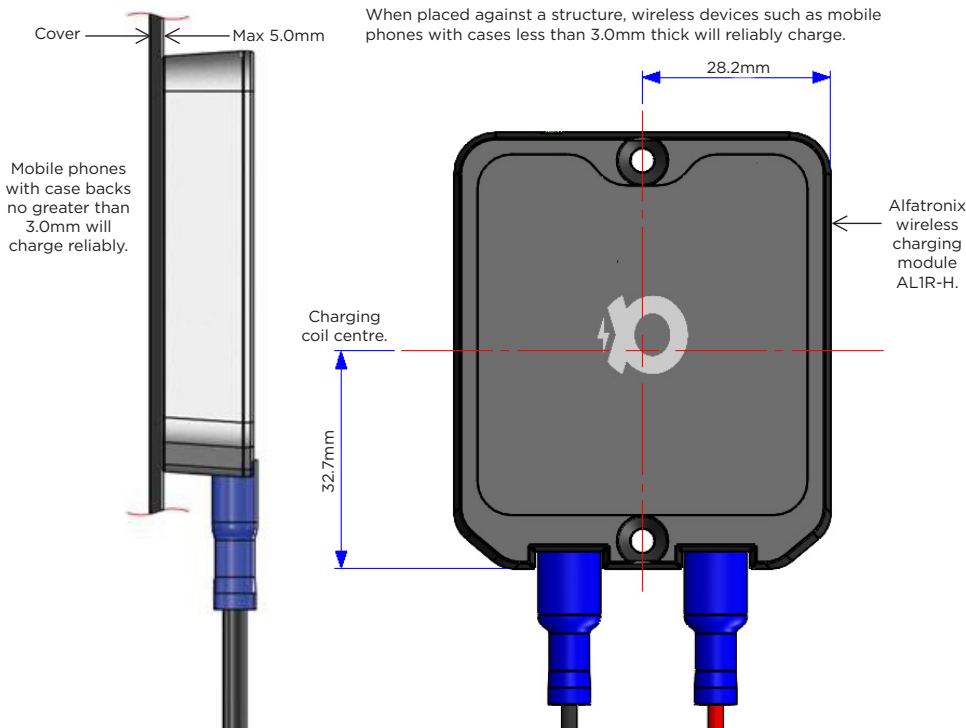
Wireless charging is increasingly becoming the preferred method of maintaining battery power in mobile devices, with most of the latest designs from the major manufacturers including wireless charging as standard.

The ALR1 series wireless charger module is designed for integration into equipment for railway applications. This module is typically housed in apparatus that enables mobile phones to be retained in position on rolling stock during charging. Typical applications include integration into passenger seating and table tops.

The charging element is placed within 0.7mm of the casing exterior to allow for maximum performance in a wide range of situations. When designing into housing equipment, we recommend keeping the active face of the unit within 5.0mm of the passenger accessible area.

This is a module unit which must be installed within a further structure. Cover or structure over the coil area should not exceed 5.0 mm in thickness.

When placed against a structure, wireless devices such as mobile phones with cases less than 3.0mm thick will reliably charge.



Most wireless mobile phones will connect within 5.0mm from optimal central point.

THE RANGE

The Alfacharge range has been designed to meet the rigorous standards required for on board applications including EN61373, 550155, 50121-3-2 and is CE marked. The casings are made from V0 rated (self extinguishing) high impact polycarbonate and the PCB is populated by computer controlled SMT for maximum accuracy and durability.

SAFETY

Wireless chargers require that there is no metal between the device providing the charge and the device being charged, as this metal could heat up to a hazardous temperature.

The AL series of wireless chargers use sophisticated Foreign Object Detection

(FOD) algorithms to detect metal objects placed between the charger and the device being charged and prevent the charging process from starting if metal is detected.

It is the responsibility of the installer to ensure correct operation of the FOD functions in the end application of the product, and that during use, no metal is expected to be placed between the wireless charger and the device being charged

WARRANTY

The ALR1 Series of wireless chargers are manufactured using rugged components to provide years of services in demanding commercial environments and are covered by a three year return to base warranty.



Designed for integration into railway applications.

Accepts both 12Vdc and 24Vdc.

- Extra vibration protection to EN61373.
- Approved to EN50498, EN50155 and CE marked.
- Phone communicates every second to establish correct charge.
- Foreign object detection & activation.
- Convenient wide input of 9-32Vdc for wireless chargers.

It is recommended that these units are fused individually with a 1 Amp fuse (24V systems) or a 2 Amp fuse (12V Systems). Suitable in-line fuses are available.



ALFACHARGE PART SELECTION

Part Number	Description	Dimensions	Weight
ALR1-H	Integrated wireless phone charger with horizontal connectors	65.4 x 56.4 x 14mm	82g

TECHNICAL DATA

Input voltage range	9-32Vdc (Rail approved @ 24Vdc +/- 30%)	
Output power	Nominal 5W	
Application	Charging of wireless enabled devices	
Transient voltage protection	EN50121-3-2 and 61000-4-4	
Tx-Range	Nominal 8mm	
Off load current (quiescent current)	6mA	
Power conversion efficiency	50% - 60%	
Operating temperature	-25°C to +40°C	
Storage temperature	-40°C to +100°C	
Operating humidity	95% max., non-condensing	
Casework	Black polycarbonate body	
Connections	Input: 6.3mm push-in flat blade connectors Output: Wireless transmission <200kHz	
Output indicator	Blue LED power indication	
Mounting method	Box with mounting screw holes - screws provided. Can also be installed by clips or other bespoke method	
Safe area protection:	Over Current	Limited by current sensing circuit
	Over heat	Limited by temperature sensing circuit
	Overvoltage and Undervoltage	Limited by sensing circuit
	Reverse Polarity	Limited by sensing circuit
	Transients	Protected by filters and rugged component selection
	Catastrophic protection	Internal fuse
Approvals	93/68/EEC The CE marking directive 2014/30/EU The general EMC directive 2014/53/EU RED directive	
Tested to	EN50155, EN50121-3-2, EN61373, EN45545, EN301-489-1, EN300-330, EN62311 & EN62368	
Markings	CE and UKCA	
IP Rating:	IP65 when installed correctly	

