Zertifiziert nach DIN EN ISO 9001
certified according to DIN EN ISO 9001

Tel. +49-(0)281-206526-0
Fax +49-(0)281-206526-29
www.argo-anleg.de

Argo-Anleg GmbH
Am Schornacker 59
D-46485 Wesel

The ARGO Infrared Refueling Interface "kit" allows for safe communication between hydrogen fueled vehicles and the hydrogen filling station. The infrared interface is designed according to SAE J2799. This standard specifies the communications hardware and software requirements and it's intent is to enable harmonized development and implementation of hydrogen fueling interfaces.

Information from the tank system such as tank volume, receptacle type, measured pressure and temperature is sent to the filling station to optimize the filling process. With these system parameters, the filling station can fill faster while maintaining safe tank temperatures.

The ARGO Infrared Refueling Interface also allows for optional general-purpose inputs and/or outputs for additional sensors, valves, etc. which can be controlled over CAN or preconfigured.

The interface consists of three parts: the electronic control unit (ECU), the ARGO IR Module inside the ECU and the ARGO infrared emitter. The ECU, a ARGOcontroll "Mini", is part of the Moduline series embedded controllers. These smart modular embedded controllers allow for maximum flexibility in various applications. Both the ARGO IR Module and the ARGO infrared emitter were designed specifically for this application.

Features

ECU

Fully programmable embedded controller

- 3 CAN interfaces (2.0b)
- Internal 5V supply for IR emitter
- IR transmitter output internally fused
- 2 LED indicator outputs for user feedback (low-side switching) internally fused
- 2 general purpose output channels, user configurable half bridges, loads up to 2A
- RS232 or RS485 interface
- USB interface (2.0)
- Ethernet interface (10/100Mbps)
- 3 controller enable inputs
- 4 RGB LED indicators
- Optional 30 additional IO's by using ARGOcontroll Moduline modules. Three remaining module slots available
- Optional WiFi/Bluetooth interface
- Optional GSM/LTE/GPS interface
- ECE R10 tested and approved

IR emitter

- IR transmitter module
- IrDA pulses according to SAE J2799
- Compact
- Rear facing connector
- 2 powerful IR LEDs

Electrical specifications

ECU

- Supply voltage: 8-32V DC
- Power consumption: 200 mA @ 24VDC
- IR emitter
- Supply voltage: 5V DC (supplied by ECU)
- Power consumption: 50mA

Mechanical specifications

ECU

- Dimensions: 185 x 135 x 64.5 mm
- Weight: 520 grams
- Robust billet aluminium enclosure
- Temperature range: -25 to 85°C
- IR emitter
- Dimensions: 65 x 45 x 13.5 mm
- Inner diameter: 34 mm
- Weight: 51 grams
- 3D printed fibre reinforced nylon enclosure
- Temperature range: -25 to 85 °C

Kit contents

ECU

- IR emitter
- 3m cable for IR emitter
- ECU connectors
- Wire terminals and blind plugs

The ARGO Infrared Refueling Interface is available in a kit. The kit provides a 3 meter long cable to connect the infrared emitter to the ECU, along with two ECU connectors, terminals and blind plugs.

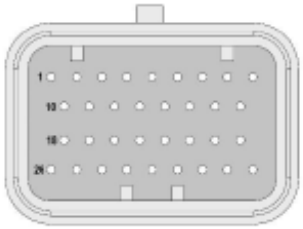
copyright © 2023 by Argo-Anleg GmbH

Zertifiziert nach DIN EN ISO 9001
certified according to DIN EN ISO 9001

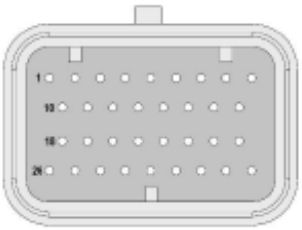
Tel. +49-(0)281-206526-0
Fax +49-(0)281-206526-29
www.argo-anleg.de

Argo-Anleg GmbH
Am Schornacker 59
D-46485 Wesel

Pinout diagrams

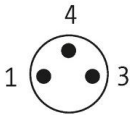


B



A

Pin	Function	Description	Pin	Function	Description
1	SUPPLY	Module supply	1	I/O	Optional I/O
2	RS485/232TX	RS485/RS232 TX output	2	I/O	Optional I/O
3	RS485/232RX	RS485/RS232 RX input	3	I/O	Optional I/O
4	I/O	Optional I/O	4	I/O	Optional I/O
5	I/O	Optional I/O	5	I/O	Optional I/O
6	I/O	Optional I/O	6	I/O	Optional I/O
7	I/O	Optional I/O	7	I/O	Optional I/O
8	K30	Supply	8	NC	Not connected
9	K30	Supply	9	NC	Not connected
10	OUT 1	Signal out 1	10	I/O	Optional I/O
11	LED A	LED out A	11	I/O	Optional I/O
12	IR IN	IR emitter feedback input	12	I/O	Optional I/O
13	I/O	Optional I/O	13	I/O	Optional I/O
14	I/O	Optional I/O	14	I/O	Optional I/O
15	I/O	Optional I/O	15	I/O	Optional I/O
16	RESET	Reset (active high)	16	K15B	Contact 2 (active high)
17	K15A	Contact 1 (active high)	17	K15C	Contact 3 (active high)
18	OUT 2	Signal out 2	18	I/O	Optional I/O
19	LED B	LED out B	19	I/O	Optional I/O
20	IR OUT	IR emitter output	20	I/O	Optional I/O
21	I/O	Optional I/O	21	I/O	Optional I/O
22	I/O	Optional I/O	22	I/O	Optional I/O
23	I/O	Optional I/O	23	I/O	Optional I/O
24	CAN1 LOW	CAN low line	24	CAN2 LOW	CAN low line
25	CAN1 HIGH	CAN high line	25	CAN2 HIGH	CAN high line
26	GROUND	Module ground	26	I/O	Optional I/O
27	CAN LOW	CAN low line	27	I/O	Optional I/O
28	CAN HIGH	CAN high line	28	I/O	Optional I/O
29	SUPPLY	5V/12V IR emitter power supply output	29	I/O	Optional I/O
30	I/O	Optional I/O	30	I/O	Optional I/O
31	I/O	Optional I/O	31	I/O	Optional I/O
32	I/O	Optional I/O	32	I/O	Optional I/O
33	K31	Ground	33	NC	Not connected
34	K31	Ground	34	NC	Not connected



Pin	Function	Description
1	SIGNAL	IR emitter input
3	SUPPLY	5V power supply input
4	FEEDBACK	IR emitter feedback

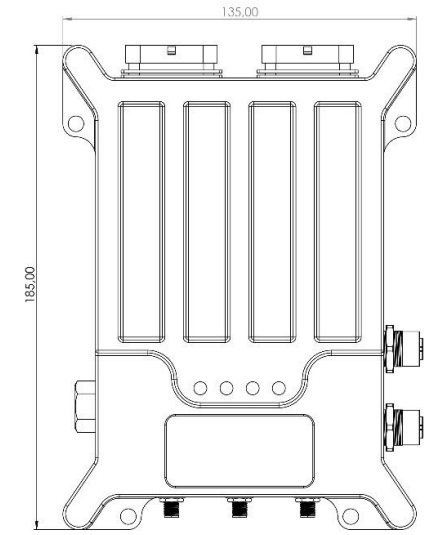
 copyright © 2023 by Argo-Anleg GmbH

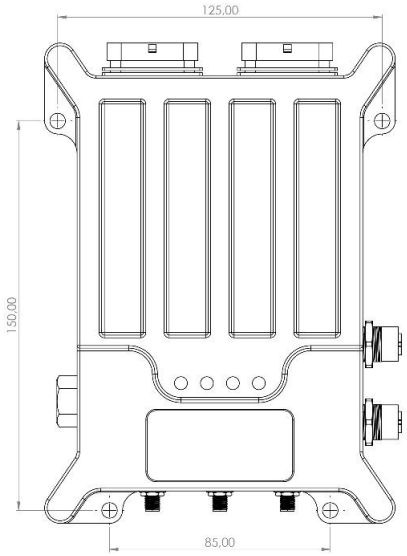
Zertifiziert nach DIN EN ISO 9001
certified according to DIN EN ISO 9001

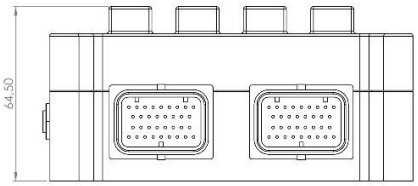
Tel. +49-(0)281-206526-0
Fax +49-(0)281-206526-29
www.argo-anleg.de

Argo-Anleg GmbH
Am Schornacker 59
D-46485 Wesel

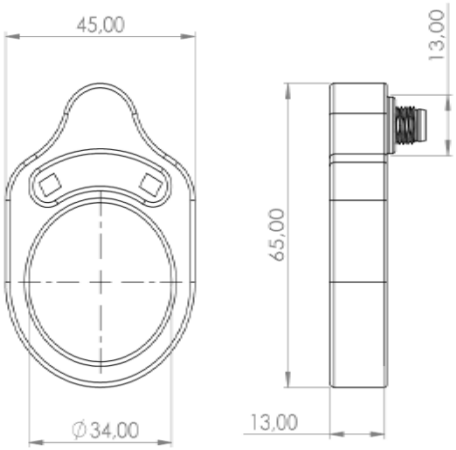
Technical drawings

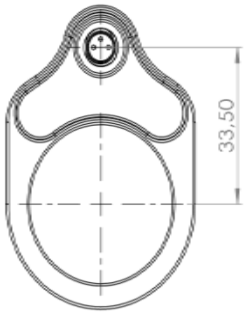






(Installation positions)





Order code:

Argo-Anleg article no.: 1002933 - IR transmitter ring incl. 3m cable, IR- communication transmitter ring
Argo-Anleg article no.: 1003207 - IR communication module
Argo-Anleg article no.: 1003208 - ARGO Infrared Refueling Interface „Kit"
Argo-Anleg article no.: 1003209 - ARGOcontroller „mini" – HW 1.11

 copyright © 2023 by Argo-Anleg GmbH