PCLC I/O BASIC CONN. AND CASE, HARWIN 101-LOK

KUERZI avionics

General

The PICO CLOSED LOOP CONTROLER (PCLC) is a solid state multi-purpose signal processing device able to work in clusters connected on a CAN bus. Besides the CAN communication, various inputs and outputs are part of the device. The configurable interface and light weight architecture offers an ingenious compact solution to many aviation in-cabin problems.

The Kuerzi bootloader software allows the end user to modify the configuration of the PCLC firmware (App), or update or upload new Apps. The PCLC can be remotely updated.

Further information on each PCLC App and its functions can be found on its respective datasheet. Individual customer tailored Apps can be created on request.

The PCLC meets aviation standards and requirements and is delivered with an EASA Form 1. Certification data will be delivered on request. In addition we offer the entire certification work for your particular aircraft type and installation.

Features

- 28VDC Power Input
- Plug & play
- CAN network
- Efficiency of up to 94%
- Up to 2 Analogue Inputs (0..5VDC)
- Up to 3 Digital (active low) Inputs
- Up to 2 +5VDC Outputs (Sensor power suppy)
- Up to 2 Digital PWM Outputs

Application examples

The PCLC is currently to be used in non-safety relevant applications. Examples would be VIP and VVIP modifications, controlling cabin lighting, heating and media equipment, Emergency Medical System (EMS) or special misison equipment. It can be installed as a single unit or networked. With its modular design it fits into every type and size of cabin to meet your needs.

On your request the PCLC can be altered or adapted to your requirements.

Products that also might interest you:
PCLC DC Low Power Bus Door Light 1/2 Open
KLM158 DC Low Power Bus Patient Light Flat NVIS
KLM159 DC Low Power Bus Door Light Round
KLM160 DC Low Power Bus Patient Light Round 1/3
KLM161 DC Low Power Bus Patient Light Round 2/3 NVIS
KLM136 Dimming Box
KVM105 DC Low Power Bus Control Panel

Principle Diagram
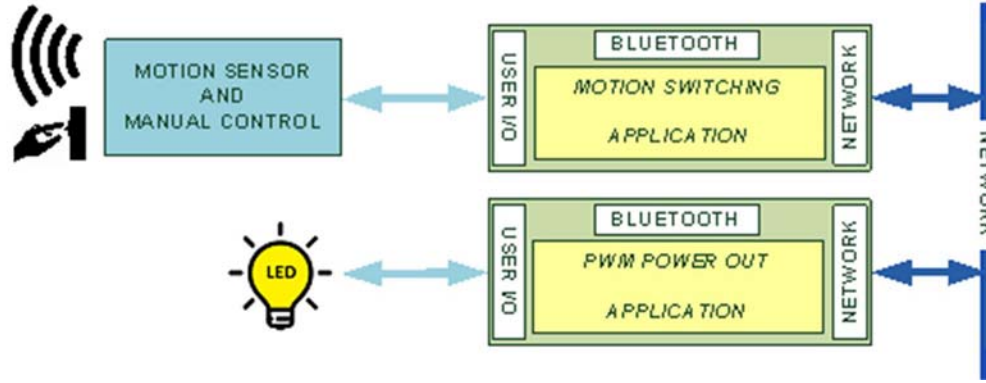
Technical Specifications

Nominal Operating Input Voltage	28.00 V
Nominal Operating Input Current	40 mA
Max Input Current	4.00 A
Nominal Operating Input Power	1.00 W

Environmental Specifications according DO-160 / ED-14

Emission of Radio Frequency Energy	DO-160G Cat. H
Fire, Flammability	DO-160 Cat. C

Interface

Connector	Pin	PIN Functions	PIN Class	Current	Description
J1	1	14/28VDC 5A PWR RETURN	POWER	5A	PCLC GND
J1	2	14/28VDC 5A PWR RETURN	POWER	5A	PCLC GND
J1	3	CAN HI	INPUT / OUTPUT	-	ISO-11898 standard physical layer
J1	4	CAN HI	INPUT / OUTPUT	-	ISO-11898 standard physical layer
J1	5	SHIELD	CASE / SHILD	-	Shielding to mounting screws / 0Ohm to GND
J1	6	CAN LO	INPUT / OUTPUT	-	ISO-11898 standard physical layer
J1	7	CAN LO	INPUT / OUTPUT	-	ISO-11898 standard physical layer
J1	8	SHIELD	CASE / SHILD	-	Shielding to mounting screws / 0Ohm to GND
J1	9	CAN TERMINATION	MODE CONTROL	-	CAN termination resistor Jumper to CAN LO
J1	10	14/28VDC 5A PWR IN	POWER	5A	PCLC POWER IN
J1	11	14/28VDC 5A PWR RETURN	POWER	5A	PCLC GND
J1	12	14/28VDC 5A PWR RETURN	POWER	5A	PCLC GND
J1	13	NC	-	-	Reserved (SPI Clock / IO)
J1	14	NC	-	-	Reserved (SPI RX / UART1 RX, IO)
J1	15	NC	-	-	Reserved (SPI TX / UART1 TX, IO)
J1	16	SHIELD	CASE / SHILD	-	Shielding to mounting screws / 0Ohm to GND
J1	17	NC	-	-	Reserved (Request Out, Active Low (#1))
J1	18	NC	-	-	Reserved (#2)
J1	19	NC	-	-	Reserved (Switched GND)
J1	20	14/28VDC 5A PWR IN	POWER	5A	PCLC POWER IN

Connector	Pin	PIN Functions	PIN Class	Current	Description
J2	1	DISCRETE 1 OUT 1A	POWER OUTPUT	1A (1.4A)	HIGH SIDE SWITCH
J2	2	DISCRETE 1 OUT RETURN	POWER GND	1A (1.4A)	HIGH SIDE SWITCH GND
J2	3	5VDC #1 PWR OUT	SIGNAL POWER	50mA	VDD 50mA
J2	4	SIGNAL 1 IN	INPUT / OUTPUT	50mA	Analog Signal / Vref-, IO, CN
J2	5	SIGNAL 1 PWR RETURN	SIGNAL POWER	50mA	Signal A_GND
J2	6	DISCRETE 1 IN	INPUT	10mA	Discrete Input < 1.6VDC LOW (Inverting)
J2	7	DISCRETE 2 IN	INPUT	10mA	Discrete Input < 1.6VDC LOW (Inverting)
J2	8	DISCRETE 3 IN	INPUT	10mA	Discrete Input < 1.6VDC LOW (Inverting)
J2	9	5VDC #2 PWR OUT	SIGNAL POWER	50mA	VDD 50mA
J2	10	SIGNAL 2 IN	INPUT / OUTPUT	50mA	Analog Signal / Vref-, IO, CN
J2	11	SIGNAL 2 PWR RETURN	SIGNAL POWER	50mA	Signal A_GND
J2	12	DISCRETE 2 OUT RETURN	POWER GND	1A (1.4A)	HIGH SIDE SWITCH GND
J2	13	DISCRETE 2 OUT 1A	POWER OUTPUT	1A (1.4A)	HIGH SIDE SWITCH
J2	14	NC	-	-	Reserved (HIGH SIDE SWITCH)
J2	15	NC	-	-	Reserved (HIGH SIDE SWITCH GND)
J2	16	NC	-	-	Reserved (VDD 50mA)
J2	17	NC	-	-	Reserved (Analog Signal / Vref-, IO, CN)
J2	18	NC	-	-	Reserved (Signal A_GND)
J2	19	NC	-	-	Reserved (Discrete Input < 1.6VDC LOW (Inverting))
J2	20	NC	-	-	Reserved (Request In)
J2	21	SHIELD	CASE / SHILD	-	Shielding to mounting screws / 0Ohm to GND
J2	22	NC	-	-	Reserved (VDD 50mA)
J2	23	NC	-	-	Reserved (Analog Signal / Vref-, IO, CN)
J2	24	NC	-	-	Reserved (Signal A_GND)
J2	25	NC	-	-	Reserved (Signal A_GND)
J2	26	NC	-	-	Reserved (HIGH SIDE SWITCH)

Mechanical Dimensions

Weight of the unit   22.00   Gr

Weight of the unit including required installation materials (w/o wiring)   22.00   Gr

All dimensions [mm]
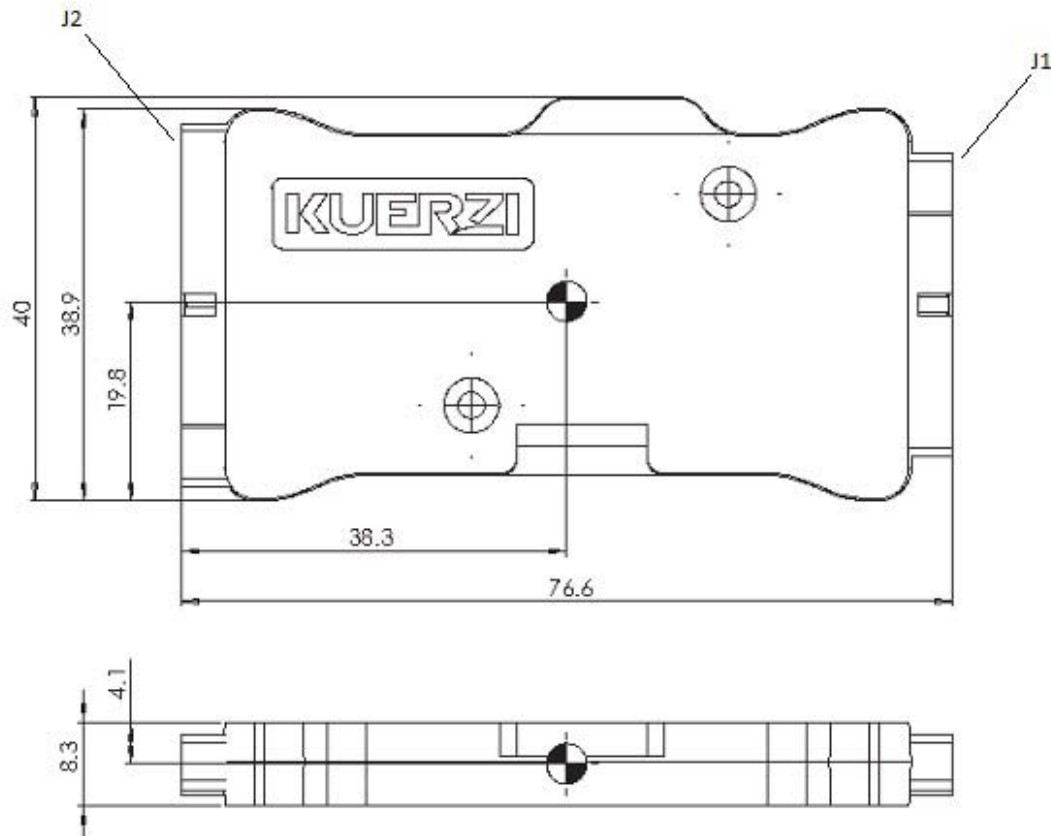
Configuration / Ordering Data

Part Number	Type	Description
1619171-1-43	PCLC I/O BASIC	The Pico Close Loop Controller (PCLC) family components are flexible configurable signal processing devices working as a standalone or in clusters based on a controller area network CAN-Aerospace. In addition the devices have multiple inputs and outputs of different types and styles. The devices will be delivered containing a boot loader software. With a dedicated interface the user is able to upload different applications (APPs) to each device and configure it to their specific needs.

Additional Parts for installation:

Qty	Part Number	Description
1	M80-4D12005FC	DATAMATE J-TEK, SOCKET, 20POL, PLUG CRIMP, 101LOK
1	M80-4D12642FC	DATAMATE J-TEK, SOCKET, 26POL, PLUG CRIMP, 101LOK
46	M80-0110005	CONTACT, SOCKET, AWG22, CRIMP