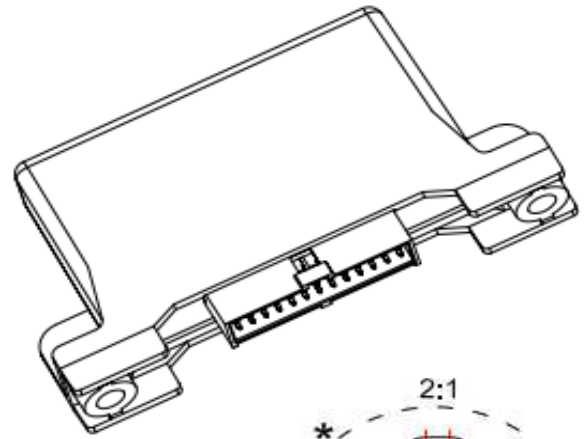
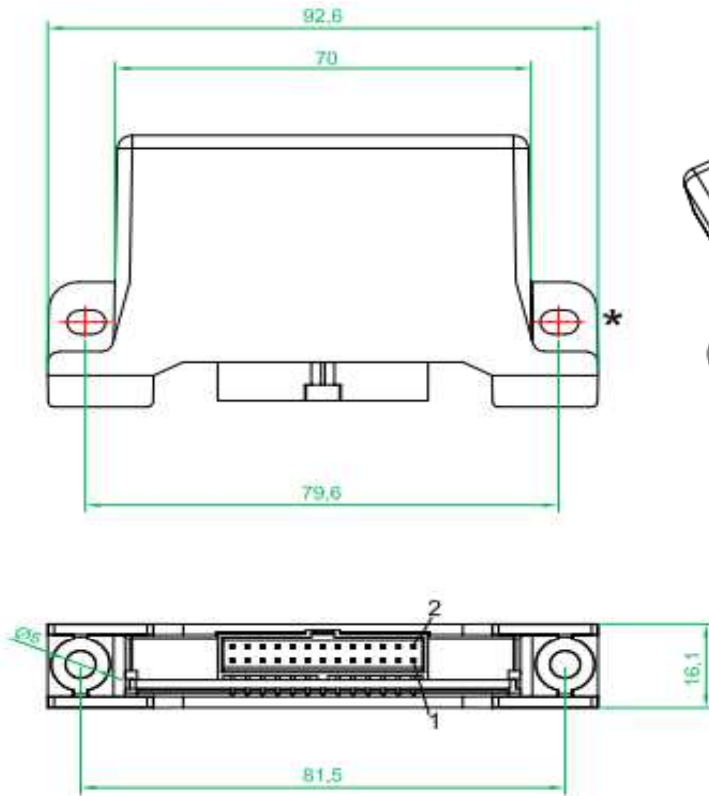


Created	Checked	Approved by	File name	Date
Luzzi R.	Porzio M.	Cardani S.	LYLK.SP01	29/08/2014
Code ref.	Description		Rev.	Rev. addax
46.50.6100XX.XX	LYLK Product specification		0	00
C.O.B.O. S.p.A. – Divisione 3B6			Web: www.3b6.it – 3b6@3b6.it	
Via Sivo, 74 – 28053 Castelletto Ticino (NO) Italy Ph. +39 0331 92861 – Fax +39 0331 972158				

▶ LIBERTY LINK - LYLK ◀

- Manage 18 outputs ON/OFF signals
- Verify key insertion

- Manage 2 inputs signals



Technical Data

Microprocessor

RAM memory

E2PROM memory

CAN-BUS line

Main power supply

Supply current

Idle Current Consumption

Case

Connector

Dimensions and weight

Test standard and regulations

Storage temp. range

Operative temp. range

MTTF

Category

Performance level

Control System

1x Freescale 8bit, 40MHz

4kB

2kB

Interfaces

CAN-bus, 2.0B high speed, (11 or 29 bit identifier), ISO 11898-2 compliant, speed up to 1Mbit/s, CAN-OPEN compatible

Electrical characteristics

+8V ÷ +34V Vdc full operational (suitable for machine battery direct connection)

2.7A @ $T_{max} = +80^\circ\text{C}$, full load

45mA

Mechanical characteristics

PA66 GF30

MOLEX 90130-3126

92.6 x 45 x 16.1 mm - 100g

Environmental characteristics

from -40°C to $+85^\circ\text{C}$ (from -40°F to $+185^\circ\text{F}$)

from -40°C to $+80^\circ\text{C}$ (from -40°F to $+176^\circ\text{F}$)

Standard ISO 13849

265 years

1

up to C

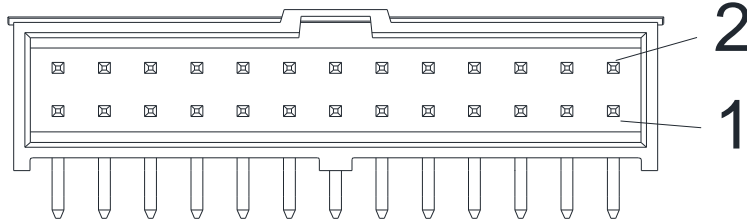
Slave protocol

Software programming

Connector pinout

Slave protocol is installed by default on Liberty Link, however it is freely programmable in C or with VT3 (IEC61131).

Frontal View



Connector

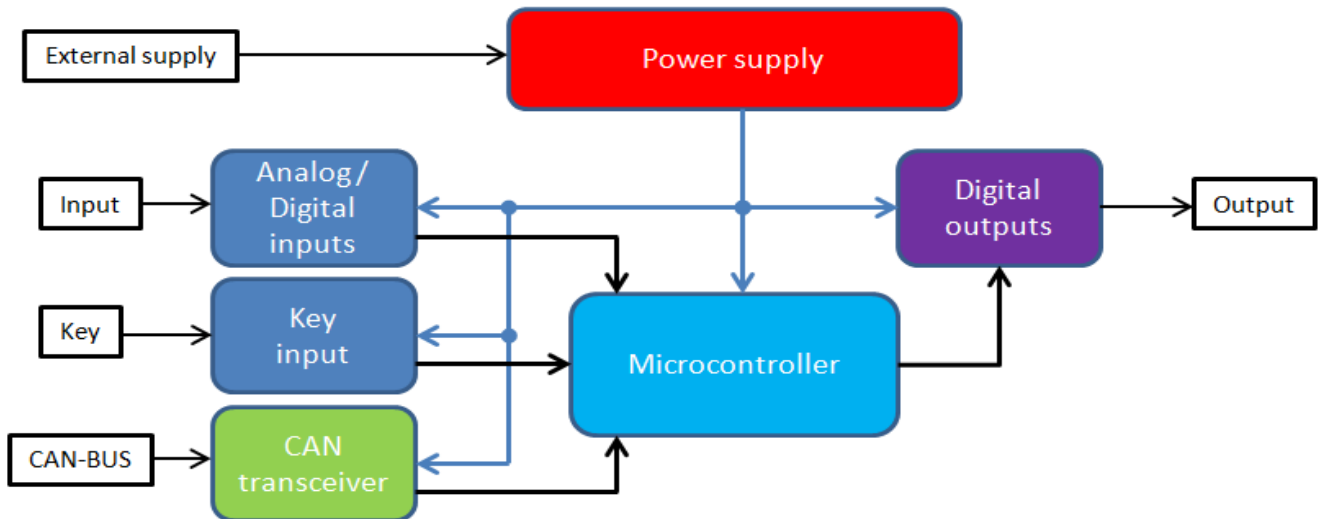
PIN	Name	Description	Configurations - Notes	Type
1	+VB	+ Power	Power supply 8-34V	A
2	KEY	Key input	Key input	B
3	-VB	- Power	GND Supply	C
4	CAN_H	CAN H	CAN-BUS - High line	D
5	CAN_L	CAN L	CAN-BUS - Low line	D
6	+VB	+ Power	Power supply 8-34V	A
7	OUT_05	Output	ON/OFF high-side output	E
8	OUT_06	Output	ON/OFF high-side output	E
9	OUT_03	Output	ON/OFF high-side output	E
10	OUT_04	Output	ON/OFF high-side output	E
11	OUT_01	Output	ON/OFF high-side output	E
12	OUT_02	Output	ON/OFF high-side output	E
13	OUT_09	Output	ON/OFF high-side output	E
14	OUT_10	Output	ON/OFF high-side output	E
15	OUT_11	Output	ON/OFF high-side output	E
16	OUT_12	Output	ON/OFF high-side output	E
17	OUT_13	Output	ON/OFF high-side output	E
18	OUT_14	Output	ON/OFF high-side output	E
19	OUT_07	Output	ON/OFF high-side output	E
20	OUT_08	Output	ON/OFF high-side output	E
21	OUT_15	Output	ON/OFF high-side output	E
22	OUT_16	Output	ON/OFF high-side output	E
23	OUT_17	Output	ON/OFF high-side output	E
24	OUT_18	Output	ON/OFF high-side output	E
25	IN_00	Input	High active ON/OFF input, high active RPM input or 0-5V analogue input	F
26	IN_01	Input	High active ON/OFF input, high active RPM input or 0-5V analogue input	F

General specifications

	Value	Notes
Absolute maximum ratings		
Power supply voltage range	+6V ÷ +40V	
Logic power supply current	50mA	
Total power outputs current	2.7A	
Single output current	350mA	
Operating conditions		
Power supply voltage range	+8V ÷ +34V	
Minimum logic power supply current	45mA	Supply no loads
Total power outputs current	2.7A	
Single output current	200mA	

	Value	Notes
Power supply pins		
+VB (Pin type A)		
Max. pin current	3A	
Key (Pin type B)		
Power supply voltage range	+8V ÷ +15V	
-VB (Pin type C)		
Max. pin current	3A	
BUS interface pins		
CAN (Pin type D)		
Physical layer	//	ISO11898 Standard Hi-Speed CAN
Input pin protection	±36V	
ESD Input pin protection	±6kV	Human body model (100pF via 1,5kΩ)
Output pins		
Output (Pin type E)		
Operating voltage range	0V ÷ +VB	
Max. output current	350mA	Single output
Nominal output current	200mA	Single output
Input pins		
Input (Pin type F)		
Analog 5V		
Operating voltage range	0V ÷ +5.5V	
T _d	27ms	τ RC filter
Z _i	242kΩ	With f=0Hz
Resolution	1.35mV	ADC microcontroller 12bit
Input (Pin type F)		
Digital high-side		
Operating range	0V ÷ +VB	
Threshold V _{IH}	3.2V	
Hysteresis	0.9V	
T _d	13ms	τ RC filter
Z _i	242kΩ	With f=0Hz
Input (Pin type F)		
High-side RPM		
Operating frequency range	1Hz ÷ 10kHz	
Threshold rising V _{IH}	3.75V	
Threshold falling V _{IL}	1.25V	
Z _i	242kΩ	With f=0Hz
Resolution	2.45Hz	

Block circuit diagram



Installation note

It is strongly recommended to install the controller with connector downward, far from heating sources, and locations with strong vibrations.

Never machine or drill controller fixing holes in order to use other fixing bolts.

For attachment, use steel screws with supported diameter, to ensure tightness is necessary to use one of the following solutions depending of the application support:

- toothed washer*
- selflocking nut*
- screw locker*

This device must be connected directly to the vehicle's battery; in case of accidental battery disconnection during normal operation, the device become unpowered.