
IntegraBus
PCR-ACH-xxx
Hybrid USB type-A and USB type-C Charger

Datasheet
Rev. 02
01.oct.2021.

Tartalom

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1. History

rev	History	Date	Author
R02	Updated electrical specification: 3.1 Supply voltage 3.7 USB-C output current	01.oct.2021.	epapp
R01	First release	03.dec.2020.	epapp

2. Product Overview

The PCR-ACH-xxx hybrid USB type-A and USB type-C charger module intended for use in buses/coaches. It allows two connected and charged device in same time.

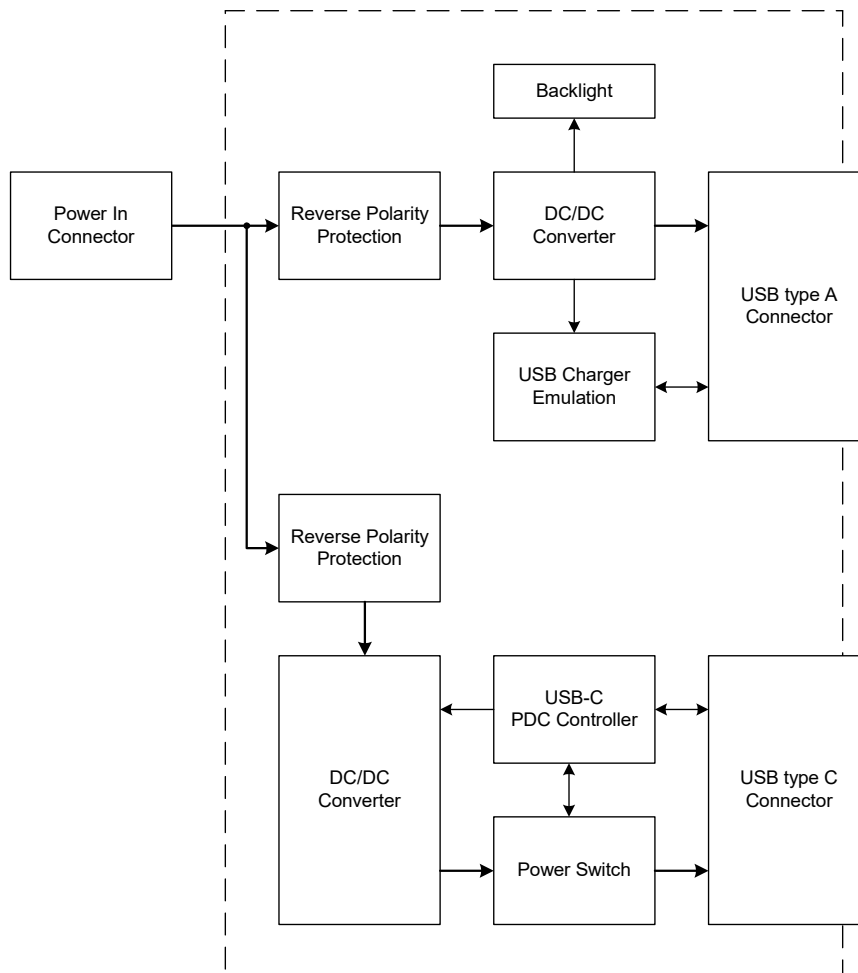
The charger has a USB type-A port and a high-power USB type-C port. These ports can be used with most of the popular mobile devices.

The USB type-C port is designed especially for charging high power mobile devices like new generation notebooks.

3. Electrical Specification

		Min.	Norm.	Max	
1.	Supply Voltage	22	24	40	V
2.	Operating Temperature	-40		+85	°C
USB type-A Port					
3.	Output Voltage	4.75	5	5.25	V
4.	Output Current (@ 5V output voltage)			2.5	A
5.	Efficiency of USB-A port	87			%
USB type-C Port					
6.	Output Voltage	4.75 8.50 11.4 14.2 18.8	5 9 12 15 20	5.25 9.50 12.6 15.8 21.2	V
7.	Output Current at 5V output voltage at 9V output voltage at 12V output voltage at 15V output voltage at 20V output voltage			3.0 3.0 2.5 2.0 1.5	A
8.	Efficiency of USB-C port	92			%
9.	Backlight		Blue		

4. System Blockdiagram



5. Functional Description

Features:

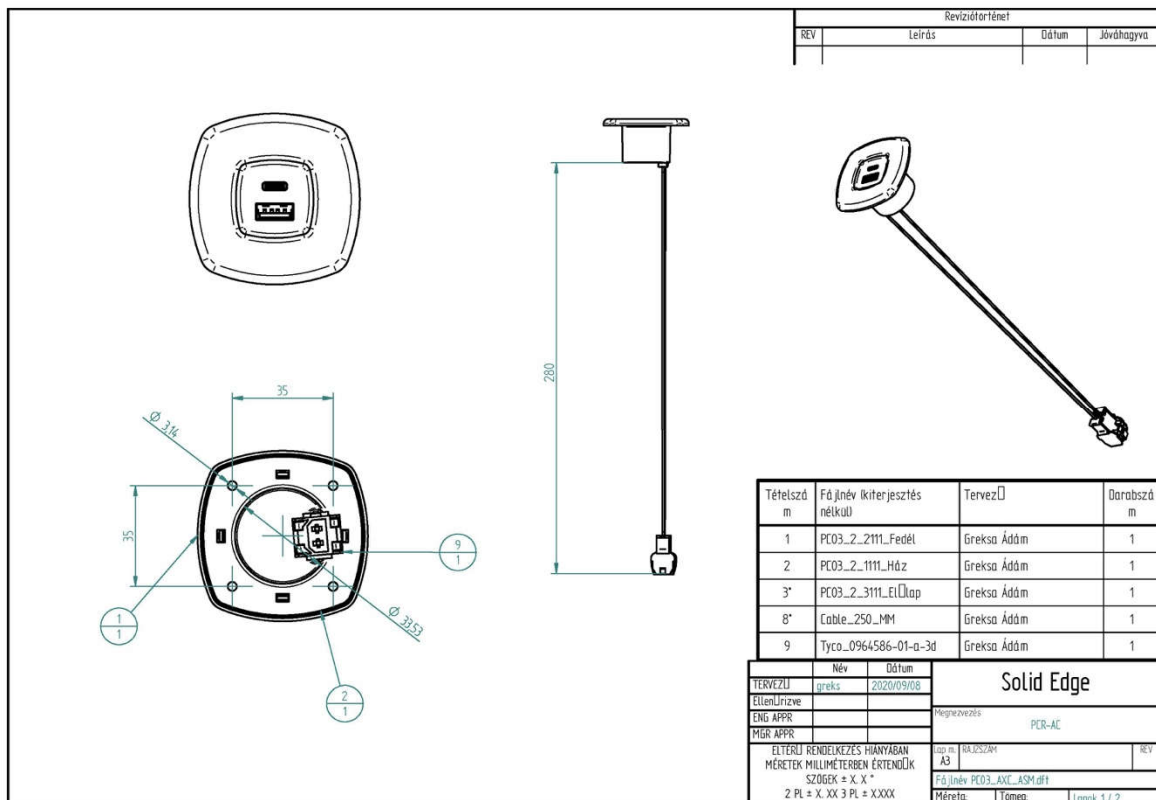
- Two mobile devices can be charged simultaneously.
- Standard USB type-A connector outputs,
- USB type-A output can supply 2.5A current maximum at 5V output voltage,
- Easy to install
- Supported mobile devices:
 - o iPod, iPhone, iPad,
 - o Android phones and tabs
- Supported Charge Profiles On USB type-A connector:
 - o Divider 1 DCP, (required to apply 2 V and 2.7 V on D+ Line on the D+ and D- Lines)

- Divider 2 DCP, required to apply 2.7 V and 2 V on the D+ and D- Lines
- Divider 3 DCP, required to apply 2.7 V and 2.7 V on the D+ and D- Lines
- BC1.2 DCP, required to short the D+ Line to the D- Line
- Chinese Telecom Standard YD/T 1591-2009 Shorted Mode, required to short the + Line to the D- Line
- 1.2 V on both D+ and D- Lines
- Automotive environment compatible design
- Overcurrent protection, overvoltage protection, thermal protection

6. Certification

E-24 10R-041054

7. Mechanical Specification



Revizor történet			
REV	Leírás	Dátum	Javahagyva

Tételszám	Fő név (kiterjesztés nélkül)	Tervező	Darabszám
1	PC03_2_2111_Fedél	Greksa Ádám	1
2	PC03_2_1111_Ház	Greksa Ádám	1
3*	PC03_2_3111_Előlap	Greksa Ádám	1
8*	Cable_250_MM	Greksa Ádám	1
9	Tyco_0964586-01-a-3d	Greksa Ádám	1

Név	Dátum	Solid Edge	
TERVEZŐ	greks	2020/09/08	
Ellenőrzve			
ENG APPR		Megnevezés	PER-AC
MGR APPR			
ELTÉRŐ RENDELKEZÉS HIÁNYÁBAN MÉRETEK MILLIMÉTERBEN ÉRTENDŐK SZÖGÉR = X X °		Lap m	HA_02/24
2 PL = X XX 3 PL = XXXX		A3	REV
		Fő név	PC03_AXC_ASM.dfl
		Méret:	Tomeg Lapok 1 / 2

8. Installation

The installation requires a round hole of 35 mm (1.38") diameter.

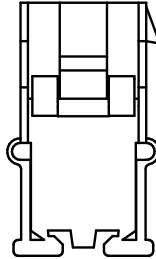
9. Ordering Codes

		PCR - ACH -
PCR	Procharge Recessed Mount charger	←
ACH	Double USB type-A charger High power	←
Connector options:		
T	Tyco connector	←
M	Molex Microfit 3.0(TM) connector	←
F	FF250 connector	←
X	No connector	←
Wire length options:		
03	300mm	←
08	800mm	←
10	1000mm	←
16	1600mm	←
Cable protection options:		
S	Shrinking tube	←
B	Bandage Tape	←
N	Plastic protector tube	←
X	No additional cable protection	←

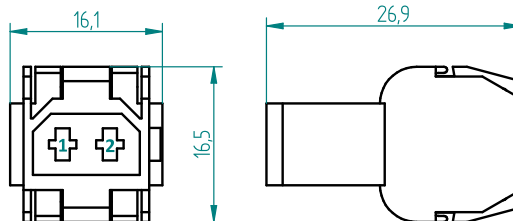
10.Connector Pinouts

Connector option “ - T”:

Housing: Tyco 964586
 Terminal: Tyco 964273-2

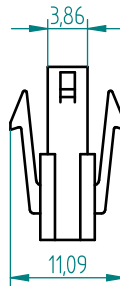


Pin	Wire	Function
1	RED	+12 – 24V Input
2	BLACK	GND Input

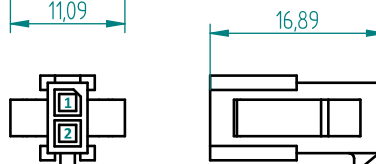


Connector option “ - M”:

Housing: Molex 430200208
 Terminal: Molex 43031

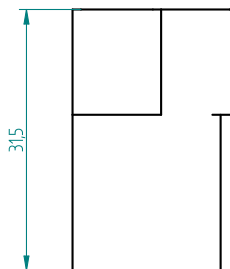


Pin	Wire	Function
1	RED	+12 – 24V Input
2	BLACK	GND Input



Connector option “ - F”:

Housing: Tyco 180908
 Terminal: Tyco 293041



Pin	Wire	Function
1	RED	+12 – 24V Input
2	BLACK	GND Input

