

Printer Communication Controller with measured value memory

PCC 400-F



Installation Guide

only valid in combination with the user manual

PCC 400-Batching Master
or PCC 400 Pipeline Master

Version 1.1

IBS BatchControl GmbH
Im Sträßchen 2-4
53925 Kall
Germany



Tel.: +49 2441 9199801
Fax.: +49 2441 9199871
www.ibs-batchcontrol.com

Safety information

The personnel for installation, commissioning, diagnostics and maintenance must fulfil the following requirements:

- Trained, qualified specialists must have a relevant qualification for this specific function and task
- Are authorised by the plant owner/operator
- Are familiar with federal/national regulations
- Before beginning work, the specialist staff must have read and understood the instructions in the User Manual and supplementary documentation as well as in the certificates (depending on the application)
- Following instructions and basic conditions

The operating personnel must fulfil the following requirements:

- Being instructed and authorised according to the requirements of the task by the facility's owner-operator
- Following the instructions in these Installing Instructions

Validity of Installation Instructions

- These installation guide apply to all PCC 400-F only in conjunction with the corresponding user manual
PCC 400 Batching Master or
PCC 400 Pipeline Master.
- The software is described in a separate manual for Batching Master or Pipeline Master. Batching Master and Pipeline Master can not be operated simultaneously at one PCC 400.
- Your IBS agent will be able to give you information about any improvements or modifications.
- The manufacturer is not responsible for damage caused by incorrect or unauthorised use. Conversions and changes to the instrument must not be made, otherwise the certification and guarantee become invalid.

The PCC 400 should be operated on an uninterruptible power supply.

Do not turn off the PCC 400 by switching off the power supply.

Please press the power button on the PCC 400 or turn off via the software.



Attention!

After briefly pressing the power button all running programs at the PCC 400 get closed within about 60 seconds and shuts off after further 15 seconds. Don't press the button about more than 1 second, because the PCC 400 then shuts off without previously shut down the operating system. This means that important data and programs could be destroyed on the hard disk.

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1 System description

The PCC 400 is a PC whose software starts automatically after power on. This is adapted to the batch controller Batching Master and is used to print and store metering data.

Other housings (e. g. mini-pc, standard housing, 19"...) and configurations are possible. This manual describes the -F variant.

Mixed operation of Batching Master and Pipeline Master at the same PCC 400 is not possible. For the exact software description please refer to the user manual PCC 400-x.

The measured values or metering data are stored internally and can be printed out, simultaneously saved in a CSV file, as a PDF file or optionally in an external database.

The PCC 400 operates as a 'Modbus RTU Master'. The Batching Master/ Pipeline Master are connected to the RS-485 interface of the PCC 400. Intrinsically safe Batching Master/Pipeline Master are additionally connected via the IPC 3x0 i for safe isolation.

The connection of mouse, keyboard and monitor are recommended.

The power is supplied by a VDC power supply.



Attention!

The PCC 400 should be operated on an uninterruptible power supply. Do not switch off the PCC 400 by switching off the power supply, but by briefly pressing the off button on the PCC 400 or via the software.

1.1 Password of the system administrator

The PCC 400 system administrator password is "IBSBatchControl" ex works. Please change this password. Open the terminal mode by pressing CTRL, Alt and T simultaneously and type

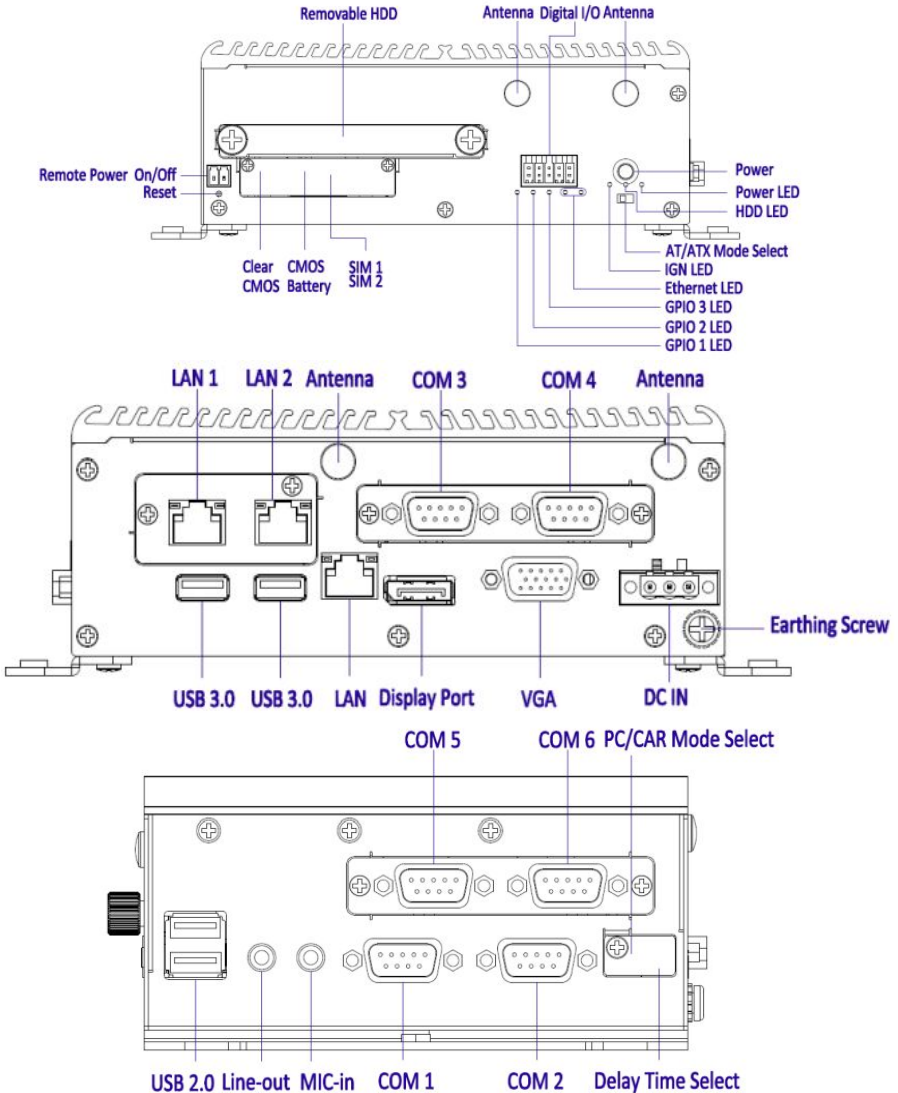
passwd [username].

The username is "pcc" ex works and displayed on the right top. Therefore you enter "passwd pcc" in the terminal. Confirm this with the RETURN key. Please take the further petitions from the terminal window.

2 Assembly and installation

This chapter must be observed during assembly and installation.

2.1 Exterior view



2.2 Protection level IP20

The PCC 400 corresponds to the IP20 protection rating.

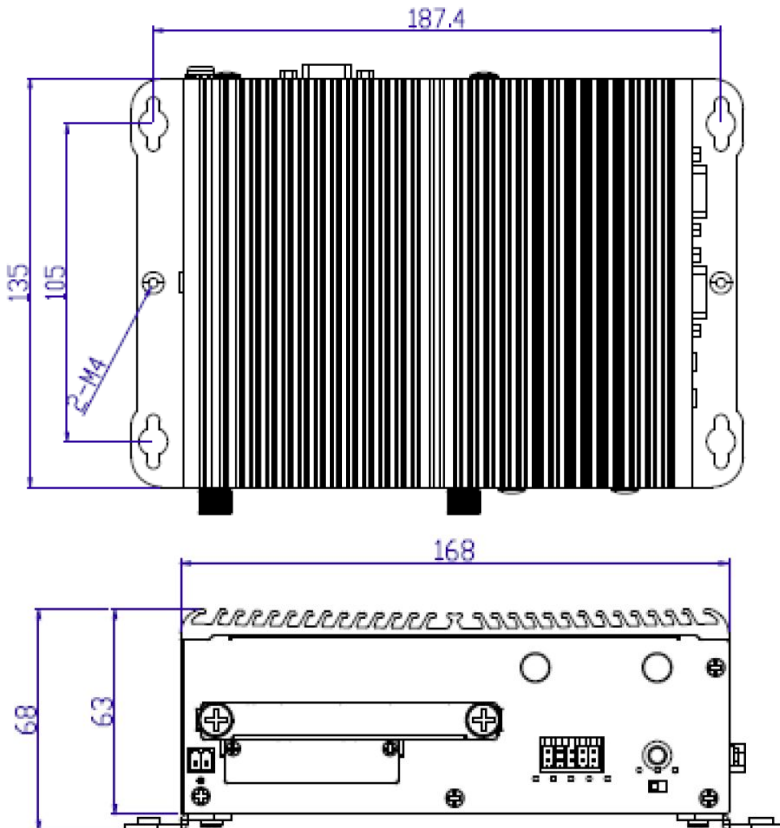
2.3 Temperature range and relative humidity

The PCC 400 may be operated in the range of -40° to $+70^{\circ}\text{C}$ with SSD. The relative humidity can be up to 95% at 70°C .

2.4 Housing dimensions

The PCC 400 is delivered in an enclosure (IP20) with the dimensions of 168 mm x 135 mm x 47 mm.

Please refer to the drawings for the exact dimensions and holes. The PCC is build for wall and DIN-rail-mounting.

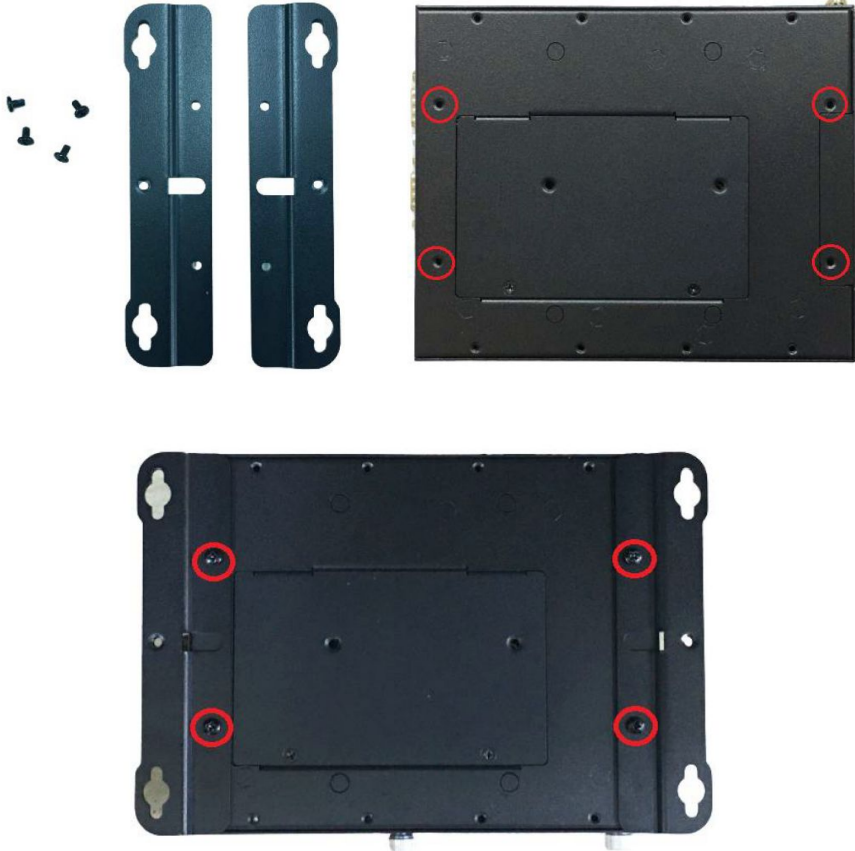


Assembly and installation

The PCC can also be mounted on DIN rails with the available accessories. To do so, mount the bracket with the two screws at the marked holes.



The wall bracket is attached to the marked holes.

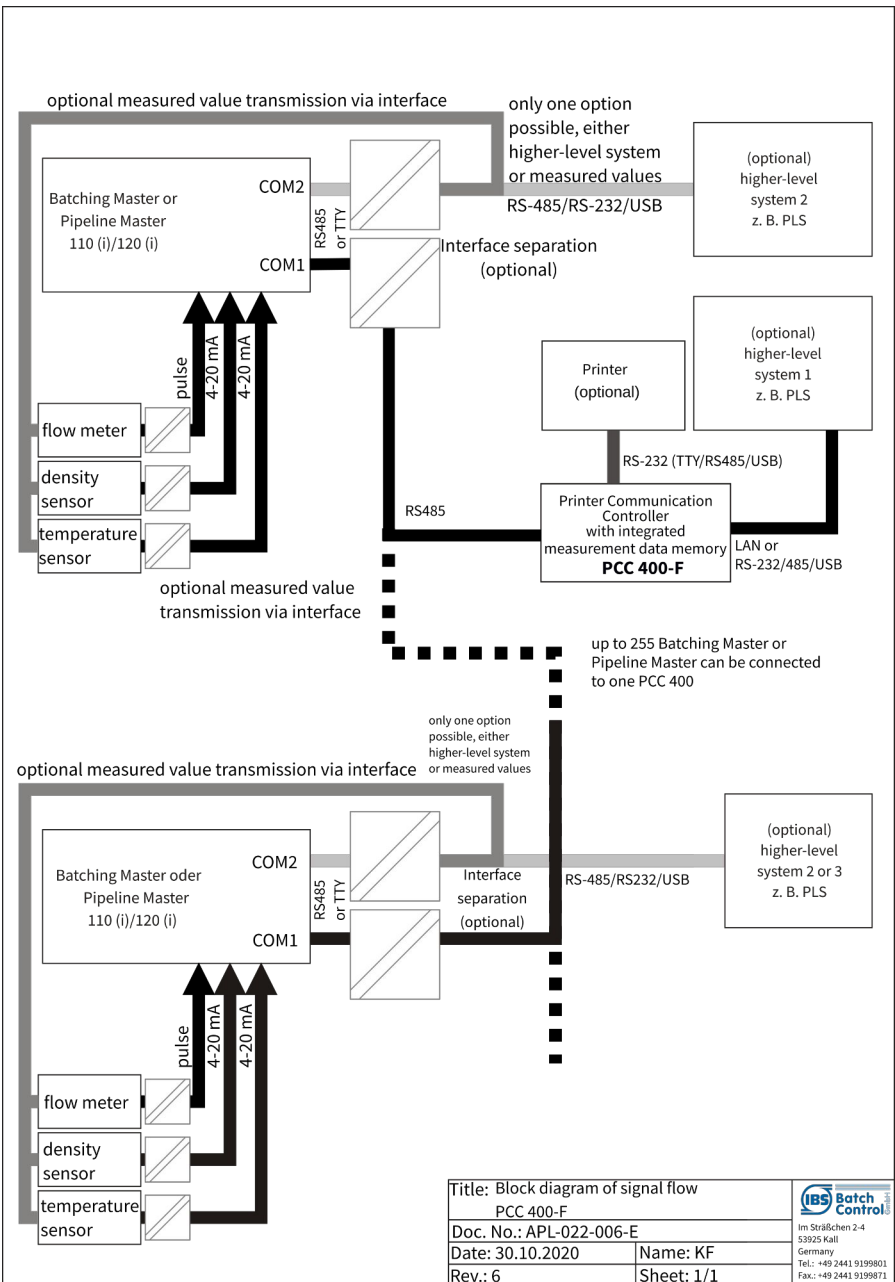


2.5 Installation instructions

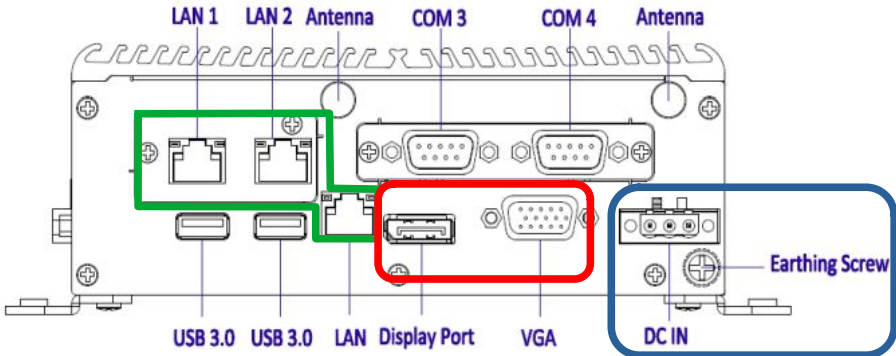
Use only shielded cables. The protection shield has to be connected extensive with a shield clamping bracket. The connector housings have to be firmly screwed to the PCC 400.

2.6 Block diagram of custody transfer measuring systems

Assembly and installation



2.7 Monitor connection



Connect the monitor with a minimum resolution of 1920 x 1080 pixel (minimum 1280 x 1024 pixel) to the DVI connector. If there is only a VGA connector at the monitor, please use an adapter.

2.8 Keyboard and Mouse connection

A standard keyboard and a mouse are connected to the USB ports.

2.9 LAN connection

LAN0 from the three available LAN connections is set to the fixed address 192.178.1.77. LAN0 could be used for a VNC-Viewer on an external PC. If you want to connect a laptop to the PCC, set the LAN to a fixed address.

LAN1 and LAN2 gets the IP address from a DHCP server.

Other settings can be done in the operating system.

2.10 Spannungsanschluss

The PCC is operated with a voltage of 9 to 48VDC on terminals 1 and 3. Make sure that 48V is not exceeded, otherwise the system will be damaged.



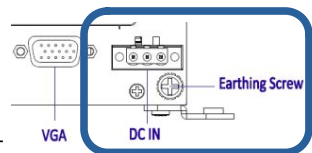
Pin	Definition
1	+9~48VIN
2	Power Ignition
3	GND

The typical power consumption is 12W (0.5A@24V).

The maximum power supply is 20W (1A@24V).

Please note that higher currents may flow at the moment of switch-on.

Additionally connect the earth with the clamping screw.



Please ensure that the supply will not be switched off before the PCC 400 is shut down. We recommend to use the optionally available UPS.



2.11 Maintenance-free DC UPS

The optional uninterruptible power supply SITOP UPS500S is mounted on a top hat rail. It has been adjusted by us to the values required for the PCC 400. Since the capacitors of the uninterruptible power supply must be safely charged, it takes a few seconds before the PCC is automatically switched on. The PCC software detects the status of the supply voltage via the USB interface. If this fails, the PCC 400 is immediately shut down safely. The UPS500S stores enough power to safely shut down the PCC.

Before switching on the uninterruptible power supply, make sure that the USB port is plugged into any of the PCC's USB slots. A UPS500S plugged in later is not recognized by the PCC.

Terminal		Description
X1.1	Power Supply +	24V DC (22-29V)
X1.2	Power Supply -	0V
X1.3	Supply Output +	Power Supply PCC V+
X1.5		Internally connected to terminal X1.3
X1.4	Supply Output -	VPower Supply PCC V-
X1.6		Internally connected to terminal X1.4
X3	USB cable to any USB port on the PCC	

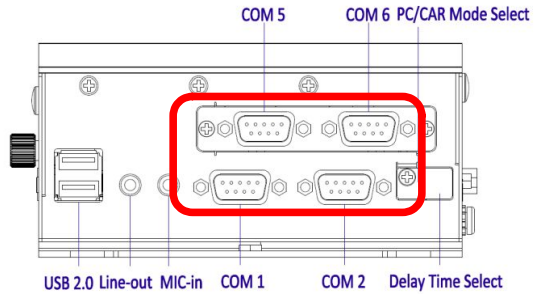
2.12 Dongle for custody transfer seal

After configuring, the dongle is plugged into the interface COM2. When the dongle is plugged the custody transfer relevant settings are fixed and can not be changed. The calibration officials seals the dongle by a seal against pull out.

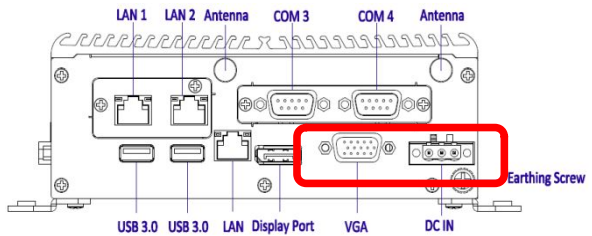


2.13 Serial Interfaces (COM)

There are six serial interfaces (COM1 to COM6). The printer (default setting COM1) and the Batching Master or Pipeline Master (default setting COM3) are connected here.

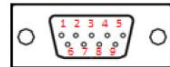


Optionally, the printer and Batching Master (Pipeline Master) can also be connected via USB or LAN. The dongle is plugged into the COM 2 interface.



The connectors are assigned as follows:

Pin	RS232 Definition	RS422 / 485 Full Duplex Definition	RS485 Half Duplex Definition
1	DCD	TX-	DATA-
2	RxD	TX+	DATA+
3	TxD	RX+	
4	DTR	RX-	
5	GND		
6	DSR		
7	RTS		
8	CTS		
9	RI		



For the connection to the Batching/Pipeline Master we supply an adapter from Sub-D9 to terminal.

2.14 Connection for custody transfer approved printers

The printer is connected to COM1, a USB interface or via LAN (TCP/IP). Use a cable with a maximum length of 5 m for RS-232 or USB. If the printer is equipped with a TTY or RS-422 interface, the cable length may be 1000 m. A converter from RS-232 to TTY or RS-422 is then required.

A 5m RS-232 printer cable is included.

The printer connected to the COM1 requires the following settings:

Serial Data:	8 bit
Protocol:	Ready/Busy
Parity check:	YES
Parity selection:	EVEN
DSR Signal:	VALID
DTR Signal:	Ready On Power Up
Baud rate:	9600 BPS (Grundeinstellung)

2.15 Connection to Master/Pipeline Master

The Batching Master/Pipeline Master are connected to COM3 (optionally COM4 or to a USB interface). The assignment is described in section 2.13.

If the intrinsically safe devices Batching Master/Pipeline Master 110i or 210i are used, separation cards of the type IPC 3x0 i are additionally required. This is not included in the scope of delivery of the PCC 400.

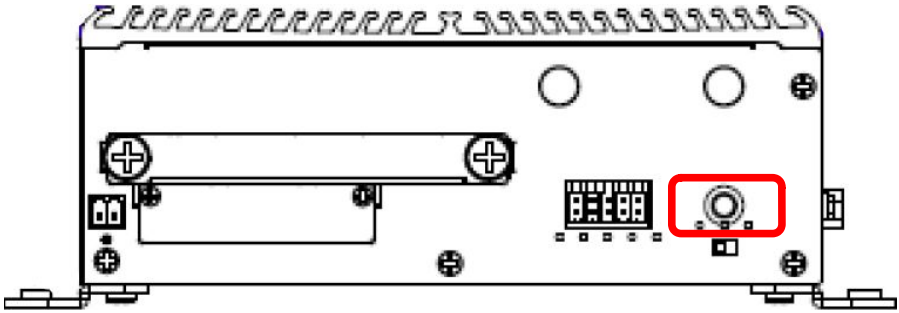
2.16 Connection of a supervisory system

A supervisory system can be connected directly to the second interface of the Batching Master/Pipeline Master. For some applications (e. g. database connection), the LAN interface of the PCC 400 may be used.

The supervisory system can also be connected to a free serial port (default COM4). Then the data are forwarded from the PCC 400 to the Batching Master by the Modbus Slave Function.

Connection a supervisory system is an option and must be coordinated with the sales representative.

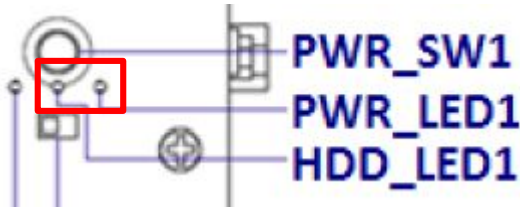
2.17 ON/OFF-Tact-Switch



Press the key to switch on the PCC 400. Do not switch on the PCC until all connections are plugged in and screwed tight.

The PCC 400 can be switched off by pressing for a **short** time.

Be sure to switch off the PCC 400 with the ON/OFF button or via the user interface and wait until the HDD and PWR LEDs are off before disconnecting it from the power supply. Disconnecting the power supply without first switching it off can destroy the system.



Pressing the ON/OFF key for more than 1 s will immediately switch off the PCC. The system will not shut down properly. It may be destroyed.



2.18 Power indicator

The PWR LED lights up as long as the PCC is on. The HDD LED indicates that the HDD or SSD (hard disk) is being accessed.

3 Certificate of Compliance



Ref. No. VXD0833A/2020
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VERIFICATION OF COMPLIANCE

Issue Date: September 14, 2020
Applicant: Aversix
Address: 4F-7, No.351, Sec. 2, Zhongshan Rd., Zhonghe Dist.,
New Taipei City 235, Taiwan, R.O.C.
Manufacturer: Aversix
Address: 4F-7, No.351, Sec. 2, Zhongshan Rd., Zhonghe Dist.,
New Taipei City 235, Taiwan, R.O.C.
Contact Information: Web:
TEL#: 02-8226-7751
E-mail#: jim.chang@aversix.com
Product: IPC
Brand Name/Trade Mark: Aversix
Model/Type: AVB-21xxx-xxxxxxx (x can be any alphanumeric, dash, or blank
for marketing purposes only.)
AVM-21xxx-xxxxxxx; AVP-21xxx-xxxxxxx (x can be any
alphanumeric, dash, or blank for marketing purposes only.)
Added Model(s):
Applicable Standards: EN 55032: 2015 / AC: 2016
CISPR 32: 2015 (Ed 2.0) / C1: 2016
EN 61000-3-2: 2014
EN 61000-3-3: 2013
EN 55035: 2017
IEC 61000-4-2: 2008; IEC 61000-4-3: 2006 + A1: 2007 + A2: 2010;
IEC 61000-4-4: 2012; IEC 61000-4-5: 2014 + A1: 2017;
IEC 61000-4-6: 2013 + COR1: 2015; IEC 61000-4-8: 2009;
IEC 61000-4-11: 2004 + A1: 2017
Test Laboratory: Compliance Certification Services Inc.
Xindian Lab
No. 163-1, Jhongsheng Rd., Xindian Dist., New Taipei City, Taiwan
Test Report No. : T200825D02-E, dated on September 14, 2020
Conclusion: Based upon a review of the Test Report(s), the tested sample of the product
mentioned above is deemed to comply with the requirements of the above
standards

Note: This verification is only valid for the product and configuration described and in conjunction
with the test report as detailed above.

Authorised Signatory:

Compliance Certification Services Inc.
Sam Hu
Assistant Manager

FM-023A-R01

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Compliance Certification Services Inc.
程智科技股份有限公司

No.163-1, Jhongsheng Rd., Xindian Dist., New Taipei City, Taiwan / 新北市新店區中生路 163-1 號
t: (886-2) 2217-0894 f: (886-2) 2217-1029 www.sgs.com.tw www.ccsr.com

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