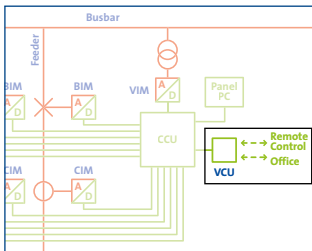


Versatile Communication Unit (VCU106)

Gateway to connect SASensor to your intelligence



Connecting an external GPS antenna to the VCU results in absolute time accuracy

The Versatile Communication Unit (VCU) connects the SASensor® Central Control Units (CCUs) with the remote control centre and back office, allowing continuous access to all digital information from the substation.

The Versatile Communication Unit (VCU) is a serial media converter that connects the substation with the remote control centre for remote operation and maintenance and back office for continuous access to all digital information from the substation.

The configuration of the VCU includes RS232 ports for connection to e.g. remote control centres (RCCs), UTP ports for connection to Wide Area Networks (WAN) and ST fiber optic ports to enable 100Base-FX Ethernet communication

with SASensor processing units.

Optionally, the VCU can also connect to an external GPS (Global Positioning System) antenna for absolute time accuracy.

VCU106

The VCU106 is equipped with one RS-232 communication port, one UTP port and 6 x duplex fiber optic communication ports. The VCU is designed to be maintenance free.

Versatile Communication Unit (VCU106)

SASensor®

Public infrastructure – secure connections



The VCU brings the local world to remote

Robust and maintenance free

The VCU106 is designed for technical and functional longevity. The power supply and communication ports are fully protected against erroneous situations.

Fiber optic communication

Communication from the VCU to the CCUs is done via fiberoptic cables using 100Base-FX Ethernet. Signals transmitted via fiber optic cables are unaffected by interference. Additionally the fibers guarantee electrical isolation and transmission over long distances.

Enables absolute time accuracy with GPS antenna

A GPS (Global Positioning System) antenna can be connected to the VCU for absolute time accuracy. This can be important for execution of various functions in the Control Units or protection relays.

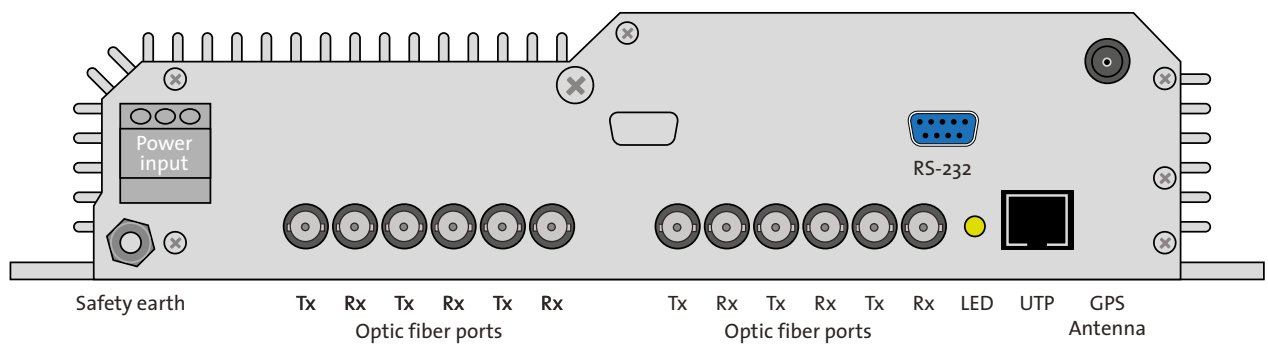


Versatile Communication Unit (VCU106)

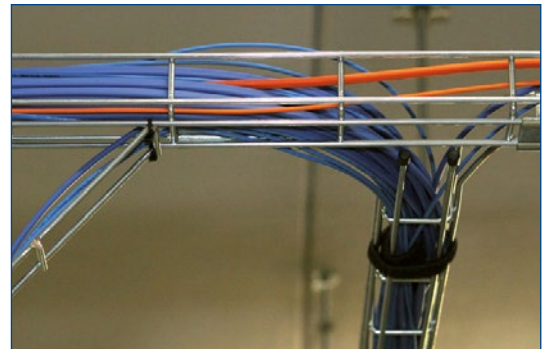
The Interface with the outside world

Serial media convertor

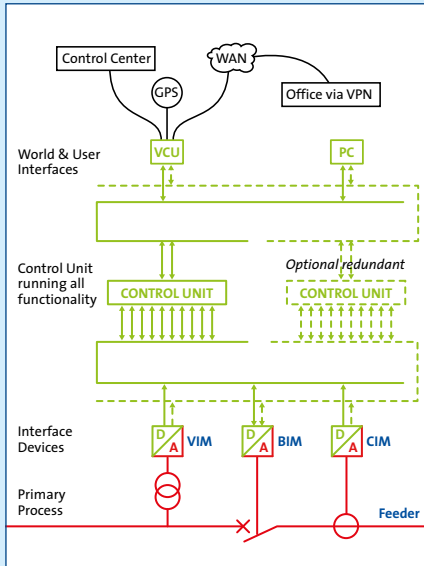
VCU is the serial media convertor for the copper connections to the “world”, suitable for all kinds of data communication via e.g. modem, wireless/3G, PLCC.



The VCU box can be supplied in a wall mounted sheet metal cabinet. All cabling, such as power supply fiber optic and datacommunication are fed into the cabinet through the base.



SASensor - Versatile Communication Unit (VCU106)



In a redundant system one CCU can be turned off for repair or replacement without any degradation of functionality or shutdown of the substation.



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www.locamation.com

Cabinet	
Type wall cabinet	RITTAL CM5110.500
Dimensions cabinet (H x W x D)	800 x 600 x 400 mm
Protection	IP55

VCU box	
Dimensions (H x W x D)	200 x 324.7 x 67.4 mm
Weight	2.5 kg

Power supply input	
DC input range	38 V ... 138 V
Tripping value MCB	1 A @ 110 Vdc
Max. power consumption	14 W
Hold-up time	> 50 ms
DC input protection	Reverse input polarity

Connections	
Fiber optic ports	100Base-FX Ethernet
Interface ports	RS-232, UTP

UTP port	
Interface	100Base-TX Ethernet
Connector type	RJ-45

RS-232 port	
Interface	RS-232
Connector type	DB9-male
Used data signals	RXD, TXD, GROUND
Max. speed	115 200 baud

Electromagnetic compatibility			
Test	Standard	Enclosure	PSU
Electrostatic discharge	IEC 61000-4-2	6 kV contact 8 kV air	
RF immunity radiated	IEC 61000-4-3	10 V/m, 80 - 1000 MHz	
Fast transient	IEC 61000-4-4	4 kV	4 kV
Surge 1.2/50 μ s	IEC 61000-4-5		2 kV LE, 1 kV LL
RF immunity conducted	IEC 61000-4-6	10 V, 10 V = 140 dB (μ V) @ 0.15 - 80 MHz	10 V, 10 V = 140 dB (μ V) @ 0.15 - 80 MHz
PF magnetic field	IEC 61000-4-8	100 A/m cont 1000 A/m for 3 s	
Voltage Dips	IEC 61000-4-29		0%, 40%, 70%
Voltage Interruptions	IEC 61000-4-29		100 %
Voltage Variations	IEC 61000-4-11		+35 ... -20%
100 kHz, 1 MHz oscillatory wave	IEC 61000-4-18		2.5 kV CM 1.0 kV DM
Ripple on DC Power Supply	IEC 61000-4-17		12% Un

Electromagnetic emission			
Test	Standard	Enclosure	PSU, communication
Radiated	IEC 61000-6-4	CISPR22, Class A @ 30 ... 1000 MHz	
Conducted	IEC 61000-6-4		CISPR22, Class A @ 0.15 ... 30 MHz

Climatic conditions			
Test	Standard	Enclosure	PSU
Operating temperature	IEC 60068-2-1 IEC 60068-2-2	-10 ... +55 °C, 72 hours	
Storage temperature	IEC 60068-2-1 IEC 60068-2-2	-25 ... +70 °C, 72 hours	
Damp Heat Static	IEC 60068-2-78	+40°C, 93% r.h., 10 days	

