



LCIE SUD EST
Laboratoire de Moirans
Z.I. Centr'Alp
170, Rue de Chatagnon
38430 MOIRANS - FRANCE

GENERAL INFORMATION

FCCID: O6QMETA14X

1.1. Product description



Application area

The controller VEGAMET Air 141 receives and processes the measured values from a wirelessly connected sensor and displays them on the screen. The compact design is ideal for mounting on carrier rails in switching cabinets. A graphic display and a turn/push button for quick on-site control of the measuring point are also integrated.

It enables easy implementation of pump controls, flow measurements on open channels and weirs as well as totalizers. The VEGAMET Air 141 can be used to monitor limit values and switch relays.

The simple connection of radio-based sensors over long distances enables applications where laying a cable would be too costly or impossible.

Technical data

Operating voltage	
– Nominal voltage AC	100 ... 230 V (-15 %, +10 %) 50/60 Hz
– Nominal voltage DC	24 ... 65 V (-15 %, +10 %)
Power consumption	max. 10 VA; 3 W
Sensor input	
Number of sensors	1 x wireless sensor
Measured value transmission	LoRaWAN
Relay output	
Quantity	3 x operating relay, one can be configured as fail safe relay
Contact	Floating change-over contact (SPDT)
Switching voltage	max. 250 V AC/60 V DC
Switching current	max. 1 A AC (cos phi > 0.9), 1 A DC
Breaking capacity	min. 50 mW, max. 250 VA, max. 40 W DC (with U < 40 V DC)
Current output	
Quantity	1 x output
Range	0/4 ... 20 mA, 20 ... 0/4 mA
Max. load	500 Ω
LoRaWAN	
max. effective range	up to 15 km (depending on local conditions)
External antenna	
– Magnetic base or wall mounting	IP67, cable length 3 m
– Antenna connection	RPSMA(F)
Bluetooth interface	
Bluetooth standard	Bluetooth 5.0
NFC reader	
Frequency	13.56 MHz
Effective range	typically 4 cm (1.5 in)
Indicators	
Measured value indication	
– Graphic-capable LC display, with lighting	25 x 20 mm, digital and quasianalogue display
Adjustment elements	Turn/Push button
Ambient conditions	
Ambient temperature	
– Instrument in general	-20 ... +60 °C (-4 ... +140 °F)
Electrical protective measures	
Protection rating	IP20 (IEC 60529)



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Application area

The controller VEGAMET Air 142 receives and processes the measured values from two wirelessly connected sensors and displays them on the screen. The compact design is ideal for mounting on carrier rails in switching cabinets. A graphic display and a turn/push button for quick on-site control of the measuring point are also integrated.

It enables simple implementation of pump controls, flow measurements on open channels and weirs, totalizers, difference, sum and average value calculations. With VEGAMET Air 142, limit values can be monitored and relays can be switched.

The simple connection of radio-based sensors over long distances enables applications where laying a cable would be too costly or impossible.

Technical data	
Operating voltage	
– Nominal voltage AC	100 ... 230 V (-15 %, +10 %) 50/60 Hz
– Nominal voltage DC	24 ... 65 V (-15 %, +10 %)
Power consumption	max. 13 VA; 5 W
Sensor input	
Number of sensors	2 x wireless sensor
Measured value transmission	LoRaWAN
Relay output	
Quantity	3 x operating relay, one can be configured as fail safe relay
Contact	Floating change-over contact (SPDT)
Switching voltage	max. 250 V AC/60 V DC
Switching current	max. 1 A AC (cos phi > 0.9), 1 A DC
Breaking capacity	min. 50 mW, max. 250 VA, max. 40 W DC (with U < 40 V DC)
Current output	
Quantity	2 x output
Range	0/4 ... 20 mA, 20 ... 0/4 mA
Max. load	500 Ω
LoRaWAN	
max. effective range	up to 15 km (depending on local conditions)
External antenna	
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1.2. Tested System Details

DTS:	LoraWAN
Chipset / RF Module	LR1302-SPI-US915
Frequency band:	[902-928] MHz
Spectrum Modulation:	Chirp Spread Spectrum
Number of Channel:	8
Spacing channel:	600kHz (500kHz BW)
Channel bandwidth:	500kHz
Antenna Type:	External with connector
Antenna connector:	Permanent external
Antenna requirements §15.203	The transmitter uses an external antenna with a connector which is classified as a unique connector
Transmit chains:	1
Receiver chains	1

CHANNEL PLAN – 500kHz channels uplink	
Channel	Frequency (MHz)
0 = Cmin	923.3
1	923.9
2 = Cmid	924.5
3	925.1
4	925.7
5	926.3
6	926.9
7 = Cmax	927.5

Antenna Characteristic			
Antenna reference	Gain (dBi)	Frequency Band (MHz)	Impedance(Ω)
2J Antennas : 2J7515M-915	2.3	902-928 MHZ	50



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Type:	RFID	
Chipset / RF Module	ST25R3916B-AQET	
Frequency band:	[13.553 to 13.567] MHz	
Number of Channel:	1	
Antenna Type:	Internal	
Transmit chains:	1	
Receiver chains	1	
Operating temperature range:	T _{min} :	-40 °C
	T _{nom} :	20°C
	T _{max} :	+60 °C
Operating voltage:	V _{min} (85% V _{nom}):	20VDC or 85VAC
	V _{nom} :	24VDC or 230VAC
	V _{max} (115% V _{nom}):	65VDC or 253VAC

Antenna Characteristic		
Antenna reference Gain (dBi)	Frequency Band (MHz)	Impedance(Ω)
Flex PCB FXC.30.52.0075X.B.dg Gain : (loop ø30*0.3 mm)	13.56	50

1.3. Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 or/and ANSI C63.10, FCC Part 15 SubPart 15B and 15C.

Radiated testing was performed at an antenna to EUT distance of 10 meters. During testing, all equipment's and cables were moved relative to each other in order to identify the worst case set-up.

1.4. Test facility

Tests have been performed: **March 10, 2026 to June 24, 2026**

This test facility has been fully described in a report and accepted by FCC as compliant with the radiated and AC line conducted test site criteria in ANSI C63.4 or/and ANSI C63.10.

This test facility has also been accredited by COFRAC (French accreditation authority for European Union test lab accreditation organization) according to NF EN ISO/IEC 17025, as compliant with test site criteria and competence in 47 CFR Part 15/ANSI C63.4 and EN55032/CISPR32 norms for 89/336/EEC European EMC Directive application. All pertinent data for this test facility remains unchanged.