

CIM / CIU Communication interfaces for wastewater products (CU 362, LC 2x1, CIU xx2) – for remote automation, control and monitoring

The CIM 260** 3G/4G is a standard interface module for remote wireless data transmission via a cellular network and can be used as follows:

- The cellular module can work as a SCADA Interface enabling a SCADA system or another PLC controller to establish a remote connection either via a Call-up using the Modbus RTU protocol or via a data connection using the Modbus TCP protocol with the system.
- As an SMS interface it enables users to control and monitor Grundfos AutoAdapt pumps and the Grundfos Dedicated Controls or LC 2x1 sewage controller from a mobile phone. It is possible to get a message whenever a warning or an alarm occurs, to request the status or to do simple control like START, STOP and adjusting of setpoint.

There are an EU and an US version available to fit to the regional frequency bands.

The CIM 260 can be mounted into CIU 900/ CIU 901/ CIU 902

Extensive amounts of data points are available from the system, when connected via the CIM 260 3G/4G. The interface offers uncomplicated wireless data transmission and remote control of pumping stations and commercial buildings. The interface module is installed as an internal add-on for Dedicated Controls. The CIM 150 is a standard interface for wired data transmission with a Profibus DP network, the CIM 200 interface is a standard interface for wired data transmission with Modbus RTU, the CIM 050 is for wired data transmission via GENIbus protocol.

*** To create a "CIU 260" you need to order a CIU 900 + CIM 260, to create a "CIU 261" order a CIU 901 + CIM 260, to create a "CIU 262" order a CIU 902 + CIM 260*

CIU add-on module

The CIM 050 / 150 / 200 / 260 / 500 are add-on communication interfaces installed internally in Dedicated Controls or LC 2x1 controller. The CIU 152 / 202 / 262* module, with integrated power supply supports the sewage AUTOADAPT pumps.

Advantages at a glance

- > Simple configuration of CIM 260 3G/4G via Dedicated Controls display
- > Modular design
- > Wireless remote control and monitoring
- > Incoming/outgoing pit interlock function
- > Status request and control via SMS
- > GSM call-up and call-back
- > Data connection with call-back option
- > Built-in battery backup possible
- > External 3G/4G antenna option
- > PROFIBUS version (wired) available
- > Modbus version (wired) available
- > GENIbus version (wired) available
- > Grundfos iSolution Cloud version available
- > Modbus TCP and PROFINET versions available for Dedicated Controls



Using CIM with **wastewater products (CU 362, LC 2x1, CIU xx2)**

Cellular Communication

Protocol	SMS GSM call up/call-back (Modbus RTU) Data (Modbus TCP) with call-back option
3G/4G antenna	Available as an option
Battery	Available as an option
SIM card	To be supplied by user/installer

SMS features:

Read status	Main status of pump pit and pumps Request active alarms/warnings
Get messages	Alarm/ warning event messages Heart beat messages
Control	Interlock (stop) the pump pit Acknowledge alarms/warnings Reset alarms Operate user defined relay (On/Off)
Configuration	Functions SMS access control option (PIN code, Phone no.) Phone book with duty roster



Data points

CIM 260 3G/4G ** and CIM 200 Modbus	CIM 150 PROFIBUS					
	Dedicated Controls CU 362	Sewage AUTOADAPT CIU xx2	LC 2X1	Dedicated Controls CU 362	Sewage AUTOADAPT ADAPT CIU xx2	LC 2X1
1 available for today, yesterday and totally						
Pit Control						
Reset alarm	✓	✓	✓	✓	✓	✓
Interlock pit	✓			✓		
Custom relay control (On/Off/Pulse)	✓			✓		
Pump Control						
Pumps On/Off/Auto	✓	✓	✓	✓	✓	✓
Pump down		✓			✓	
Configuration						
Set pit and pumps control levels	✓	✓	✓	✓	✓	✓
Pit status						
Pit operation mode	✓	✓	✓	✓	✓	✓
Active alarms/warnings	✓	✓	✓	✓	✓	✓
Pit mode (single/multi)		✓			✓	
Status/function of float switches	✓		✓	✓		✓
Presence of sensors	✓		✓	✓		✓
Real time clock (read and set)	✓			✓		
Pit control source (Manual/Auto)	✓	✓	✓	✓	✓	✓
Pit and pumps control levels	✓	✓	✓	✓	✓	✓
Water level	✓	✓	✓	✓	✓	✓
Water level max		✓				
In/out flow	✓			✓		
Power/Energy consumption	✓ ¹	✓ ¹	✓	✓ ¹	✓ ¹	✓
Specific energy	✓			✓		
Volume	✓ ¹			✓ ¹		
Overflow volume/time/counter	✓ ¹			✓ ¹		
Operation time	✓	✓	✓	✓	✓	✓
Operation time for simultaneous pumps	✓ ¹	✓		✓ ¹	✓	
Mixer average starts per hours	✓			✓		
3 x user defined sensor inputs	✓		✓	✓		✓
Float switches	✓		✓	✓		✓
Digital inputs	✓		✓	✓		✓
8 x I/O logic outputs	✓			✓		
Digital Outputs			✓	✓		
Pump status						
Presence of pump	✓	✓	✓	✓	✓	✓
Pump enabled/disabled	✓			✓		
Running/Stopped	✓	✓	✓	✓	✓	✓
Active alarms/warnings	✓	✓	✓	✓	✓	✓
Auxiliary equipment status	✓			✓		
Control source	✓		✓	✓		✓
Operation time	✓ ¹	✓ ¹	✓	✓ ¹	✓ ¹	✓
Starts counter (total/average)	✓ ¹	✓ ¹	✓	✓ ¹	✓ ¹	✓
Latest continuous operation time	✓	✓		✓		✓
Max continuous operation time		✓				
Time to service	✓		✓	✓		✓
Flow (actual/latest)	✓			✓		
Current (actual/latest)	✓	✓	✓ ²	✓	✓	✓ ²
Voltage/frequency	✓	✓		✓		✓
Current asymmetry	✓			✓		
Power/Power factor /Energy consumption	✓	✓	✓ ³	✓	✓	✓ ³
Motor temperature	✓	✓		✓		✓
Insulation	✓					
Water in oil	✓					
Special						
Hour log (latest 72h of main pit/pump values)	✓					
Event log (50 latest alarms/warnings w. time stamp)	✓		✓ ⁴			✓ ⁴
User defined data log (40000 registers)	✓					

*) Available for today, yesterday and totally
For information related to Modbus TCP, PROFINET or GRM please contact Grundfos
2): LC 2X1 only has actual current
3): LC 2X1 does not measure power factor

4): LC 2X1 only has 40 logs
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