

CIM / CIU Communication interfaces for Dedicated Controls and for sewage AUTO_{ADAPT} – for remote automation, control and monitoring

The CIM 250 is a standard interface module for remote wireless data transmission via a GSM/GPRS network and can be used as follows:

- As an SMS interface it enables users to control and monitor Grundfos AutoAdapt pumps and the Grundfos Dedicated Controls 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.
- The GSM/GPRS module can work as a SCADA Interface enabling a SCADA system or another PLC controller to establish a remote connection either via GSM Call-up using the Modbus RTU protocol or via a GPRS connection using the Modbus TCP protocol with the system.

Extensive amounts of data points are available from the system, when connected via the CIM 250. 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.

CIM add-on module

The CIM 050 / 150 / 200 / 250 / 500 are add-on communication interfaces installed internally in Dedicated Control. The CIU 152 / 202 / 252 module, with integrated power supply supports the sewage AUTO_{ADAPT} pumps.

Advantages at a glance

- > Simple configuration of CIM 250 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
- > GPRS connection with call-back option
- > Built-in battery backup possible
- > External GSM antenna option
- > Profibus version (wired) available
- > Modbus version (wired) available
- > GENIbus version (wired) available
- > Grundfos Remote Management version available
- > Modbus TCP and PROFINET versions available for Dedicated Controls



Using CIM 250 with **Dedicated Controls** and for **sewage AUTOADAPT**

GSM/GPRS Communication

Protocol	SMS GSM call up/call-back (Modbus RTU) GPRS (Modbus TCP) with call-back option
GSM 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
Configuration	Operate user defined relay (On/Off) Functions SMS access control option (PIN code, Phone no.) Phone book with duty roster



Data points

CIM 250 GSM / GPRS and CIM 200 Modbus	CIM 150 Profibus			
¹ available for today, yesterday and totally	Dedicated Controls	Sewage AUTOADAPT	Dedicated Controls	Sewage AUTOADAPT
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	✓		✓	
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)	✓	✓	✓	✓
Voltage/frequency	✓	✓	✓	✓
Current asymmetry	✓		✓	
Power/Power factor /Energy consumption	✓	✓	✓	✓
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)	✓			
User defined data log (40000 registers)	✓			

¹) Available for today, yesterday and totally

For information related to Modbus TCP, PROFINET or GRM please contact Grundfos