

Communication interface for **cellular communication** – for remote wireless control and monitoring

The CIM 260 / CIU 260 ** is a standard interface for data transmission between a cellular network and a Grundfos pump or controller and can be used as follows:

- The cellular module can work as a SCADA Interface enabling a SCADA system or a 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 connection.
- As an SMS interface it enables users to control and monitor Grundfos pumps and pump systems 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.

Extensive amounts of datapoints are available from each product via the CIM 260 / CIU 260 *). The interface offers uncomplicated wireless data transmission and remote control of Grundfos pumps systems. The interface module can be installed as an internal add-on or as a wall-mounted unit " CIU 260 *) " where internal connection is not supported. The wall-mounted unit is equipped with a 24-240 VAC/VDC power supply. In addition to CIM 260, Grundfos CIM/CIU interface modules are also available for the wired fieldbuses GENIbus, BACnet MS/TP, PROFIBUS DP, LON, Modbus RTU, Modbus TCP, PROFINET IO and for GiC. A version CIU 261 *) with additional analog and digital inputs/ outputs is available to connect sensors or e.g. alarm or level contacts Management.

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

*** 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*

CIM 260 add-on-module

The CIM 260 is an add-on communication module installed internally in single Grundfos E-pumps MGE model H/I/J or MGE 11-22kW or MAGNA3, Dedicated Controls, LC 2x1, Multi-B, Hydro MPC or Control MPC.

CIU 260 *) wall-mounted/DIN rail unit

The CIM 260 can be mounted into a CIU 900 or CIU 901 with internal power supply for Grundfos products that do not support the add-on module like CUE, MP 204.

Supported Products

- > Dry running E-pumps: CRE/CRNE/CRIE, MTRE, CHIE, CME, TPE2 / TPE3, NBE/NKE
- > CUE Motor drive for pumps
- > Multi Pump Controller: Control MPC
- > Boosters: Hydro Multi-E and Hydro MPC and Hydro Multi-B
- > CR Monitor* condition monitoring for CR pumps
- > Dedicated Controls or LC 2x1 controller for sewage pumps (separate datasheet)
- > Motor Protector MP 204
- > Circulators: MAGNA3
- > Sewage AUTO_{ADAPT} pump (separate datasheet)

* Additional add-on GENIbus module required

Advantages at a glance

- > Supports a wide range of Grundfos products
- > Simple configuration via SMS commands
- > CIU 261 *) version to connect analog and digital inputs/outputs
- > 24-240 VAC/VDC power supply in CIU
- > Wireless remote control and monitoring
- > Status request and control via SMS
- > GSM call-up
- > Data connection
- > Built-in battery backup possible



Using CIM/CIU with Grundfos products

General CIU data

Supply voltage	24-240 VAC/VDC, -10% / + 15%
Frequency	0 - 60 Hz
Power consumption	Max. 11 W
Cable size	IEC: 0.2 - 4 mm ² , UL: 24-12 AWG
Enclosure class	IP 54, according to IEC 60529
Cable entry	6 x M16 Ø4 – Ø10
Operation temperatures	-20 °C to +45 °C (-4 °F to +113 °F)
Storage temperatures	-20 °C to +45 °C (-4 °F to +113 °F)
Dimensions (H/W/D)	182 x 108 x 82 mm

GENIbus communication (CIU)

Protocol	GENIbus
Recommended cable type	Screened, double twisted-pair
Maximum cable length	1200 m/4000 ft

GSM/GPRS communication

Protocol	SMS GSM call up (Modbus RTU) Cellular (Modbus TCP)
GSM antenna	Available as an option
Battery	Optional for CIM 260
SIM card	To be supplied by user/ installer

SMS features:

Read product status	E.g. pressure, power, temperature etc. (depends on product type) Request active alarms/warnings
Read network status	E.g. signal level, battery status, GSM/GPRS status and data statistics.
Get messages	Alarm/ warning event messages Heart beat messages
Control	Set operating mode (e.g. Start/stop) Set control mode (e.g. constant pressure) Set Setpoint Reset Alarms
Configuration	SMS access control via PIN code Configuration of SMS functions Configuration of GSM options Configuration of cellular connection

CIU 261 **	2 configurable inputs (digital or analog 0/4-20mA, 0-10V) 1 Relay output (230V, 2 A) 1 Analog signal output (0-10V) 1 Temperature input (Pt100/Pt1000, 2-wire) 2 digital inputs
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Data points

CIM 260 + CIU 261 **								
	MAGNA/UE	MAGNA3	"E-Pumps 0.25-7.5 kW"	CUE/E-Pumps 11-22 kW	Hydro Multi-E	Hydro MPC/Control MPC	MP204	Hydro Multi-B
<small>s = if sensor installed s* = available with sensor or TPE 2000 1 differential or absolute, depends on sensor 2 Not standard for Control MPC 3 Not supported for all pump variants G= only for MGE model G or later H= only for MGE model H or later</small>								
Control								
Operating Mode	✓	✓	✓	✓	✓	✓	✓	✓
Setpoint	✓	✓	✓	✓	✓	✓	✓	✓
Control Mode	✓	✓	✓	✓	H	✓		
Relay Control			✓	✓				
Tank filling control								✓
Status								
Operating Mode status	✓	✓	✓	✓	✓	✓	✓	✓
Control Mode status	✓	✓	✓	✓	✓	✓	✓	✓
Feedback	✓	✓	✓	✓	✓	✓		✓
Alarm/warning information	✓	✓	✓	✓	✓	✓	✓	✓
Bearing Service Information			G	✓				
Tank filling status information								✓
Measured Data								
Power/Energy Consumption	✓	✓	✓	✓	✓	✓	✓	✓
Pressure (Head) ¹	✓	✓	s*	s*	✓	✓ ²		s
Flow (calculated at MAGNA, TPE2000)	✓	✓	s*	s*	H+s	✓ ²		
Relative Performance	✓	✓	✓	✓	✓	✓		✓
Speed and Frequency	✓	✓	✓	✓				
Digital Input/Output		✓	✓	✓	✓	✓		✓
Motor Current		✓	✓	✓	✓			✓
DC Link Voltage		✓	✓	✓				
Motor Voltage			✓	✓				✓
Remote Flow		s	G+s	s	H+s			
Inlet Pressure ¹			G+s	s	H+s	s		s
Remote Pressure ¹		s	G+s	s	H+s	s		
Level			s	s	H+s	s		s
Motor Temperature			G	✓				s
Remote Temperature		s	s	s	H+s	s		
Pump Liquid Temperature	✓	✓	G+s	s				
Bearing Temperatures			H+s	s				
Auxiliary Sensor Input			s	s	H+s			
Operation Time (Run Time)	✓	✓	✓	✓	✓	✓	✓	✓
Total on time	✓	✓	✓	✓	✓		✓	
Number Of Starts		✓	✓	✓			✓	
Ambient Temperature			H+S		H+s	s		
Inlet and Outlet Temperatures						s		
Heat energy meter		✓	H					
Outlet Pressure ¹			H+s		H+s	✓ ²		s
Feed Tank Level			H+s		H+s	s		s
Phase Voltages								✓
Line Voltages/Currents/Frequency								✓
Start/Run Capacitor								✓
Voltage Angles + Cos phi								✓
Insulation resistance								✓
Starts/h and auto restarts/24h								✓
Subpump Data								
Alarm/Status information					✓	✓		✓
Operation Time (Run Time)					✓	✓		✓
Speed					H	✓		✓
Line current/ power consumption					H	✓		✓
Motor temperature						✓		✓
Number of starts						✓		✓
Control pump: force to stop/ auto						✓		✓

Note: E-Pumps = CRE/CRNE/CRIE, MTR, CME, TPE2/ TPE3, NBE/NKE
 Note: TPED twin pump model F or G in range 3,0 -22 kW needs always 2 CIU module
 Note: Version CIU 261 to connect analog or digital inputs available
 Note: MAGNA3-D twinpump model D only require 1x CIM interface installed in master head
 Note: 3G/4G antenna available as accessory
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