Communication interface for **Profibus**
– for automation

The CIM/CIU 150 is a standard interface for data transmission between a Profibus DP network and a Grundfos pump or controller. It makes data exchange possible between Grundfos pumping systems and a PLC or SCADA system.

No custom programming is needed to integrate the CIM/CIU 150 in a Profibus network. System integration is very straight-forward with standard GSD files and support for the standard profile "intelligent pumps" from Profibus International.

The interface module can be installed as an internal add-on or as a wall-mounted unit where internal connection is not supported. The wall-mounted unit is equipped with a 24-240 VAC/VDC power supply.

In addition to Profibus DP, interface modules are also available for GENIbus, BACnet, Modbus, LON, GSM and other systems.

CIM 150 add-on module
The CIM 150 is an add-on communication module installed internally in 11-22 kW Grundfos E-pumps.

CIU 150 wall-mounted/DIN-rail unit
The CIU 150 with internal power supply is for Grundfos products that do not support the add-on module.

Supported products
> MAGNA/ UPE circulators *
> Dry-running E-pumps: CRE/CRNE/CRIE, MTRE, CME, TPE Series 1000/2000, NBE/NKE
> CUE Motor drive for pumps
> Multi Pump Controller: Control MPC*
> Motor Protector MP 204
> Boosters: Hydro Multi-E and Hydro MPC*
* additional add-on GENIbus module required

Advantages at a glance

> Supports a wide range of Grundfos products

> Supports standard intelligent pump profile from Profibus International

> Modular design – prepared for future needs

> 24-240 VAC/VDC power supply in CIU

> Easy installation and commissioning

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Using CIM/CIU with Grundfos products

General CIU 150 data

Supply voltage	24-240 VAC/VDC, -10% / + 15%
Frequency	0 - 60 Hz
Power consumption	Max. 11 W
Cable size	IEC: 0.2 - 4 mm2, UL: 24-12 AWG
Enclosure class	IP 54, according to IEC 60529
Cable entry	6 x M16 Ø4 - Ø10
Operating temperatures	-20 °C to +45 °C (-4 °F to +113 °F)
Storage temperatures	-20°C to +60°C (-4°F to +140°F)
Dimensions (H/W/D)	182 x 108 x 82 mm

GENIbus Communication

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

Profibus Communication

Protocol	Profibus DP
Implementation Class	DP-V0
Transmission speeds	9600 bps to 12 Mbps
Slave address	1 – 126, set via rotary switches

Profibus DP

E-pump 11-22 kW with CIM 150 built in

E-pump 0.25-7.5 kW

Hydro/Control MPC

Data points

CIM/CIU 150 Profibus

s = available with sensor
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

	MAGNA / UPE	E-Pumps 0.25-7.5 kW	CUE / E-Pumps 11-22 kW	Multi-E	Hydro MPC/ Control MPC	CR Monitor	MP 204
Control							
Operating Mode	•	•	•	•	•	•	•
Setpoint	•	•	•	•	•	•	
Control Mode	•	•	•	•	•	•	
Relay Control		•	•				•
Status							
Operating Mode Status	•	•	•	•	•	•	•
Control Mode Status	•	•	•	•	•	•	•
Feedback	•	•	•	•	•	•	
Alarm and warning information	•	•	•	•	•	•	•
Bearing Service information			•			•	
Measured Data							
Power/Energy Consumption	•	•	•	•	•	•	•
Pressure (Head) [1]	•	s*	s*	•	•[2]	•	
Flow	•	s*	s*		•[2]	•	
Relative Performance	•	•	•	•	•		
Speed and Frequency	•	•	•			•	
Digital Input/Output		•	•	•	•		
Motor Current		•	•			•	•
DC Link Voltage		•	•				
Motor Voltage		•	•			•	•
Remote Flow		s					
Inlet Pressure [1]		s			s	s	
Remote Pressure [1]		s			s		
Level	s	s	s		s		
Motor Temperature		•				•[3]	s
Remote Temperature		s	s		s		
Pump Liquid Temperature	•	s			s		
Bearing Temperatures		s					
Auxilary Sensor Input		s	s		s		
Operation Time (Run Time)	•	•	•	•	•	•	•
Total on time	•	•				•	•
Torque (N/A on 1-phased motors)	•	•					
Number Of Starts	•	•			•		
Ambient Temperature					s		
Inlet and Outlet Temperatures					s		
Temperature Difference					s		
Outlet Pressure [1]					•[2]	s	
Feed Tank Level					s		
Phase Voltages							•
Line Voltages/Currents/Frequency							•
Start/Run Capacitor							•
Voltages Angles + Cos phi							•
Insulation resistance							•
Starts/h and auto restarts/24h							•
Calculated/Measured Efficiency						•	
Available/required NPSH						•	
Cavitation Margin						•	
Subpump Data (for each sub pump in the system)							
Status information				•	•		
Alarm information				•	•		
Operation Time (Run Time)				•	•		
Speed					•		

Note: E-Pumps = CRE/CRNE/CME, MTRE, CHIE, TPE Series 1000/2000, NBE/NKE

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