Communication interface for **BACnet MS/TP**

- for building automation

The CIM/CIU 300 is a standard interface for data transmission between a BACnet MS/TP network and a Grundfos pump. It makes data exchange possible between pumps and a SCADA system or supervisory controller.

The communication interface is based on standard BACnet object types, allowing for straightforward data access over the network.

The BACnet functional profile has been optimised for exchanging data between pumping systems and building management systems / operator workstations.

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 BACnet, interface modules are also available for GENIbus, LON, Modbus, Profibus, GSM/GPRS (wireless communication) and other systems.

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**CIM 300 add-on module**
The CIM 300 is an add-on communication module installed internally in 11-22 kW Grundfos E-pumps and Hydro Multi-B

**CIU 300 wall-mounted/DIN-rail unit**
The CIU 300 with internal power supply is for Grundfos products that do not support the add-on module.

**Product support list**
- MAGNA/UPE Circulators*
- Dry-running E-pumps: CRE/CRNE/CRE, MTRE, CME, TPE Series 1000/2000, NBE/NKE
- CUE Motor drive for pumps
- Multi Pump Controller Control MPC*
- Boosters Hydro Multi-E and Hydro MPC * and Hydro Multi-B
  * additional add-on GENIbus module required

**Advantages at a glance**
- Supports a wide range of Grundfos products
- Simple configuration of BACnet MS/TP network settings
- Modular design based on open standards
- 24-240 VAC/VDC power supply in CIU
- Supports automatic device recognition on BACnet network
- Transmission speeds up to 76.8 kbit/s
Using CIM/CIU with Grundfos products

General CIU 300 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

BACnet Communication
- Transceiver: RS-485
- Protocol: BACnet MS/TP (Master)
- Transmission speeds: 9.6, 19.2, 38.4, 76.8 kbits/s
- BACnet master address: 0 – 127

BACnet Network

<table>
<thead>
<tr>
<th>CIM 300 BACnet</th>
<th>MAGNA/ UPE</th>
<th>E-Pumps 0.25-7.5 kW</th>
<th>Multi-E</th>
<th>Hydro Multi-B</th>
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</thead>
<tbody>
<tr>
<td>E-Pumps = CRE/CRNE/CRIE, MTRE, CME, TPE Series 0100/2000, NBE/NKE</td>
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Data points

Control
- Operating Mode
- Setpoint
- Control Mode
- Relay Control
- Tank filling status

Status
- Operating Mode status
- Control Mode Status
- Feedback
- Alarm/warning information
- Bearing Service Information
- Tank filling control

Measured Data
- Power/Energy Consumption
- Pressure (Head)
- Flow
- Relative Performance
- Speed and Frequency
- Digital Input/Output
- Motor Current
- Motor Voltage
- Remote Flow
- Inlet Pressure
- Remote Pressure
- Level
- Motor Temperature
- Remote Temperature
- Pump Liquid Temperature
- Bearing Temperatures
- Auxiliary Sensor Input
- Operation Time (Run Time)
- Total on time
- Number Of Starts
- Volume (CUE only)
- Ambient Temperature
- Inlet and Outlet Temperatures
- Temperature Difference
- Outlet Pressure
- Feed Tank Level

Subpump Data
- Alarm/Status information
- Operation Time (Run Time)
- Speed
- Line current/power consumption
- Motor temperature
- Number of starts
- Control pump: force to stop/auto

Note: E-Pumps = CRE/CRNE/CRIE, MTRE, CME, TPE Series 0100/2000, NBE/NKE

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