

Arc Integration into Profibus DP Process Control System

Technical Note

More functionality, better usability with Arc system

Hamilton Arc™ and VisiFerm™ DO sensors provide a digital Modbus® protocol that can be converted into Profibus DP protocol using the Deutschmann Unigate® CL Module. All Arc parameters DO, pH, COND and ORP are supported.

For an easy adaption to Profibus DP, Hamilton developed a conversion script for the Deutschmann Unigate® CL-Profibus Module giving access to the most common Modbus register. In cooperation with Sanofi-Aventis (Frankfurt/Germany) Hamilton Arc™ sensors were tested successfully on their Profibus DP Yokogawa System (Master Device), using a Deutschmann Unigate® CL Module.

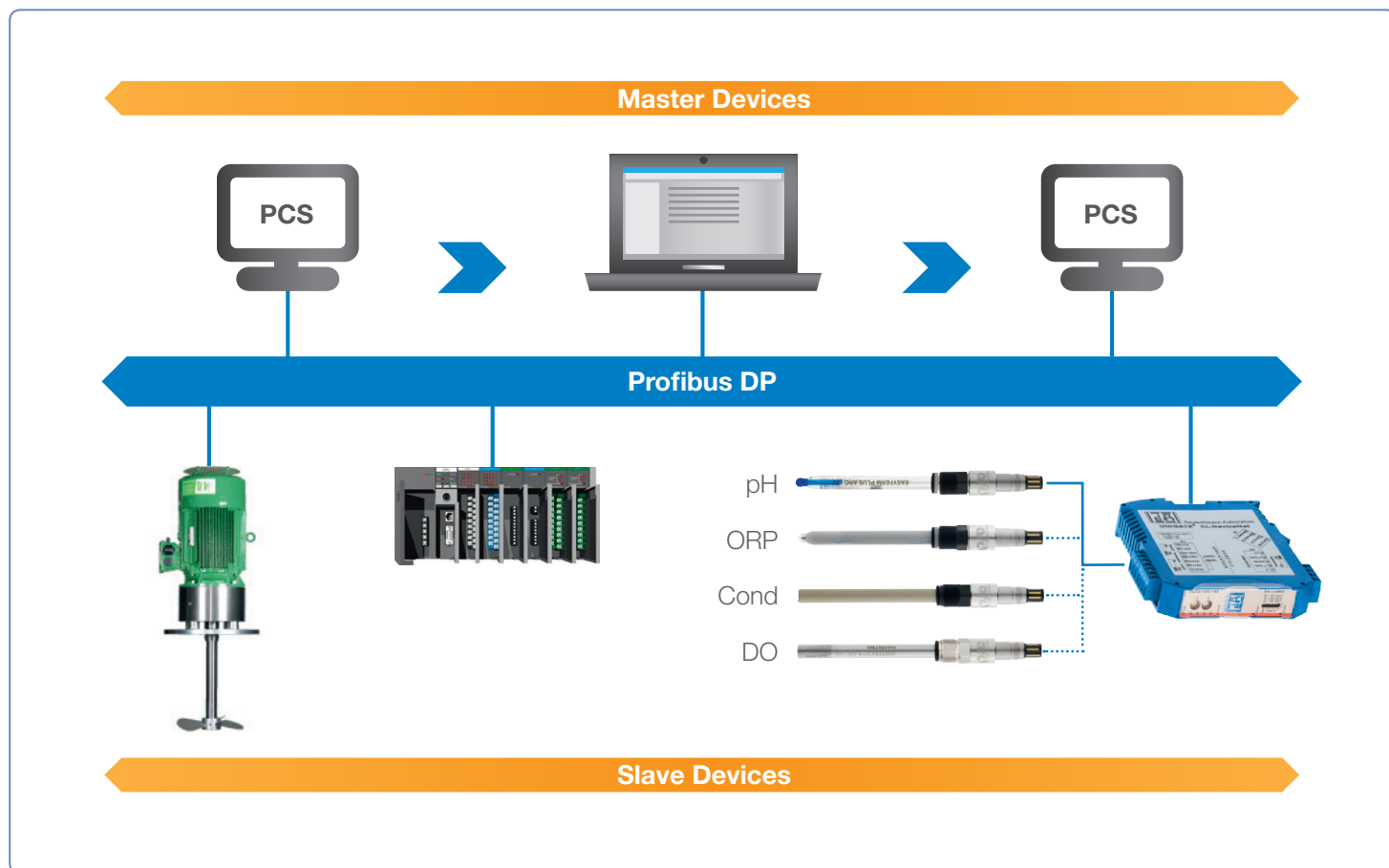


Fig. 1: Arc integration into a Profibus DP network

The following Arc sensor information are accessible through Profibus conversion script:

DO	pH	COND	ORP
Measurement value	Measurement value	Measurement value	Measurement value
Temperature value	Temperature value	Temperature value	Temperature value
Sensor Status	Sensor Status	Sensor Status	Sensor Status
Function Code Profibus	Function Code Profibus	Function Code Profibus	Function Code Profibus
Profibus Communication Status	Profibus Communication Status	Profibus Communication Status	Profibus Communication Status
Sensor name	Sensor name	Sensor name	Sensor name
WO Number	WO Number	WO Number	WO Number
WO Date	WO Date	WO Date	WO Date
Sensor ID	Sensor ID	Sensor ID	Sensor ID
Measuring point	Measuring point	Measuring point	Measuring point
Quality indication	Quality indication	Quality indication	Quality indication
Operation Hours	Operation Hours	Operation Hours	Operation Hours
Operation Hours for Calibration in Zero Oxygen	Operation Hours for Calibration Point 1	Operation Hours for Calibration Point 1	Operation Hours for Calibration Point 1
Operation Hours for Calibration in Air	Operation Hours for Calibration Point 2	Offset resistance [Ω]	Zero Point (25°C) in mV
Zero point (25°C)	Zero Point (25°C) in mV	Cell constant	Slope (25°C)
Sensitivity (25°C)	Slope (25°C)	Selected Calibration Standard	Selected Calibration Standard
Zero Oxygen: Calibration value	Selected Calibration Standard	Resistance	Glass Resistance
Zero Oxygen: Calibration Temp.	Glass Resistance	CP1: Calibration value	CP1: Calibration value
Air: Calibration value	CP1: Calibration value	CP1: Calibration Temperature	CP1: Calibration Temperature
Air: Calibration Temperature	CP1: Calibration Temperature	CP1: Active Calibration Standards	CP1: Active Buffer
Warnings	CP1: Active Buffer	Warnings	Warnings
Errors	CP2: Calibration value	Errors	Errors
	CP2: Calibration Temperature		
	CP2: Active Buffer		
	Warnings		
	Errors		

Additional sensor information can be added on request into the conversion script.

Note: Deutschmann Automation Unigate® CL Profibus Module supports only one Arc sensor at the same time.

The following components are needed for the Profibus DP connection

P/N	Description
243555	Deutschmann Automation Unigate® CL Profibus Module with preinstalled Modbus-Profibus conversion Script
624719	Modbus-Profibus Programmer's Manual (Free download from: www.hamiltoncompany.com)
n.a.	GSD-Deutschmann Automation Unigate® CL Profibus Module Integration File into the Profibus DP network (Free download from: www.hamiltoncompany.com)

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