



Unicom Com Unit for PROFIBUS DP/DP-V1

LB8109H0908

- Interface between the I/O modules and the PCS/PLC
- Com unit for 80 analog or 184 digital channels
- Communication via PROFIBUS DP
- Mounting in Zone 2, Class I/Div.2 or in the safe area
- HART communication via PROFIBUS DP V1 or service bus
- Configuration via FDT 1.2 DTM
- Configuration in run (CiR) for any PCS
- Non-volatile memory for configuration and parameter settings
- Self configuration in redundant systems
- Permanently self-monitoring
- Outputs drive to safe state in case of failures
- Module can be exchanged under voltage

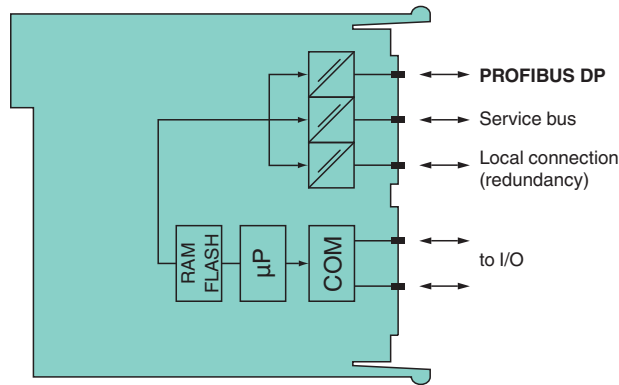
Unicom com unit for PROFIBUS DP/DP-V1, the com unit leads intrinsically safe and secure inputs and outputs from sensors and actuators to PROFIBUS



Function

The PROFIBUS com unit forms the interface between the I/O modules on the backplane and the process control system. It supports all single width and dual width I/O modules. Thereby signals from NAMUR sensors, mechanical contacts, high-power solenoid drivers, power relays, sounders, and alarm LEDs are transported to the higher-level bus system. The com unit can be easily configured via DTM and supports redundancy as well as HART. Configuration in Run (CiR) enables configuration of a running system without a PROFIBUS restart, even in non-redundant systems.

Wiring Diagram



Zone 2
Div. 2

Technical Data

Supply		
Connection		backplane bus
Rated voltage	U_r	5 V DC , only in connection with the power supplies LB9***
Power dissipation		1.8 W
Power consumption		1.8 W
Fieldbus connection		
Fieldbus type		PROFIBUS DP/DP-V1

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Technical Data

PROFIBUS DP		
Connection		9-pin Sub-D socket via backplane
Baud rate		up to 1.5 MBit/s
Protocol		PROFIBUS DP/DP V1 read/write services
Number of stations per bus line		max. 125 (PROFIBUS), max. 119 (service bus)
Cyclic process data		240 bytes input and (simultaneously) 240 bytes output
Number of stations per bus segment		max. 31 (RS-485 standard)
Number of repeaters between Master and Slave		max. 3
Supported I/O modules		all LB remote I/O modules
Configuration (240 bytes I/O)		Standard: 80 analog, 184 digital Universal 2I2O: 48 analog, 184 digital Universal 4I4O: 60 analog, 120 digital
Bus length		max. 1000 m (FOL, 1.5 Mbaud), max. 1000 m (copper cable, 187.5 kBd), max. 200 m (copper cable, 1.5 MBd)
Addressing		via configuration software
PROFIBUS address		0 ... 126 (factory standard setting: 126)
GSE file		PFV61710.gsd/gse
HART communication		via PROFIBUS or service bus
Internal bus		
Connection		backplane bus
Redundancy		via backplane
Indicators/settings		
LED indication		LED P: (power supply): On = operating, fast flash = cold start LED 1: (collective alarm): On = internal fault, flashing = no fieldbus connection LED 2: (operating mode): flashing 1 (1:1 ratio) = active, normal operation; flashing 2 (7:1 ratio) = active, simulation LED 3: (status fieldbus): flashing = fieldbus receive channel active LED 4: (status fieldbus): flashing = fieldbus response channel active LED 5: (status service bus): flashing = service bus receive channel active LED 6: (status service bus): flashing = service bus response channel active
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1
Conformity		
Electromagnetic compatibility		NE 21
Degree of protection		IEC 60529
Fieldbus standard		IEC 61158-2
Environmental test		EN 60068-2-14
Shock resistance		EN 60068-2-27
Vibration resistance		EN 60068-2-6
Damaging gas		EN 60068-2-42
Relative humidity		EN 60068-2-78
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Relative humidity		95 % non-condensing
Altitude		max. 2000 m
Shock resistance		shock type I, shock duration 11 ms, shock amplitude 15 g, number of shocks 18
Vibration resistance		frequency range 10 ... 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles frequency range 5 ... 100 Hz; transition frequency: 13.2 Hz amplitude/acceleration ± 1 mm/0.7 g; 90 minutes at each resonance
Damaging gas		designed for operation in environmental conditions acc. to ISA-S71.04-1985, severity level G3
Mechanical specifications		
Degree of protection		IP20 (module) , mounted on backplane

Technical Data

Connection	via backplane
Mass	approx. 120 g
Dimensions	32.5 x 100 x 102 mm (1.28 x 3.9 x 4 inch)
Data for application in connection with hazardous areas	
Certificate	PF 08 CERT 1234 X
Marking	Ⓜ II 3 G Ex nA IIC T4 Gc
Directive conformity	
Directive 2014/34/EU	EN IEC 60079-0:2018+AC:2020 , EN 60079-15:2010
International approvals	
ATEX approval	PF 08 CERT 1234 X
UL approval	E106378
IECEX approval	
IECEX certificate	IECEX BVS 09.0037X
IECEX marking	Ex nA IIC T4 Gc
General information	
System information	The module has to be mounted in appropriate backplanes (LB9***) in Zone 2 or outside hazardous areas. Here, observe the corresponding declaration of conformity. For use in hazardous areas (e. g. Zone 2, Zone 22 or Div. 2) the module must be installed in an appropriate enclosure.
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com .

Assembly

Front view

