

dametric 

IPB-DM1

GMS Industrial Profibus Module



Content

1	GENERAL	2
2	ARTICLE NUMBER	2
3	TECHNICAL SPECIFICATION	2
4	SOFTWARE	2
5	PROFIBUS	3
6	STATUS LEDS	3
7	CONNECTION	4
7.1	PROFIBUS	4
7.2	CONFIGURATION SWITCHES	4
7.3	USB CONNECTOR	4
7.4	CAN	4
7.5	POWER CONNECTOR	4
8	CONTACT	4

1 General

The IPB-DM1 is a communication module for data interchange between the Profibus DP and a CAN-bus.

2 Article number

<i>Unit</i>	<i>SKC</i>	<i>Valmet</i>
IPB-DM1	SKC2594444	VAL0398441.

3 Technical Specification

Size	120 * 75 * 27 mm
Power supply	24VDC, +/- 10%
Power consumption	150 mA typ.
Temperature range	-25 till 55 °C
Data area	In 512 byte Out 512 byte
Enclosure	IP20
CAN standard	2.0B
CAN data rate	250 kbit/s

4 Software

The unit contains dedicated software to control the data interchange between the IPB unit and the used GMS system from Dametric.

Version	GMS-system	Refiner
V11_R101	GMS-V11	RF5

The software generates CAN-messages to the GMS units control the information to dedicated addresses for the Profibus. A separate document specifies the data and addresses.

5 Profibus

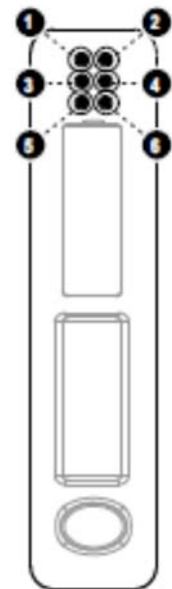
The Profibus master must send a command to the unit to start the exchange between the CAN and the Profibus. The first address of the in-data holds the control word and has the following meaning:

Bit	Namn	Beskrivning
2	Reset CAN	A transition from 0 to 1 resets the CAN controller (used when the CAN interface is bus off).
1	Reboot module	A transition from 0 to 1 reboots the Communicator (software reset).
0	Operation mode	This bit sets the start-up operation mode of the Communicator: 0 - Idle No new data issued to the CAN network. Data received from the CAN network is sent on the PROFIBUS network. 1 - Run Data is exchanged between the CAN network and PROFIBUS.

6 Status leds

The status LEDs on the front indicate the status of the module as shown in the table below. Status LEDs 1 - 4 indicate the status of the PROFIBUS network and status LEDs 5 - 6 indicate the status of the CAN subnetwork and the device.

Led	State	Status
1 Field bus Online	Off	No power or not online
	Green	Online, data exchange possible
	Green flashing	Clear mode
	Red	Application stopped
2 Field bus Offline	Off	No power or not offline
	Red	Offline
3 Acyclic	Off	No power or no DP-V1 request is currently being executed
	Green	DP-V1 request is currently being executed
4 Field bus Diagnostic	Off	No diagnostics present
	Red 1Hz flashing	Error in configuration
	Red, 2Hz flashing	Error in user parameter data
	Red, 4Hz flashing	Error in initialization of the PROFIBUS communication ASIC
5 CAN-Subnet Work status	Off	Power off/no CAN communication
	Green	Running with no transaction error/timeout
	Green flashing	Not all transactions have been executed at least once since startup and no transaction error/timeout has occurred
	Red flashing	Transaction error/timeout or subnetwork stopped
	Red	Fatal error
6 Device status	Off	Power off
	Green/red flashing	Invalid or missing configuration
	Green	Operation mode Run
	Green flashing	Operation mode Idle
	Red	Fatal error

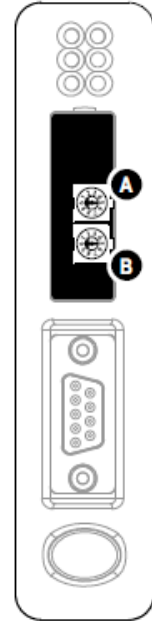
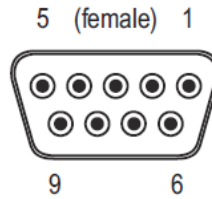


7 Connection

7.1 Profibus

9-pole D-sub for ProfiBus-cable.

Pin	Description
1	Cable shield
2,7,9	Not connected
3	B-line
4	RTS
5	GND bus
6	+5V out
8	A-line
Closure	Protective earth



7.2 Configuration Switches

The configuration switches are used to set the PROFIBUS node address. Note that the node address cannot be changed during runtime, i.e. the Anybus Communicator CAN requires a reset for any changes to have effect.

The configuration is done using two rotary switches as follows:

$$\text{Node Address} = (\text{Switch B} \times 10) + (\text{Switch A} \times 1)$$

Example:

If the node address should be 42, set switch A to '2' and switch B to '4'..

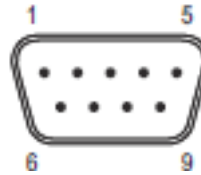
7.3 USB Connector

This connector is only used during configuration and software update.

7.4 CAN

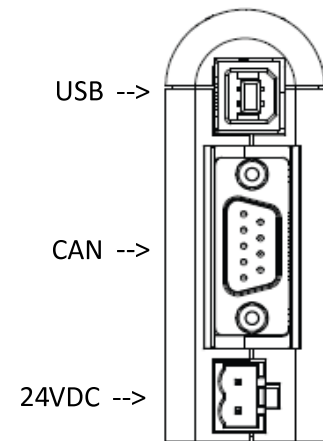
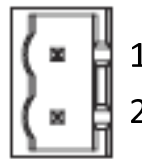
9-pole D-sub connector

Pin	Description
2	CANL
5	Closure (do not connect)
7	CANH
1,4,8,9	Not used
3,6	CAN GND (do not connect)



7.5 Power Connector

Pin	Description
1	+24VDC
2	GND



8 Contact

Sales, development, production and service:

Dametric AB

Jägerhorns Väg 19, SE 141 75 Kungens Kurva, Sweden

Phone: +46-8 556 477 00

Telefax: +46-8 556 477 29

E-Mail: service@dametric.se

Website: www.dametric.se

dametric