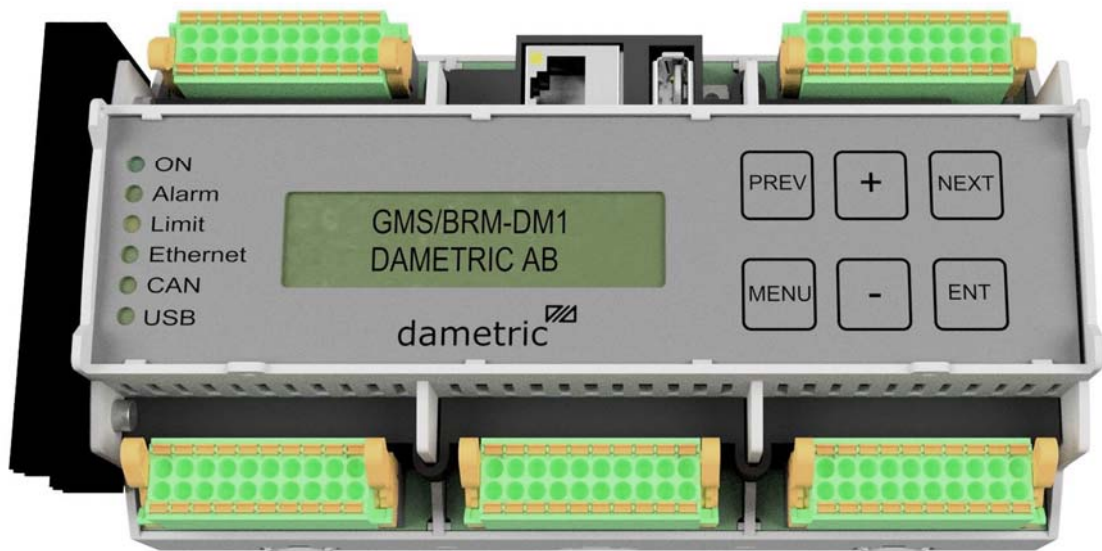




BRM-DM1



BRM-DM1

GMS Basic Refiner Module

INSTALLATION MANUAL

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1 Document revision

- Feb. 1, 2018/BL First release.
- June 5, 2018/BL Added connection of K-AGP25 and K-CAN1P25.
- Aug. 7, 2018/BL Added CEC and SSM-functions.
- Oct. 1, 2018/BL Small corrections.
- Oct. 20. 2018/BL Fixed connection J3/17 to J2/17.
- Oct. 14, 2019/BL Clarified termination of CAN-bus to AGS (5.4).

2 Article number SKC and Valmet

<i>Unit</i>	<i>SKC</i>	<i>Valmet</i>
BRM-DM1	SKC2594365	VAL0399295
BRM-DM2	SKC2601904	VAL0405083.

3 User manual

See document "BRM-DM12 UM EN YYMMDD.pdf" regarding how to use the unit.

4 Technical specification

See document "BRM-DM12 TS EN YYMMDD.pdf" regarding the technical specification.

5 Installation

5.1 General

This manual shows all connections to the module. Some of the functions are however not activated in the BRM-DM1 variant.

All connections are done to 20-pole connectors with spring loaded sockets.

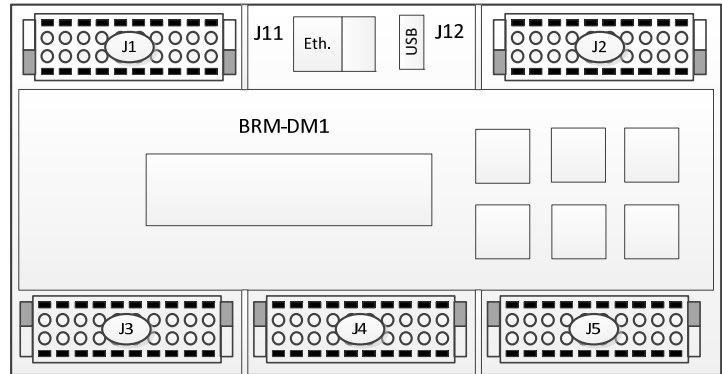
Maximum allowed conduit area is 1.5mm² or AWG 16. Do not use clamping sleeves.

The strip length should be 10mm (0.40 inch). A too short a length might make the cable loose, at too long, the result will be a piece of non-isolated cable.

The cable shields should be joined with a 1.0 mm² isolated cable and then mounted to the connector.

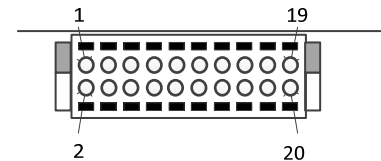


5.2 Connector placing



5.3 Connector J1, +24VDC, CAN-1

1,2	+24VDC	Power supply to the module
3,4	0VDC	Power ground
5,6	CAN1-H	CAN1-interface H-signal (use twisted pair cable for CAN1-H and CAN1-L)
7,8	CAN1-L	CAN1-interface L-signal
9,10	CAN1-R	CAN1-interface termination pole (jumper between 9 and 10 for 120Ω termination)
11,12	0VDC	Signal ground
13	DI 1	Digital input 1
14	DI 2	Digital input 2
15	DI 3	Digital input 3
16	DI 4	Digital input 4
17	DI 5	Digital input 5
18	DI 6	Digital input 6
19	DI 7	Digital input 7
20	DI 8	Digital input 8



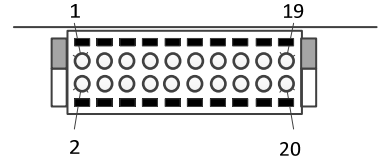
5.3.1 Inputs for the SSM function option

Use DI7 and DI8 as inputs for the Safeset supervision option.

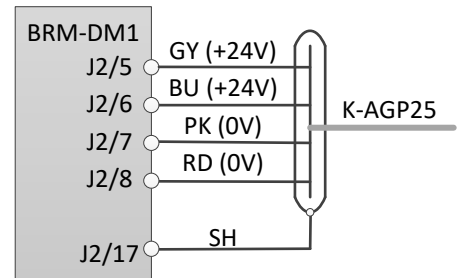
J1/19	DI7	Connect to pulse sensor for the motor side.
J1/20	DI8	Connect to pulse sensor for the refiner side.

5.4 Connector J2, AGS/CPM interface (option)

1,2	+24VDCin	Power supply input for AGS/CPM
3,4	0VDC	Power ground
5,6	+24VDCout	Power supply output to AGS/CPM
7,8	0VDC	Power ground
9,10	CAN2-H	CAN2-interface H-signal (use twisted pair cable for CAN2-H and CAN2-L)
11,12	CAN2-L	CAN2-interface L-signal
13,14	CAN2-R	CAN2-interface termination pole (jumper between 13 and 14 for 120Ω termination)
15,16	CAN2-C	CAN2-interface common (for cable shielding)
17,18	0VDC	Signal ground
19,20	0VDC	Signal ground

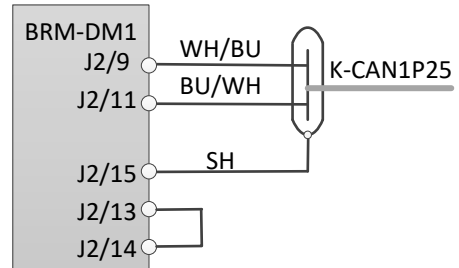


Connect K-AGP25 according to the figure. Cut away excessive wires.
 GY=grey, BU = blue, PK = pink, RD = red, SH = shield.



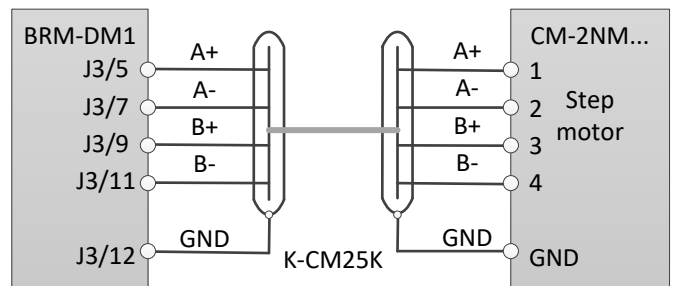
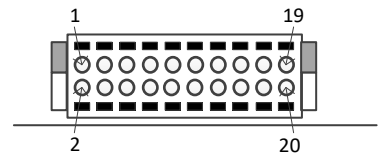
Connect K-AGP25 according to the figure.
 (WH/BU = white / blue, BU/WH = blue /white, SH = shield)

A jumper between 13 and 14 terminates the bus with 120 Ω.



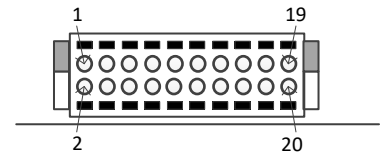
5.5 Connector J3, CMD, Digital outputs

1,2	+24VDCin	The power supply input for the CMD system
3,4	0VDC	The power ground
6,8,10,12	0VDC	The power ground
5	SM-WA1	To control motor winding
7	SM-WA2	To control motor winding
9	SM-WB1	To control motor winding
11	SM-WB2	To control motor winding
13	DO1	Digital output 1
14	DO2	Digital output 2
15	DIO3	Digital output 3
16	DIO4	Digital output 4
17	DIO5	Digital output 5
18	DIO6	Digital output 6
19	DI7	Digital output 7
20	DI8	Digital output 8



5.6 Connector J4, POM, VIM, TVD

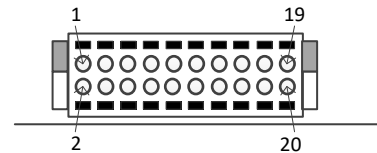
1	POM-T1	K-POT25/white (to POT-50 transducer)
2	POM-T2	K-POT25/brown
3	POM-T3	K-POT25/green
4	POM-T4	K-POT25/yellow
5	POM-T5	K-POT25/grey
6	POM-T6	K-POT25/rose
7	0VDC	K-POT25/shield
8	0VDC	Signal ground
9	VIM-EP	K-VIMS25/white (to VIM-T2 transducer)
10	VIM-SP	K-VIMS25/brown
11	VIM-SN	K-VIMS25/green
12	VIM-EN	K-VIMS25/yellow
13	0VDC	K-VIMS25/shield
14	0VDC	Signal ground
15	TVD-EP	K-TVDS25/white (to TVD-T2 transducer)
16	TVD-SP	K-TVDS25/brown
17	TVD-SN	K-TVDS25/green
18	TVD-EN	K-TVDS25/yellow
19	0VDC	K-TVDS25/shield
20	0VDC	Signal ground



5.7 Connector J5, HPM, OTM, AIN

HPM-A and HPM-B measures two pressure transmitters.

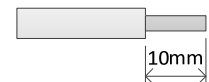
1	HPM-SAP	HPM-A, Analog input, positive, 4-20mA
2	HPM-SAN	HPM-A, Analog input, negative, 4-20mA
3	HPM-SBP	HPM-B, Analog input, positive, 4-20mA
4	HPM-SBN	HPM-B, Analog input, negative, 4-20mA
5,6	0VDC	Signal ground



OTM-1 and OTM-2 measures PT100 sensors in a 3-wire connection.

The compensating and negative wires are internally connected in the transducer end.

7	OTM-E1	OTM-1, Excitation, PT-100
8	OTM-S1	OTM-1, Compensation, PT-100
9	OTM-N1	OTM-1, Negative, PT-100
10	0VDC	Signal ground
11	OTM-E2	OTM-2, Excitation, PT-100
12	OTM-S2	OTM-2, Compensation, PT-100
13	OTM-N2	OTM-2, Negative, PT-100
14	0VDC	Signal ground
15,16	0VDC	Signal ground



MPM and AIN measures active 4-20mA input signals, that is – the electrical current loop is not powered from the BRM unit.

17	MPM-IP	MPM analog input, positive (4-20mA)
18	MPM-IN	MPM analog input, negative (4-20mA)
19	AIN-P	Analog input, positive (4-20mA)
20	AIN-N	Analog input, negative (4-20mA)

5.8 Connector J11, Ethernet

RJ45 connector for the Ethernet cable.

Connect the cable to the switch of the local GMS network.

5.9 Connector J12, USB

USB-A connector for a memory stick.

6 Contact

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