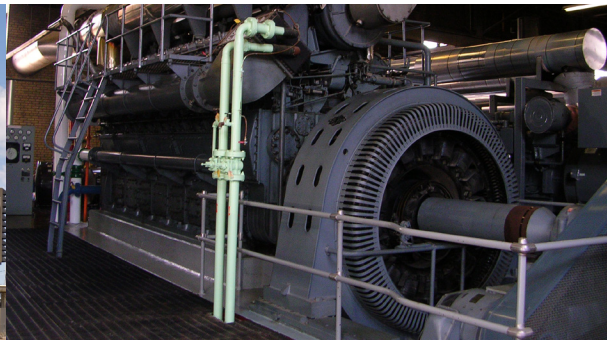
AEM-2020 and CEM-2020 Expansion Modules



Overview

These expansion modules eliminate the need for expensive external devices by providing additional contact and analog inputs and outputs to certain Basler Electric products.

Features

- **AEM-2020 Analog Expansion Module**
  - Eight analog inputs
  - Eight resistance temperature device (RTD) inputs
  - Two Type K thermocouple inputs
  - Four analog outputs
  - Inputs and outputs are configurable for 4 to 20 mA and 0 to 10 Vdc ranges
  - Controller Area Network (CAN) communication protocol
  - Compatible with DGC-2020, DGC-2020HD, DECS-250, DECS-250N, DECS-250E, and DECS-450
- **CEM-2020 Contact Expansion Module**
  - Ten dry contact inputs
  - Twenty-four contact outputs with the CEM-2020
  - Inputs and outputs programmable through BESTCOMS*Plus*® software
  - CAN communication protocol
  - Compatible with DGC-2020ES, DGC-2020, DGC-2020HD, DECS-250, DECS-250N, DECS-250E, and DECS-450

Benefits

- **AEM-2020 Analog Expansion Module**
  - Easily connects to compatible devices when additional analog I/O is required to meet difficult specifications.
  - Rugged, potted design for the ultimate in reliability for extreme environmental applications.
  - Connects to compatible devices via CAN bus and automatically integrates into the BESTCOMS*Plus*® PC software. Fast to configure, simplifying commissioning of complicated systems.
  - Combine this additional I/O with the powerful programmable logic of the DGC-2020, DGC-2020HD, DECS-250, DECS-250N, DECS-250E, and DECS-450 and eliminate the need for an additional PLC or other peripheral devices, saving installation and purchasing costs.
  - Easily-assigned trip points for the analog inputs can be scaled by the user to directly reflect the measured parameter.
  - A wide variety of generator parameters can easily be integrated into an overall protection and metering scheme to meet virtually any specification.
- **CEM-2020 Contact Expansion Module**
  - The rugged, potted design of the CEM-2020 provides ultimate reliability in extreme environments.
  - Enables easy addition of contact inputs and outputs through logic, reducing the need for external control devices, which saves both time and money.
  - Connects to compatible devices via CAN bus and automatically integrates into BESTCOMS*Plus* software for simple, quick configuration of complicated systems.

AEM-2020 and CEM-2020 Expansion Modules

Specifications

Power Supply

Nominal:	12 to 24 Vdc
Range:	8 to 32 Vdc
Burden:	
AEM-2020:	5.1 W
CEM-2020:	14 W

Analog Inputs (AEM-2020 only)

Number of Inputs:	8
Voltage Configuration:	0 to 10 Vdc
Voltage Burden:	9.65 kΩ minimum
Current Configuration:	4 to 20 mAdc
Current Burden:	470 Ω maximum

Analog Outputs (AEM-2020 only)

Number of Outputs:	4
Voltage Configuration:	0 to 10 Vdc
Current Configuration:	4 to 20 mAdc

RTD Inputs (AEM-2020 only)

Number of Inputs:	8
Rating:	100 Ω platinum or 10 Ω copper
Setting Range:	-50°C to 250°C (-58°F to 482°F)
Accuracy (10 Ω copper):	±0.044 Ω at 25°C
Accuracy (100 Ω platinum):	±0.39 Ω at 25°C

Thermocouple Inputs (AEM-2020 only)

Number of Inputs:	2
Rating:	Type K
Setting Range:	0 to 1,378°C (0 to 2,507°F)
Accuracy:	±40 µV at 25°C

Contact Inputs (CEM-2020 only)

Number of Inputs:	10
Programmable:	Yes
Contact Type:	Accepts dry contacts

Contact Outputs (CEM-2020 only)

CEM-2020 Rating:	
Outputs 1 through 12:	1 Adc, 30 Vdc, Form C, gold contacts
Outputs 13 through 24:	4 Adc, 30 Vdc, Form C

Communication

CAN bus:	
Differential Bus Voltage:	1.5 to 3 Vdc
Maximum Voltage:	-32 to +32 Vdc
Communication Rate:	250 kB/s

Agency/Certifications

CSA certified, UL approval, Hazardous Locations Class I, Div 2 - Groups A, B, C, and D, CE EMC and LVD compliant, NFPA compliant, EAC certified

Environmental

Operating Temp:	-40°C to 70°C (-40°F to 158°F)
Storage Temp:	-40°C to 85°C (-40°F to 185°F)
Humidity:	IEC 68-2-38
Shock:	15 G in three perpendicular planes
Vibration:	
5 to 29 Hz:	1.5 G peak for 5 min.
29 to 52 Hz:	0.036 in. double amplitude
52 to 500 Hz:	5 G peak for 7.5 min.

Physical

Weight:	
AEM-2020:	1.80 lb (0.82 kg)
CEM-2020:	2.25 lb (1.02 kg)
Dimensions (WxHxD):	
AEM-2020:	6.38 x 8.38 x 2.23 inches (162.0 x 212.8 x 56.6 mm)
CEM-2020:	6.38 x 8.38 x 2.02 inches (162.0 x 212.8 x 51.3 mm)

For complete specifications, download the instruction manual at www.basler.com.

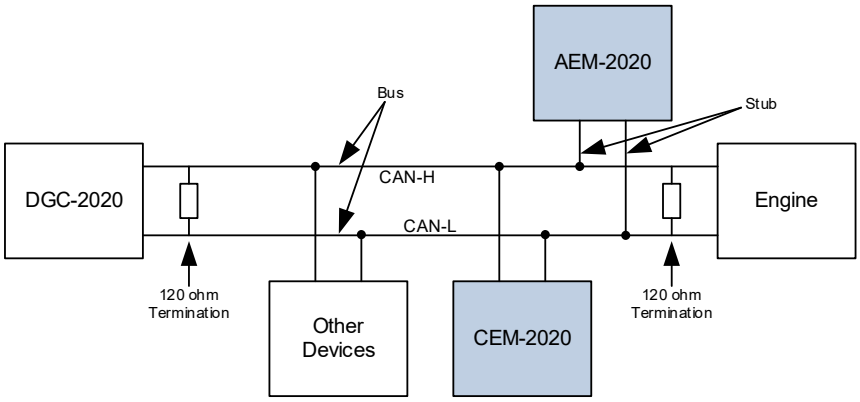


Figure 1 - AEM-2020 and CEM-2020 CAN Bus Interface

Related Products

DGC-2020 Digital Genset Controller
Provides genset and transfer switch control, metering, protection, and programmable logic in a simple, easy to use, reliable, rugged, and cost effective package.

DGC-2020ES Digital Genset Controller
The total system solution for emergency and standalone genset applications.

DGC-2020HD Digital Genset Controller
A highly advanced integrated genset control system for stand-alone and paralleled genset applications.

DECS-250 Digital Excitation Control System
Provides precise voltage, var and Power Factor regulation, exceptional system response, and generator protection.

DECS-250N Digital Excitation Control System with Negative Forcing
Provides the same functionality as the DECS-250 with negative field-forcing capabilities.

DECS-250E Digital Excitation Control System
Provides accurate and reliable regulation, control, and protection for synchronous motors or generators.

DECS-450 Digital Excitation Control System
A versatile digital excitation control system for synchronous generators and motors.

Visit the Basler website!

Scan the QR code for more information on the AEM-2020 Analog Expansion Module and the CEM-2020 Contact Expansion Module.

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