

General Information

The Congrav® CM-E is a feeder mounted and pre-wired controller for all Brabender loss-in-weight or weigh belt gravimetric feeders. There are two modules for each feeder, the Congrav® CM-E feeder control module and the FC CM module for motor speed control. These modules work together to provide dependable and accurate feeding.

Each Brabender Congrav® CM-E module has an advanced 32 bit RISC processor that performs the calculations necessary to provide accurate feeder performance and is designed for demanding industrial environments.

The control module Congrav® CM-E is interconnected by a bus and connected to either the Congrav® OP1-E (for a single feeder) Congrav® OP6-E (up to 6 feeders) or the Congrav® OP16-E (up to 16 feeders) Operator Interface by a single cable connection (SCC).

The unit conforms to CE directives and is characterized by high electromagnetic compatibility.



Inputs and outputs

Inputs	3 digital inputs (24 VDC) often used for start/stop or interlock 1 digital input can be used as frequency input for digital speed measurement.
Outputs	3 digital outputs (24 VDC) often used for run, refill and alarms

Module variants

Congrav® CM-SG-E	with integrated DMS-digital module for feeders with DMS-strain gauge load cell
Congrav® CM-A-E	With an additional analog input (e.g. analog speed feedback) and an analog output (e.g. analog actual value)

Interfaces

The control module Congrav® CM-E offers several interfaces including:

Interface	Function
Interface for IDL-F, MD, DLS load cell and DMS digital Module (RS 422)	Reading the weighing signal
Host-/SPS-interface	Communicate to host systems. Optional Ethernet Modbus TCP, Profibus DP, Profinet, EtherNet/IP
Brabender-fieldbus interface (RS 485)	For operation of the Congrav® OP6-E and OP16-E or PC for diagnostics and maintenance
Speed controller (RS 485)	For regulating speed
Interface to Congrav® OP1-S	For diagnostics and maintenance



Congrav®

CM-E

Feeder Controller



Speed Control FC CM

The Brabender FC CM module is a variable frequency drive device. It is used for speed control on all three phase AC motors commonly used on Brabender loss-in-weight and weigh belt feeders.

When using a smart motor, a power unit is used instead of the FC CM.

Technical Specification

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Housing material	Aluminium, painted (RAL 7035)
Ambient temperature	0°C to +45°C (32°F to +113°F)
Transport/storage:	-20°C to +85°C (-4°F to +185°F)
Humidity of the air	Up to 85% without condensation
Protection	IP 65
Dimensions (HxWxD)	200 x 200 x 72 mm
Mounting	DIN rail, clamp assembly
Weight	2 kg (4.4 lb)

Electromagnetic compatibility (EMC)

Electromagnetic compatibility (EMC)		
Emitted interference	Requirements acc. to EN 55011 Limit class A acc. to EN 55011 Limit class B acc. to EN 55011	
Interference resistance	Requirement	Standard
	ESD	EN 61000-4-2 (2009)
	HF radiation	EN 61000-4-3 (2006)
	Burst	EN 61000-4-4 (2004 + A1)
	Surge	EN 61000-4-6 (2006)
	Inflow	EN 61000-4-6 (2009)
	Interference voltage	CISPR 16 /EN 55011 Klasse A