

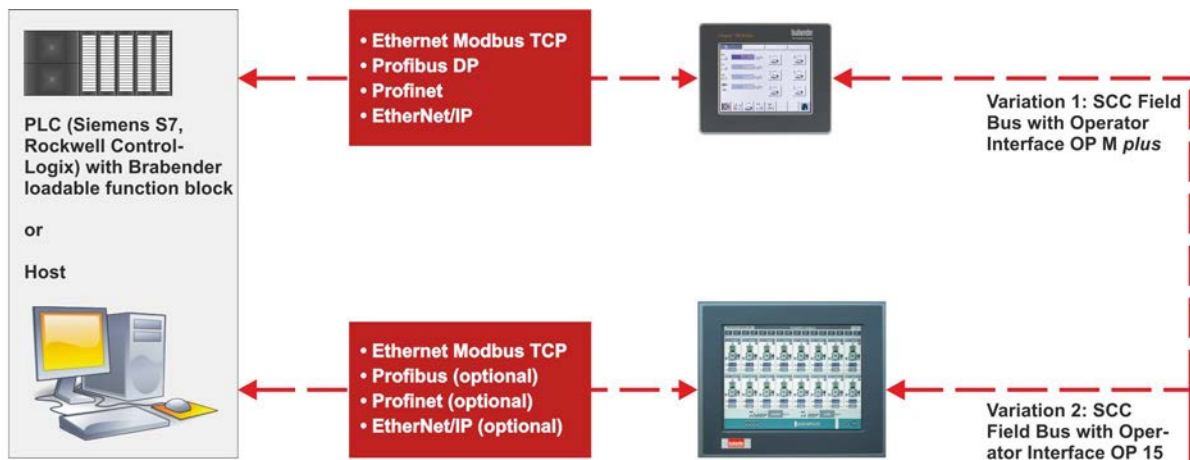
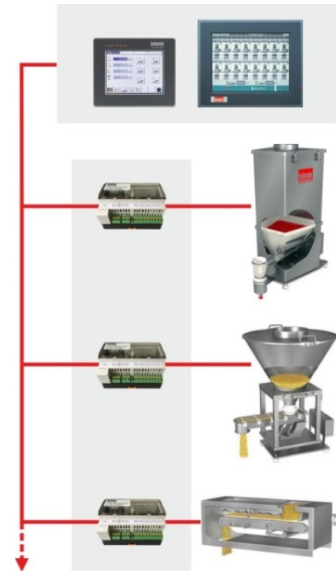
## Brabender Feeder Control Modules Congrav® CBS for Multiple Gravimetric Feeders

Congrav® CBS modules are microprocessor based controllers for all gravimetric feeders from Brabender with 3 phase AC motors (loss-in-weight screw feeders, weigh-belt feeders) or vibration drives (loss-in-weight vibrating tray feeders).

Congrav® CBS modules are typically rail mounted in a control cabinet. There is one module for each feeders. In multiple feeder control configurations, the Congrav® CBS feeder control modules are interconnected by a bus and connected to either the Congrav® OP M *plus* or the Congrav® OP 15 Operator Interface by a single cable connection.

To communicate with a host/PLC system, the operator interfaces are stand-

ardly equipped with host interfaces (see separate Works Standards "Brabender Operator Interface Congrav® OP M *plus*/OP 15 for Multiple Feeder Control Systems"). Brabender Congrav® CBS feeder control modules conform to CE directives and feature high electromagnetic compatibility.



## Technical Data



### Application

- Individual control of Brabender loss-in-weight or weigh-belt gravimetric feeders in multiple feeder systems (1 module per feeder)

### Design

Brabender Congrav® CBS feeder control modules have been designed for the most demanding industrial environments and offer the following:

- Housing for DIN rail mounting
- Dimensions 108 x 90 x 63 mm  
w x h x d (4.2 x 3.5 x 2.5 in)
- Weight approx. 0.3 kg (≈ 0.7 lb)
- IP20 (≈ NEMA 1) rated enclosure
- Power supply 24 VDC
- Power consumption approx. 5 VA
- Operation in environmental conditions of 0-45°C (32-113°F) and up to 85% humidity without condensation
- Noise immunity in compliance with the following directives and harmonized specifications of the European Union:
  - EN 61000-6-2:2005 (EMC)
  - EN 61000-4-2: 2008 (ESD immunity)
  - EN 61000-4-3: 2006 + A1, A2 (radiated RF immunity)
  - EN 61000-4-4: 2012 (burst immunity)
  - EN 61000-4-5: 2005 (surge immunity)
  - EN 61000-4-6: 2009 (conducted RF immunity)
  - EN 55011, Kl. A: 2009 + A1:2010 (emission)
  - CISPR 11 (interference voltage/current)
  - CISPR 11 (radiation)
- Compliance with CE directives

### FeederControl Congrav® CBS

Each Brabender Congrav® CBS module has an advanced 32 bit RISC processor that performs the calculations necessary to provide accurate feeder performance. Other features are:

#### Interfaces

- RS 485 for Brabender Field Bus (also for Congrav® OP M plus/OP 15 operator interface or PC/laptop for diagnostics and maintenance)
- RS 422 for DigiMASS-2 or IDL-F digital load cells, or strain gauge load cell (with strain gauge to digital converter module)
- RS 485 to speed controller (for speed controllers please refer to the appropriate separate Works Standards)

#### Inputs

- Digital input (24 VDC) often used for start/stop or interlock
- Frequency input for digital speed feedback (input voltage 24 VDC, frequency range 0-10 kHz)

#### Outputs

- 24 VDC relay output often used for run, refill and alarms
- 24 VDC relay output to speed or vibration controller

#### Accessories

- Diagnostics software "Smart Service" available for PC or laptop use

### Operating and Display Unit

Multiple Brabender gravimetric feeders with Congrav® CBS feeder control modules are operated by one of the Brabender touch screen human/machine interfaces Congrav® OP M plus (max. 6 feeders) or Congrav® OP 15 (max. 16 feeders).



Congrav® OP M plus



Congrav® OP 15

Please refer to the appropriate separate Works Standards for further details.



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