

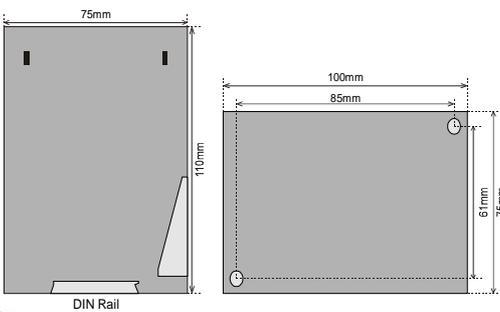


- Synchronising mode
- Loadsharing mode
- Frequency mode
- Soft unload control

**Specifications**

System Voltage:	100-120, 200-240, 380-440V AC: 50 or 60Hz
Aux Voltage:	12, 24 or 48V DC
Contact Rating:	AC: 100VA -250V/2A max. DC: 50W -100V/1A max.
Adjustments:	Puls rate Puls lenght Frequency trim Load trim
Inputs:	Power I/P: -1/0/+10mA (kW) Synchronising I/P: -10/0/+10mA (KSQ105)
Outputs:	Total power : 0-5mA Surplus power: 0-5mA
Temperature:	-20 to +70°C
Weight:	0.6kgs
Front protection:	IP41

Unit meets IEC60092-504 and relevant environmental and EMC tests specified in IEC60068/60092 and IEC61000/60533 respectively, to comply with Classification Societies requirements.



**Description**

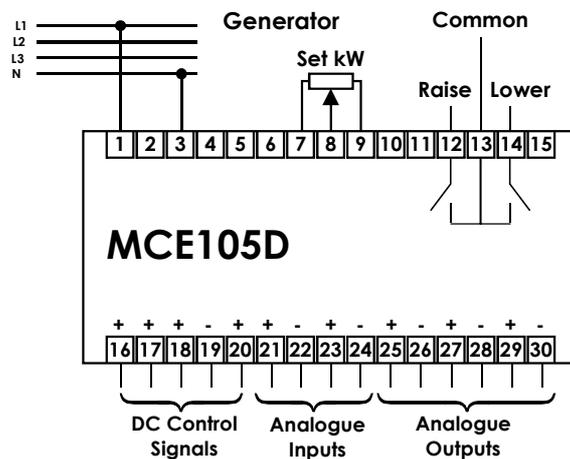
The MCE105D provides volt free raise/lower signals to control the speed of the prime mover of a generator.

The raise/lower outputs will provide a constant output until they reach 95% of their target speed and then will change to a pulsed output.

These control signals are produced depending upon the operating status of the controller. For detailed information on use of this controller, refer to Megacon technical publication.

**The MCE105D has five operating modes:**

- 1) **Synchronising Control** Monitors an analogue input from KSQ105 synchroniser.
- 2) **Load and Frequency** Maintains a frequency set within the unit and will load share with any other MCE105D within the system.
- 3) **Load only** Used when synchronised to the mains (infinite bus).
- 4) **Unload** Reduces the speed of the prime mover until zero kilowatts is detected.
- 5) **Fixed kilowatt** Controls the speed of the prime mover to match a kilowatt output relative to a value set by an external potentiometer.



**Connection description of the MCE105D**

Terminal(s)	Connection	Comments
1 and 3	Generator AC	This is either line to line voltage or line to neutral voltage. Refer to the units test certificate or information label
7, 8 and 9	Set kW pot.	An external 5kohm pot. For setting a kilowatt level for applications of generators synchronised to the mains. See information on terminal 20
12, 13, 14	Speed control	Can be directly connected to systems that accept volt free raise/lower signals. Connected to MXR845B electronic potentiometer for applications that require interfacing into speed controls that require a voltage signal.

DC Control Signals		
19 (-ve)	Control signal Common	Common negative feed for control signals
<b>NOTE: Only one Control signal should be connected at any time.</b>		
	Synchronising	With NO DC control signals applied the synchronising mode is selected.
16 (+ve)	Frequency and load sharing control	With a positive 24VDC applied, the load sharing and frequency control are activated. The «L+F» LED being illuminated indicates this. On "island mode" applications, this would be connected to an auxiliary contact on the generator breaker. NOTE: Under the LID there is a switch to select either 50 or 60Hz as nominal speed, right position=50Hz and left position=60Hz.
17 (+ve)	Load sharing	With a positive 24VDC applied, only the load sharing control is activated. The «L» LED being illuminated indicates this. On "peak lopping" applications, this would be connected to auxiliary contacts of both the generator breaker and the mains breaker.
18 (+ve)	Unload	With a positive 24VDC applied, the load sharing and frequency controls are overridden. The unit will lower the kilowatt loading on the generator to zero. The «U/L» LED being illuminated indicates the operational mode. This is normally connected to an unload switch or timer.
20 (+ve)	Set kW level	With a positive 24VDC applied, the unit will increase the kilowatt loading on a generator to a fixed percentage. This is used on "export to mains applications where the generator is synchronised to the mains and a fixed export amount is required.

Analogue Signals		
21,22	Synchroniser input	Input from synchroniser type KSQ105 Bi-directional 5-0-5mA signal.
23,24	Power transducer input	Input from power transducer type MC2W3C/D or MC2W4C/D. -1-0-10mA signal 23 (+ve) 24 (-ve)
25,26	Generated power output	Output scaled for use with KPM151 level controller. 25 (+ve) 26(-ve)
27,28	Surplus power output	Output scaled for use with KPM151 level controller. 27 (+ve) 28 (-ve)
29,30	Load sharing line	Wired in parallel, positive to positive and negative to negative, with all other generators in the system.

The MEGAICON policy is one of continuous improvement, consequently equipment supplied may vary in detail from this publication.

**ORDERING EXAMPLE:**

Type: MCE105D  
Aux. Supply: 24VDC  
Gen. Voltage: 230V

