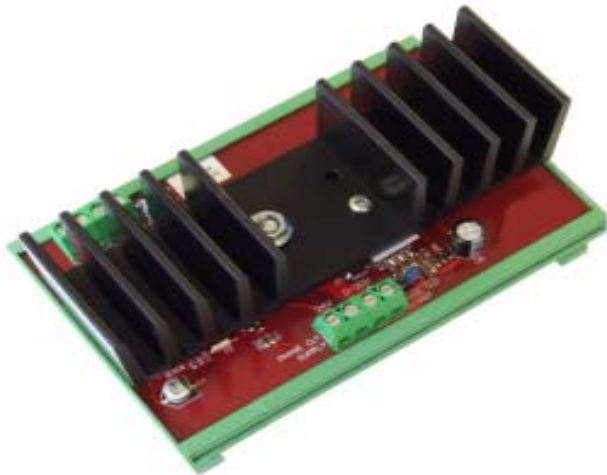




Single Channel Phase Cut Module (isolated) **MPC 120N**

Nov.11



MPC 120N

CE Features

- 0-10Vdc Control Signal Input
- 120VA 0-20V Phase-Cut Output
- DIN-rail Mounting
- Fully Opto-Isolated
- Integral Heatsink
- Led Indication

Technical Data

Control Supply Input 24Vac/dc (+/-15%) at 25mA maximum

Control Input Signal 0-10Vdc, (47kohm load impedance)

Phase-cut Load Supply Input 24Vac 50Hz rated to drive the load (120VA maximum)

Phase-cut LoadSignal 0-20V full wave rectified 50 Hz phase cut at 120VA

Led Indicators Provide indication of unit operation
 Brightness proportional to control input signal.
 Flashes when control signal input at 0V.
 Blinks when output phase is lost

Terminals Rising Clamp for 0,5-2,5 mm² cable

Ambient Temperature 0...+40°C

Dimensions 125 mm x 85 mm x 78 mm

Vikt 300 g

Usage

The MPC 120N converts a single 0-10Vdc control input signal to a 0-20V, 50Hz phase-cut output, at up to 120VA.

The control circuit of the module is powered from 24Vac or 24Vdc (with common connection to the input signal).

A separate input connection is provided for the 24Vac phase-cut load supply.

The MPC 120N features full opto-isolation of the control signal from the output circuit, to ensure that no grounding conflicts can occur.

Ordering

MPC 120N Phase Cut Module 0-10Vdc 120VA

Installation

The MPC 120N should be installed by a suitably qualified technician in conjunction with any guidelines for the equipment it is to be connected to.

Field wiring should be installed to satisfy the requirements set out by the manufacturer of the equipment that the module is being connected to.

There is a heatsink fitted to this module, which can get hot in operation.

The MPC 120N must be mounted so that adequate cooling is provided by free air circulation.

The 24Vac phase-cut load supply must be rated to supply the full phase-cut output load.1

Description and Connection

The input connections on the MPC 120N are fully opto-isolated from the load connections.

So if one of the phase-cut outputs is earthed, then the 0V on the input connections can also be earthed without causing any conflicts (provide the phase-cut supply is floating).
(refer to the wiring detail shown in example 1.

All of the load connections must be isolated from each other, otherwise damage to the unit will occur.

For example, if the - phase-cut supply is earthed, then the two + phase-cut supply connections must be floating.

If required, the Input Control supply can be commoned to the phase-cut supply.

However, this negates the isolation of the connections, and only one point in the system can be earthed (refer to the wiring detail shown in example 2).

The module is not protected against short circuits on the output.

Care must be taken during wiring, and suitable external fusing should be fitted.

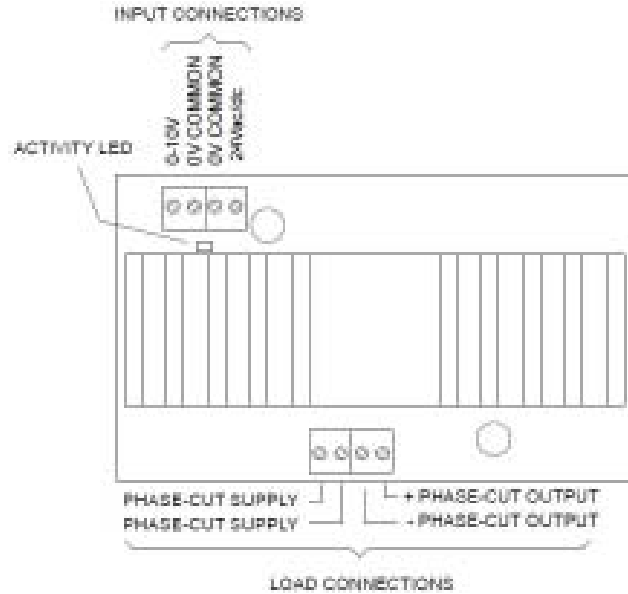
All connections should be made with the power disconnected.

3-Wire valves (e.g. Belimo Types with their own 24V supply connection) can also be used with this module

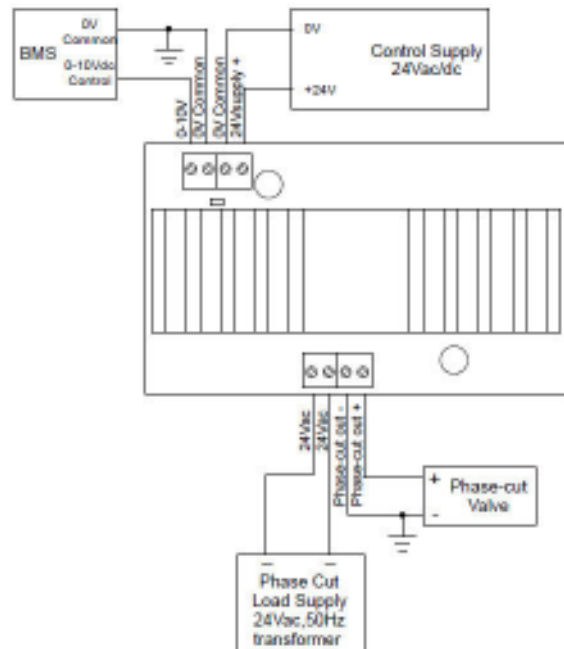
Scaling

A scaling factor, meaning that the output range from a DDC, PLC etc be scaled 0-20V phase cut to requested output 7-14V phase cut, which control the valve actuator 0-10Vdc by the module.

Starting at 35%=0Volt and finishing at 65%=10Volt



Example 1 - Earthed BMS Connection and earthed Load
(control supply and load supply must be isolated from each other)



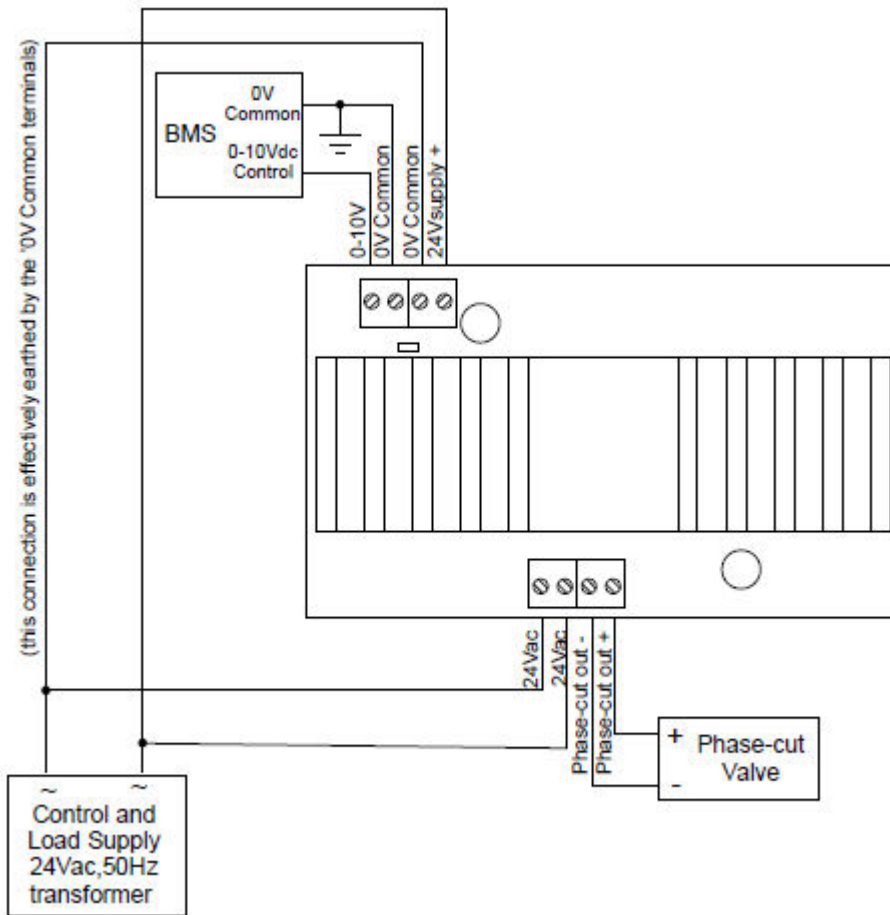


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Example 2 - Common Supplies, with earthed BMS connection.
(note load must not be earthed)



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