

CE

MPC 30N

Features

- 2 x 0-10Vdc Control Signal Inputs
- 2 x 0-20V Phase Cut Outputs
- Can drive up to 30VA per channel
- High Quality Rising Clamp Terminals
- DIN-rail mounting
- Fully opto-isolated

Technical Data

Control Supply Input	24Vac/dc (+/- 15%), at 25mA maximum
Control Input Signal	2 x 0-10Vdc (47kohm Impedance)
Phase Load Signal	0-20V full wave rectified 50Hz phase cut at 30VA maximum each output
Phase Cut Load Supply Input	24Vac, 50Hz rated to drive the load (30VA maximum x 2)
Terminals	Rising Clamp for 0.5-2.5 mm ² cable
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
Ambient Temperature	0...+40°C
Dimensions	57 x 85 x 60 mm (cirka)

Design Features

MPC 30N converts one or two 0-10Vdc control signal inputs to one or two 0-20V 50Hz phase-cut outputs, at up 30VA each output for the control of small valve or damper actuators.

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

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

The MPC 30N features opto-isolation, is powered from 24Vac (with common connection to input signal) and has Rising Clamp Screws Terminals.

The MPC 30N features full opto-isolation of the control signal from the output circuit, to ensure that no grounding conflicts can occur

The output from the MPC 30N can be boosted to 60VA by using two MPC 60A modules, 1 per channel.

The MPC 30N is designed to mount onto TS35 Section Din Rail.

Ordering

MPC 30N Dual Channel 0-10Vdc to Phase Cut Module

Installation

The MPC 30N 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 30N 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.

Descriptions and Connections

The input connections on the MPC 30N 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.

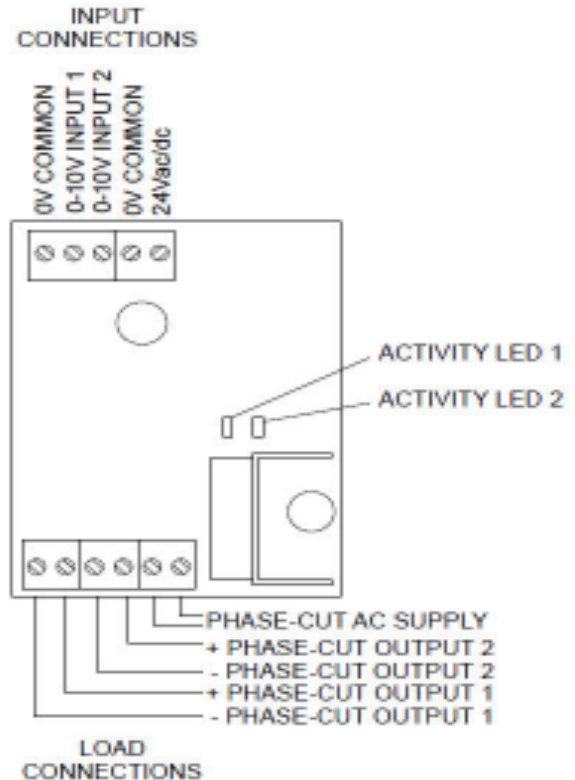
All connections should be made with the power disconnected.

3-Wire valves (e.g. Belimo Types with their own 24V supply connection) can also be used with this module (refer to the wiring detail shown in example 3).

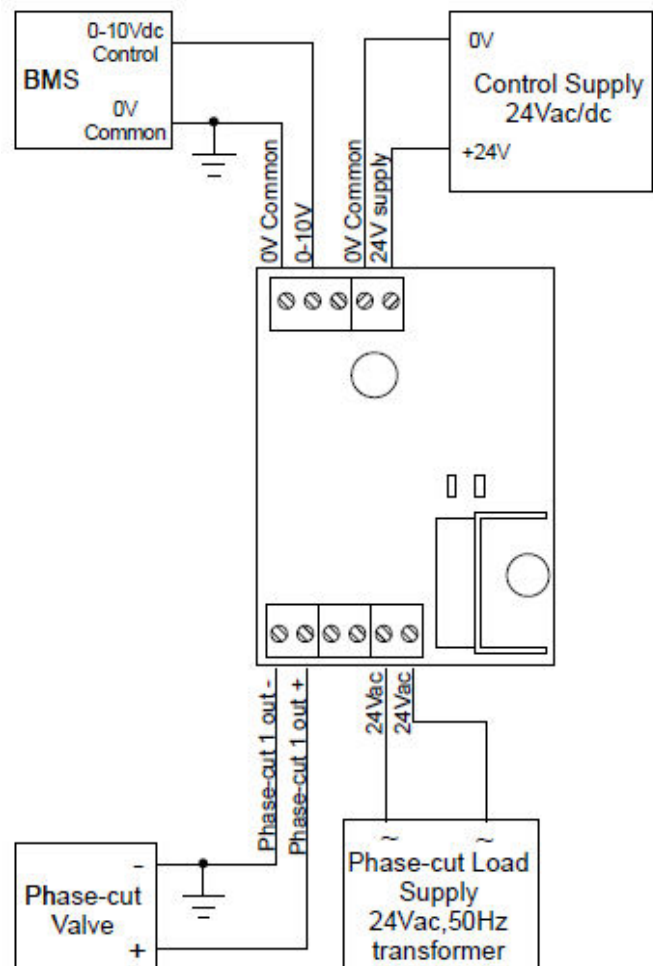
Scaling

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

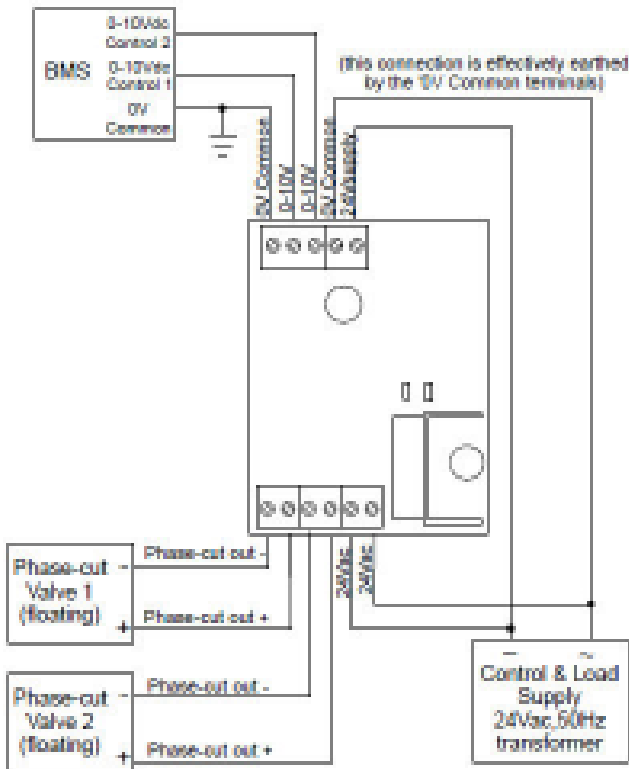
Starting at 35%=0Vdc and finishing at 65%=10Vdc



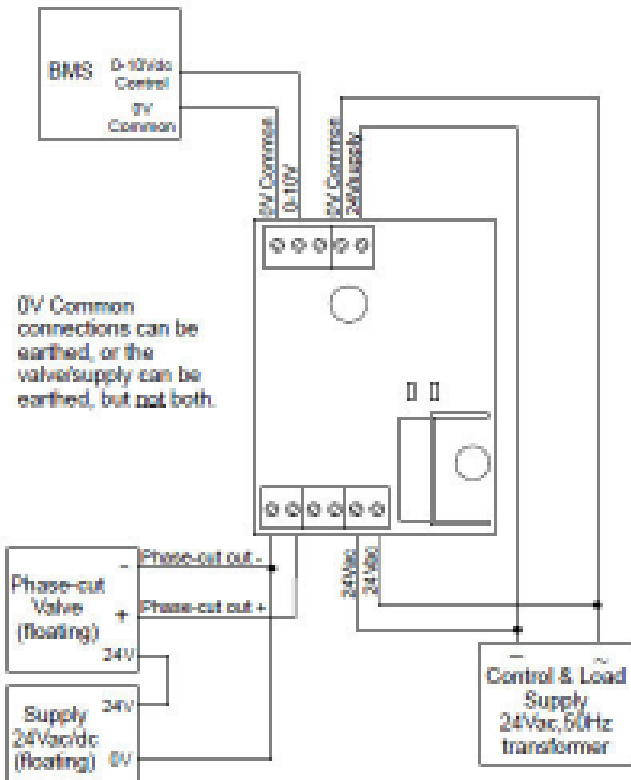
Example 1 - Earthed BMS Connection and earthed Load. (control supply and load supply must be isolated from each other)



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



Example 3 - 3-Wire Actuator.
(note yhat the valve must have its own supply)



We reserve the right to make changes and improvements in our products which may effect the accuracy of the information contained in this leaflet.

