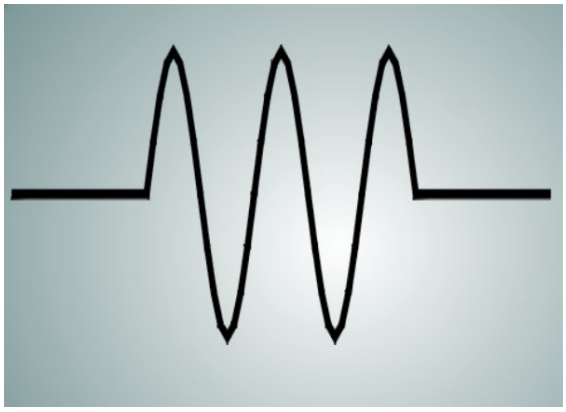
MFC SERIES

MF SERIES WITH ZERO CROSSING SWITCH



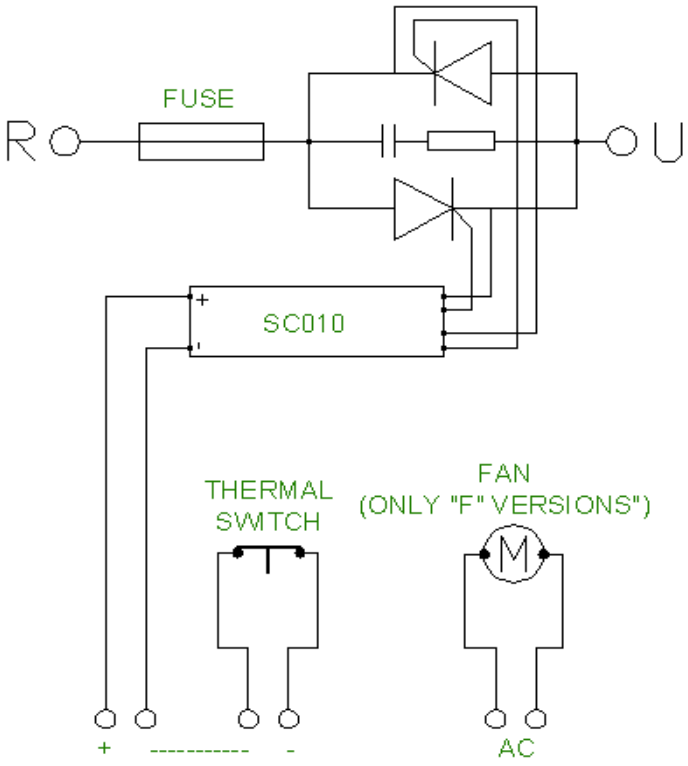
HIGHLIGHTS

- Appliable to MF-W1C and MF-W3C references
- Reliability
- Short delivery time
- Zero crossing switch (power static relay application)
- Input control 6 to 30 V_{DC}

DESCRIPTION

MFC Series, consists in single phase and three phase power stacks, composed of power modules with a zero crossing switch driver (power static relay applications). Power stacks standards are named as MF Series, and the firing module is used to control the power resistive loads with a simple driving. Refer to MF Series datasheets for working limits and technical characteristics.

SINGLE PHASE TYPE (W1C)



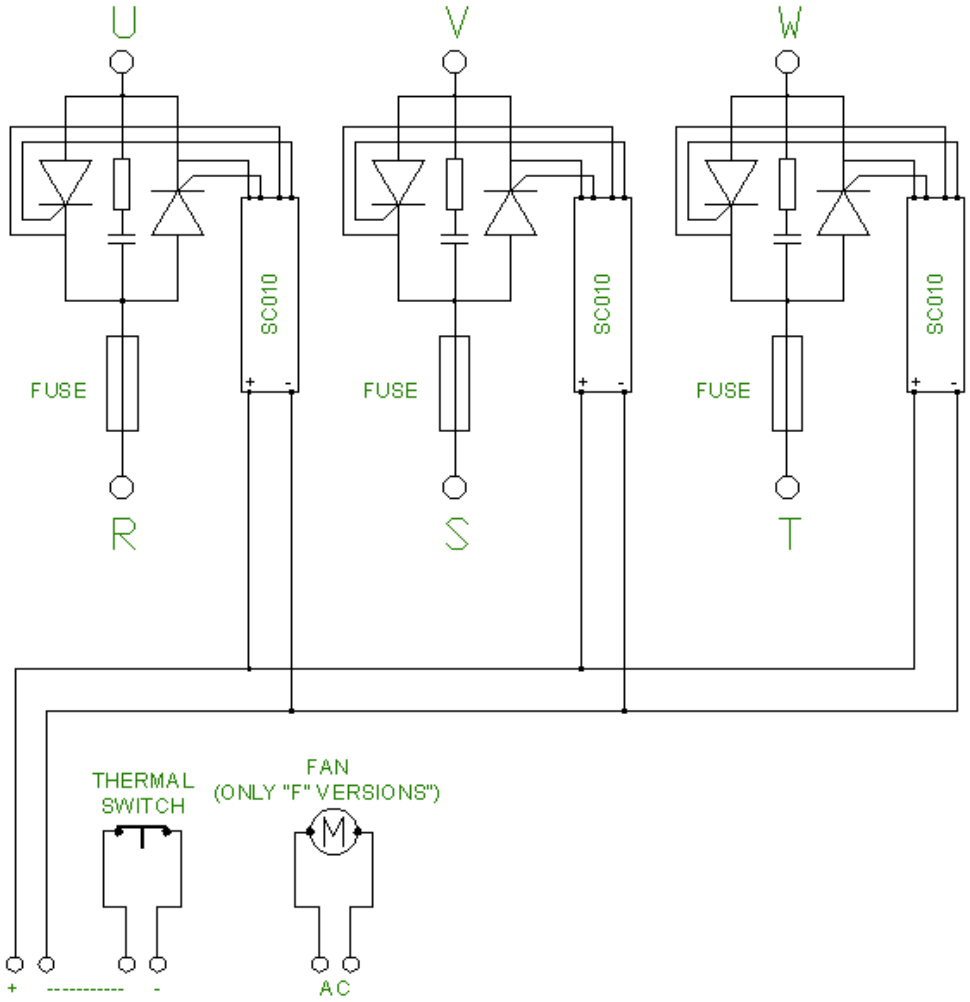
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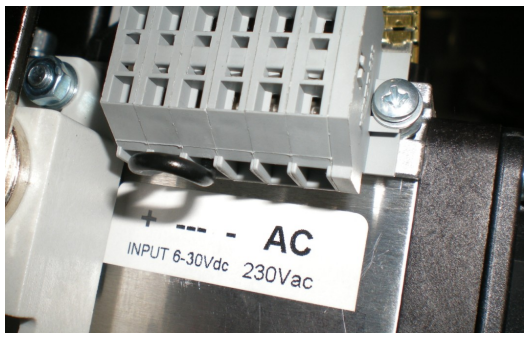
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THREE PHASE TYPE (W3C)



CONTROL CONNECTIONS

The control connection is made through terminal blocks (WAGO series 260). ”ON” signal must be a filtered DC value from 6 to 30V_{DC}.



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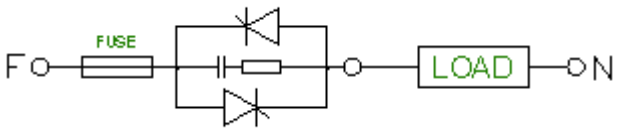
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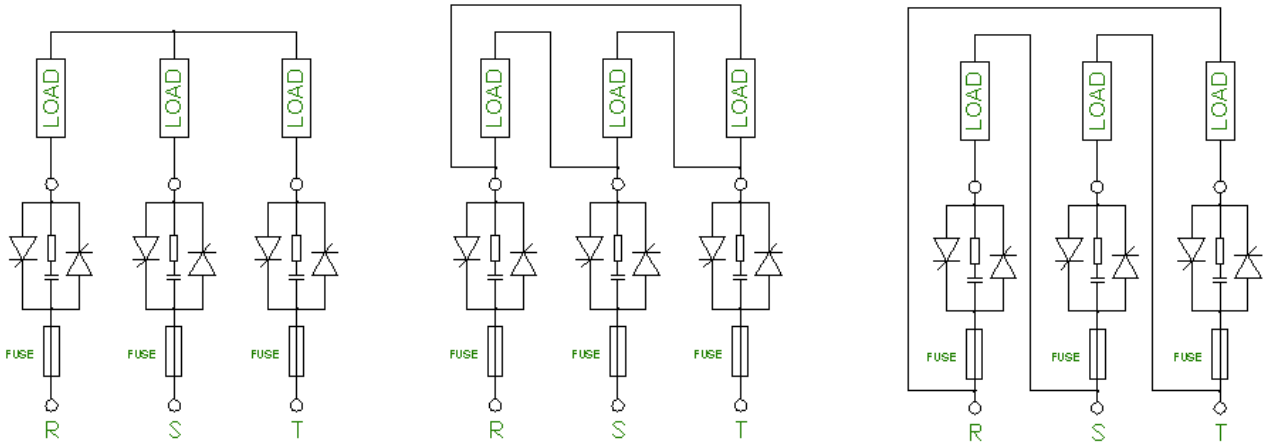
LOAD CHARACTERISTICS AND CONNECTION

MFC series are intended only for resistive loads. There is not any guarantee that other loads will work properly. Optimal working voltage is from 200V_{RMS} to 400V_{RMS}+10% and from 42Hz to 63Hz.

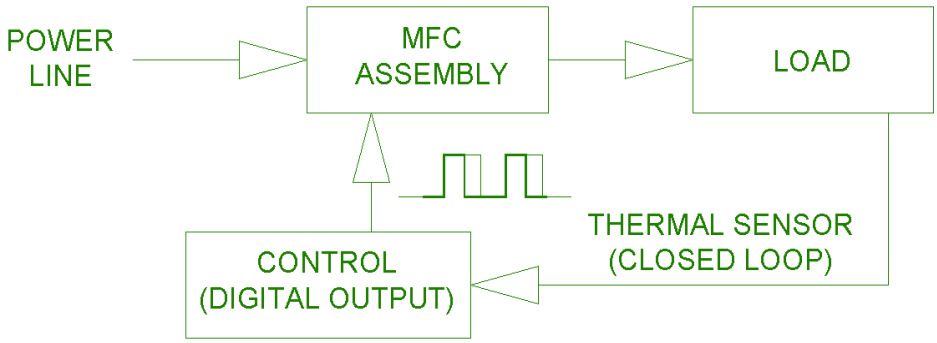
SINGLE PHASE LOAD



THREE PHASE LOADS



TYPICAL APPLICATION



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ORDER CODES & OPTIONS

Adding a “C” to MF-W1C and MF-W3C references, becomes the MFC series for zero crossing control systems.

The standard control signal is from 6 to $30V_{DC}$ (“ON” function). Consumption is <25mA @ $12V_{DC}$ for single phase systems and <75mA @$12V_{DC}$ for three phase systems.

As an example:

MFC-W3C0028N12RCVTF

The example refers to a MF Series power stack, MF-W3C0028N12RCVTF, with a zero crossing switch drivers (static relay).

EMC DIRECTIVE

MFC series are considered components without any direct function as defined in the EMC Directive. However, the end system or installation where these devices are used must complies with the essential protection requirements of the EMC Directive. Zero crossing method, helps to comply with EMC standards, since it avoids line disturbances.

MAXIMUM CURRENT

Due to, supply voltage variations and heating element resistance dispersion, a safety coefficient of 0.8 must be considered on the thyristor to determine the load’s maximum nominal current at which the unit can operate safely.

PERSONNEL

The installation, configuration, and maintenance of this power unit, must be supervised by a qualified and authorized person capable to perform in an industrial low voltage electrical environment.

INSTALLATION AND USE SAFETY

-The installation and use must be done inside an electrical and cooled cabinet, with guarantees of protection from condensation and pollution. The cabinet must be closed and connected to safety earth according to applicable National Standards.

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- MFC Series has included high speed fuses, which are only designed to protect the thyristors. These fuses aren't a substitute of installation and wiring protection fuses. Remind that thyristors are not isolated devices, so it is necessary to provide an additional protection, i.e. electromechanical contactor, and extra isolation in accordance with wiring regulations in order to allow safe interventions.

-Please pay attention, only qualified personnel is allowed to access into the internal parts of this device.

-It is the user's responsibility to ensure that the installation, wiring and protection of the device are in accordance with the relevant standards and wiring regulations.

- Before proceeding any connection or disconnection, be sure that the cables and wires are insulated from the supply voltage.

- The earth connection must be connected first and disconnected last.

- Control signal wiring must be kept separate from power cables.

- Before dismounting, MFC assembly must be completely disconnected.

- While this device is operating, the heatsink reaches high temperatures, it is mandatory do not touch the heatsink and protect it from any accidental contact during the ON state. It is advisable to consider a safety prudential time, after the unit disconnection, until the temperature has decreased.

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