- **Active Power (Watt) or Reactive Power (VAr) Transducer for balanced or unbalanced load**

- **Precision true RMS class 0,5 (Watt) and class 1 (Var) measurement, not affected by any waveform distortion**

- **For use with 1A or 5A current transformers**

- **Up to two individual very fast analogue output signals (<50mS), (optional)**

- **DIN96 Slave Indicator with full power scale (optional)**

Specifications

|	
Monitored Voltage:	100-120V, 200-240V, 380-415V, 440-460V, 480VAC 40-70Hz (Fuse 0,5A)
Optional Separate Auxiliary Voltage AC:	100-120V, 200-240V, 380-415V, 440-460V, 480VAC 40-70Hz (Fuse 0,5A)
Optional Separate Auxiliary Voltage DC:	24-60VDC (Fuse 0,5A) 110-220VDC (Fuse 1A)
Supply tolerance:	+10%, -20%
Power rating:	5VA
Current Input:	1A CT or 5A CT, <0,1VA
Watt or VAr range:	Any % of the range
Analogue output 1: (see page 3 for available outputs)	mA: Up to 20mA, max 500R V: Up to 10V, min 100kohm (other on request)
Analogue output 2: (see page 3 for available outputs)	mA: Up to 20mA, max 500R V: Up to 10V, min 500ohm (other on request)
Accuracy:	Class 0,5 (Watt) Class 1 (VAr)
Temperature:	-20 to +70°C
Humidity, relative:	0-95%
Weight:	0.6kgs
Front protection:	IP21
Flammability:	UL94-V0

The unit meets EN 60255-27 Cat. III, Pollution degree 2 and the relevant environmental and EMC tests specified in EN 60255-26 to comply with the requirements of the major Classification Societies.

Related information:
The MCxWxDx & MCxRxDx series are also available for panel mounting as MPxWxE & MPxRxE series.

Description

The digitally controlled **MCxWxDx or MCxRxDx is a precision power transducer for balanced or unbalanced load system active (Watt) or reactive (VAr).**

To be used in applications that require a very fast response, precision monitoring of active or reactive power. Ideal for systems for regulation and control of the load on generators, motors and inverters.

The unit measures the voltage and current true r.m.s. value, and accuracy is independent of any wave form distortion. A green LED (ON) indicates the auxiliary supply presence.

LED status
Power
🟢
ON

Up to two individual very fast analogue output signals, with amplitude proportional to the measured active power (Watt) or reactive power (VAr) level.

All standard models have **one** output signal, but optional models have **two** output signals (see page 3 for an overview of models). The analogue output is isolated from the CT, voltage inputs and auxiliary power.

If an output is used for remote meter reading, we recommend 0-1mA for the slave indicator.

It also includes an additional RJ12 output for a DIN96 Slave Indicator (optional).

The noise-immune mA output is isolated from both the C.T. and voltage inputs and auxiliary power.

The standard models takes the auxiliary supply voltage from the monitored voltage (terminal 1 & 2).

It can also be delivered with optional separate AC or DC auxiliary voltage (terminal 26 & 27), but that must be specified when ordering (see page 3 for ordering code for separate Aux. Supply).
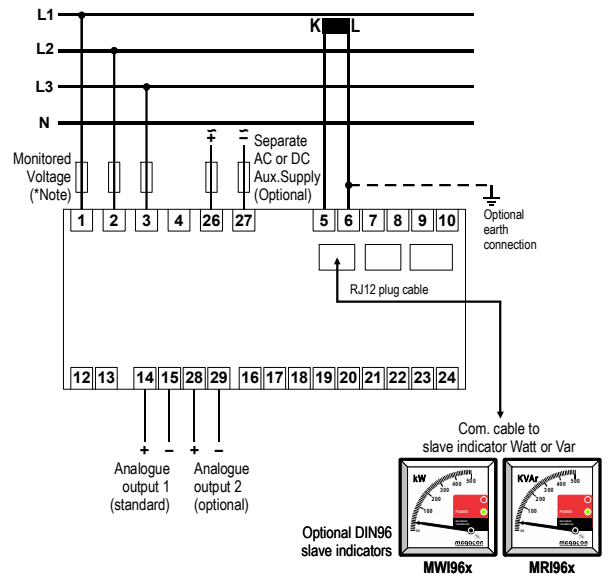
Connection Diagram

MC1W2Dx (kW)
MC1R2Dx (kVAr)
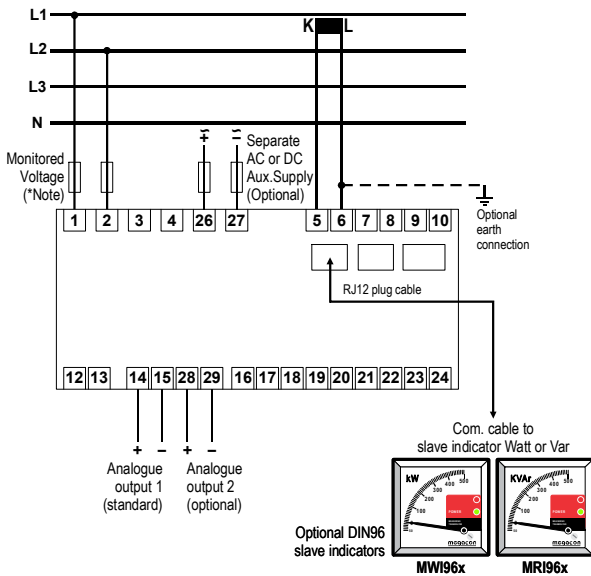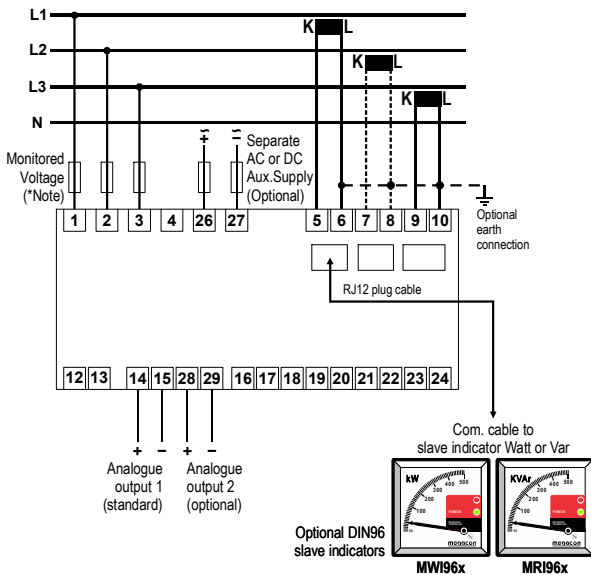

Connection Diagram

MC1W3Dx (kW)
MC1R3Dx (kVAr)

Connection Diagram

MC2W3Dx (kW)   **MC3W3Dx (kW)**
MC2R3Dx (kVAr)   **MC3R3Dx (kVAr)**
Dotted wire is for MC3W3Dx & MC3R3Dx

Connection Diagram

MC1W4Dx (kW)   **MC3W4Dx (kW)**
MC1R4Dx (kVAr)   **MC3R4Dx (kVAr)**
Dotted wire is for MC3W4Dx & MC3R4Dx
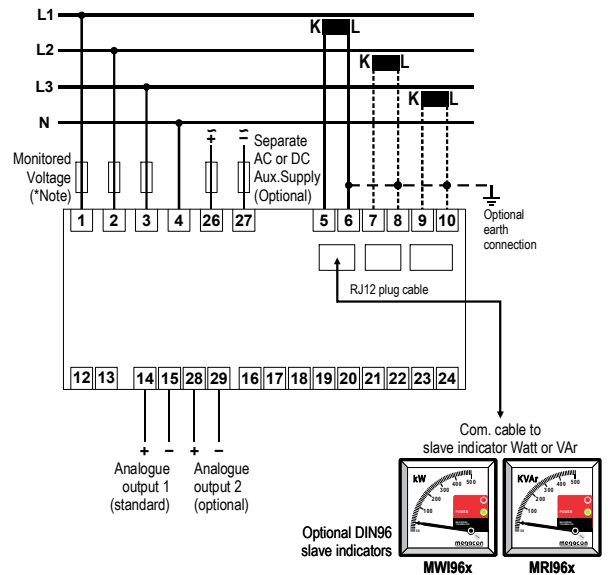
The MEGACON policy is one of continuous improvement, consequently equipment supplied may vary in detail from this publication.

*Note: The standard models takes the auxiliary supply voltage from the monitored voltage (terminal 1 & 2).

Info: To ensure correct kW measurement, the voltage phase sequence and CT connections must be as shown on connection diagrams. (See page 3 for an overview of models)

Norway
Denmark
United Kingdom

MCxWxDx/MCxRxDx

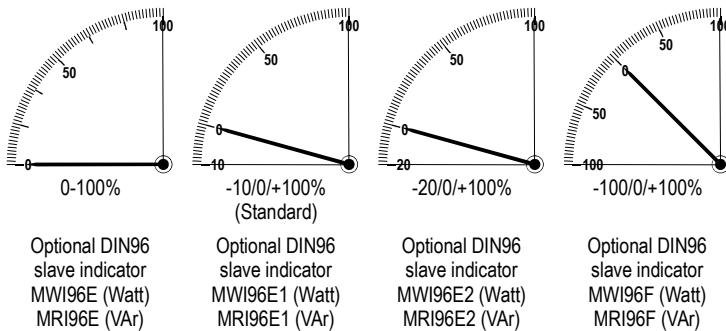## Model Overview (Watt)

Models	Active Power (W)	O/P 1	O/P 2	Standard model	Optional model
MC1W2DA	1 element, single phase	X	-	X	-
MC1W2DB	1 element, single phase	X	X	-	X
MC1W3DA	1 element, 3 phase, 3 wire, balanced load	X	-	X	-
MC1W3DB	1 element, 3 phase, 3 wire, balanced load	X	X	-	X
MC1W4DA	1 element, 3 phase, 4 wire, balanced load	X	-	X	-
MC1W4DB	1 element, 3 phase, 4 wire, balanced load	X	X	-	X
MC2W3DA	2 element, 3 phase, 3 wire, unbalanced load	X	-	X	-
MC2W3DB	2 element, 3 phase, 3 wire, unbalanced load	X	X	-	X
MC3W3DA	3 element, 3 phase, 3 wire, unbalanced load	X	-	X	-
MC3W3DB	3 element, 3 phase, 3 wire, unbalanced load	X	X	-	X
MC3W4DA	3 element, 3 phase, 4 wire, unbalanced load	X	-	X	-
MC3W4DB	3 element, 3 phase, 4 wire, unbalanced load	X	X	-	X

Model Overview (VAr)

Models	Reactive Power (VAr)	O/P 1	O/P 2	Standard model	Optional model
MC1R2DA	1 element, single phase	X	-	X	-
MC1R2DB	1 element, single phase	X	X	-	X
MC1R3DA	1 element, 3 phase, 3 wire, balanced load	X	-	X	-
MC1R3DB	1 element, 3 phase, 3 wire, balanced load	X	X	-	X
MC1R4DA	1 element, 3 phase, 4 wire, balanced load	X	-	X	-
MC1R4DB	1 element, 3 phase, 4 wire, balanced load	X	X	-	X
MC2R3DA	2 element, 3 phase, 3 wire, unbalanced load	X	-	X	-
MC2R3DB	2 element, 3 phase, 3 wire, unbalanced load	X	X	-	X
MC3R3DA	3 element, 3 phase, 3 wire, unbalanced load	X	-	X	-
MC3R3DB	3 element, 3 phase, 3 wire, unbalanced load	X	X	-	X
MC3R4DA	3 element, 3 phase, 4 wire, unbalanced load	X	-	X	-
MC3R4DB	3 element, 3 phase, 4 wire, unbalanced load	X	X	-	X

Scaling for optional DIN96 slave indicator

Shown below are designations for the available circuit configurations:

0-100%	-10/0/+100% (Standard)	-20/0/+100%	-100/0/+100%
Optional DIN96 slave indicator MWI96E (Watt) MRI96E (VAr)	Optional DIN96 slave indicator MWI96E1 (Watt) MRI96E1 (VAr)	Optional DIN96 slave indicator MWI96E2 (Watt) MRI96E2 (VAr)	Optional DIN96 slave indicator MWI96F (Watt) MRI96F (VAr)

Analogue Output

The output signals are proportional to the meter reading.

The signal is specifically intended as an input to a control system for monitoring or control.

Add suffix from table below to type designation to specify output required:

Outputs 1
O/P1	**0 - 10mA**
O/P2	**0 - 20mA**
O/P3	**4 - 20mA**
O/P4	**4 - 12 - 20mA**
O/P5	**4 - 5,45 - 20mA**
O/P6	**-10 - 0 - +10mA**
O/P7	**-20 - 0 - +20mA**
O/P8	**0 - 10V**
O/P9	**0,2 - 10V**
O/P10	**4,3 - 20mA**

Outputs 2
O/P11	**0 - 10mA**
O/P12	**0 - 20mA**
O/P13	**4 - 20mA**
O/P14	**4 - 12 - 20mA**
O/P15	**4 - 5,45 - 20mA**
O/P16	**-10 - 0 - +10mA**
O/P17	**-20 - 0 - +20mA**
O/P18	**0 - 10V**
O/P19	**0,2 - 10V**
O/P20	**4,3 - 20mA**

Connection
Terminal type	: Terminal Clamp and Screw
Wire max.	: T1-T4,
	T26-T27: AWG 24-14,
	T5-T10: AWG 12,
	other terminals: AWG 24-12
Screw Torque	: 0.5Nm

Overload
Voltage	: 1.2 x Un continuous
	2 x Un for 10secs
Current	: 2.5 x In continuous
	5 x In for 1secs (max 25A)

Dimensions

Mounting : 35mm Rail Mount EN 60715
Dimensions: 100mm x 75mm x 110mm

Slave Indicator	A	B	C
DIN96	96 x 96mm	92 x 92mm	64mm

Panel cut-out Maximum panel thickness 10mm

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

ORDERING INFORMATION (Example)
Type	: MC2W3DB
Aux. Supply	: 200-240VAC
Input Voltage	: 230V
Input Current C.T.	: 1500/5A
Range	: -60/0/+600kW
Analogue output 1	: O/P3: 4-20mA
Analogue output 2	: O/P18: 0-10VDC

Optional Separate Aux. Supply:
Add **-SA** for models with Separate **AC** Aux. Supply. (Example: MC2W3DB-**SA**)

Add **-SD** for models with Separate **DC** Aux. Supply. (Example: MC2W3DB-**SD**)

IS range

Norway
Denmark
United Kingdom

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