



- Under and Over Voltage and Frequency Protection
- Adjustable Voltage and Frequency Deviation Set points
- The Pathfinder function eases fault finding
- Up to two individual very fast analogue output signals (<50mS), (optional)
- DIN96 Slave Indicator with Hz 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)
Supply tolerance:	110-220VDC (Fuse 1A)
Power rating:	+10%, -20%
Current Input:	5VA
Contact rating:	1A CT or 5A CT, <0,1VA
Adjustments:	AC: 100VA -250V/2A max. DC: 50W -100V/1A max. Depending on the selected model (See table on the right)
Frequency range:	45-55Hz (Other range on request)
Analogue output 1:	45-65Hz, 30-70Hz
(see page 2 for available outputs)	mA: Up to 20mA, max 500R V: Up to 10V, min 100kohm (other on request)
Analogue output 2:	mA: Up to 20mA, max 500R V: Up to 10V, min 500ohm (other on request)
(see page 2 for available outputs)	
Accuracy:	Class 0,5
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 KCFV54x series are also available for panel mounting as KPFV54x series.

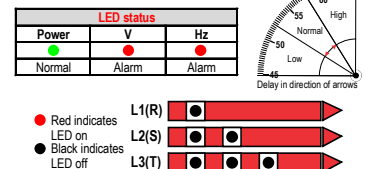
Description

The digitally controlled KCFV54x is for use on three phase, four wire systems. KCFV54x provides precision monitoring of frequency and line voltage on any generator system. When trip delays are set to zero (0,1sec) operation corresponds with G59 requirements.

User settable trip levels and delays. LEDs flash during count-down. Colour of LEDs indicates alarm status.

The Pathfinder (only on latching models) indicates the phase (s) causing the trip by the flashing pattern of the relevant LED.

Up to two individual very fast analogue output signals (optional) proportional to Hz range (see page 2 for available outputs). The analogue output is isolated from both voltage input and auxiliary power.



Relay Configurations

Less than 50mS fault detection. R1 (Under & Over Frequency) and R2 (Under & Over Voltage) activates when set level is exceeded and time delay has elapsed. R3 activates when R1 or R2 is activated and can be used as a common alarm.

KCFV54E - KCFV54FA - KCFV54FB

Models	Latch	Output 1	Output 2	Relay	V	Hz	Fail Safe	Latch	Adjustments	Trip level	Delay
KCFV54E	X	-	-	R1		X		X	UV:	0-20% of V nom.	0,1-30secs
KCFV54FA	X	X	-	R2	X		X	X	O/V:	0-20% of V nom.	0,1-30secs
KCFV54FB	X	X	X	R3	X	X		X	U/Hz:	45-65Hz	0,1-30secs
									O/Hz:	45-65Hz	0,1-30secs

(KCFV54E is the standard version)

Relays shown de-energised.
R2 is fail-safe and energises when unit is powered.

KCFV54C - KCFV54CFA - KCFV54CFB

Models	Latch	Output 1	Output 2	Relay	V	Hz	Fail Safe	Latch	Adjustments	Trip level	Delay
KCFV54C	X	-	-	R1		X		X	UV:	0-20% of V nom.	0,1-30secs
KCFV54CFA	X	X	-	R2	X		X	X	O/V:	0-20% of V nom.	0,1-30secs
KCFV54CFB	X	X	X	R3	X	X		X	U/Hz:	45-65Hz	0,1-30secs
									O/Hz:	45-65Hz	0,1-30secs

Relays shown de-energised.
R2 is fail-safe and energises when unit is powered.

KCFV54D - KCFV54DFA - KCFV54DFB

Models	Latch	Output 1	Output 2	Relay	V	Hz	Fail Safe	Latch	Adjustments	Trip level	Delay
KCFV54D	-	-	-	R1		X			UV:	0-20% of V nom.	0,1-30secs
KCFV54DFA	-	X	-	R2	X		X		O/V:	0-20% of V nom.	0,1-30secs
KCFV54DFB	-	X	X	R3	X	X			U/Hz:	45-65Hz	0,1-30secs
									O/Hz:	45-65Hz	0,1-30secs

Relays shown de-energised.
R2 is fail-safe and energises when unit is powered.

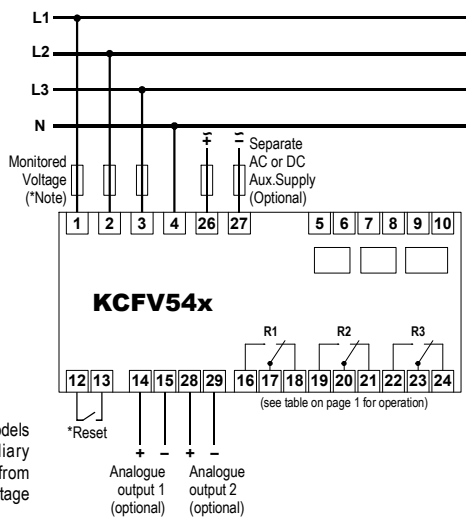
KCFV54D2 - KCFV54D2FA - KCFV54D2FB

Models	Latch	Output 1	Output 2	Relay	V	Hz	Fail Safe	Latch	Adjustments	Trip level	Delay
KCFV54D2	-	-	-	R1		X			UV:	0-20% of V nom.	0,1-30secs
KCFV54D2FA	-	X	-	R2	X		X		O/V:	0-20% of V nom.	0,1-30secs
KCFV54D2FB	-	X	X	R3	X	X	X		U/Hz:	45-65Hz	0,1-30secs
									O/Hz:	45-65Hz	0,1-30secs

Relays shown de-energised.
R2 is fail-safe and energises when unit is powered.

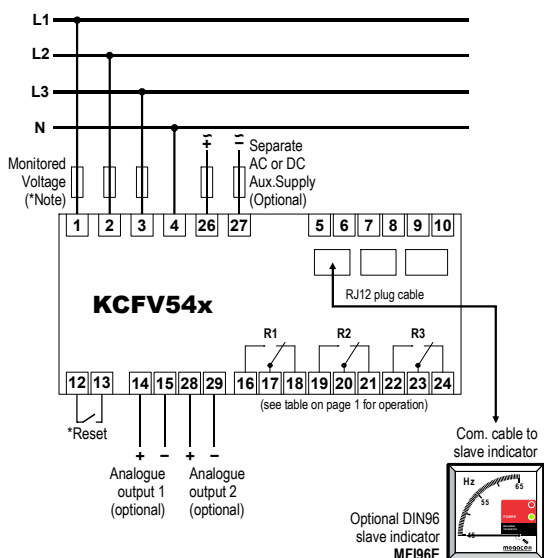
Connection Diagram

Connection Diagram without optional slave instrument



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

Connection Diagram with optional slave instrument



***Reset**
Any latched relay is reset by linking terminals 12 and 13 or by interrupting the auxiliary voltage supply.

Analogue Output

The output signals are proportional to the meter reading (see page 1 for an overview of models and functions).

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	N/A
O/P5	N/A
O/P6	N/A
O/P7	N/A
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	N/A
O/P15	N/A
O/P16	N/A
O/P17	N/A
O/P18	0 - 10V
O/P19	0,2 - 10V
O/P20	4,3 - 20mA

Relay Contacts

Burden on supply	: 170mW per relay
Switching voltage (Max)	: 400V AC, 300V DC
Switching voltage (Rated)	: 250V AC, 30V DC
Max I continuous	: 6A RMS, 6A DC
Max breaking capacity	: 1500VA AC, 18-120W DC
Dielectric strength across Open contacts	: 1000V RMS

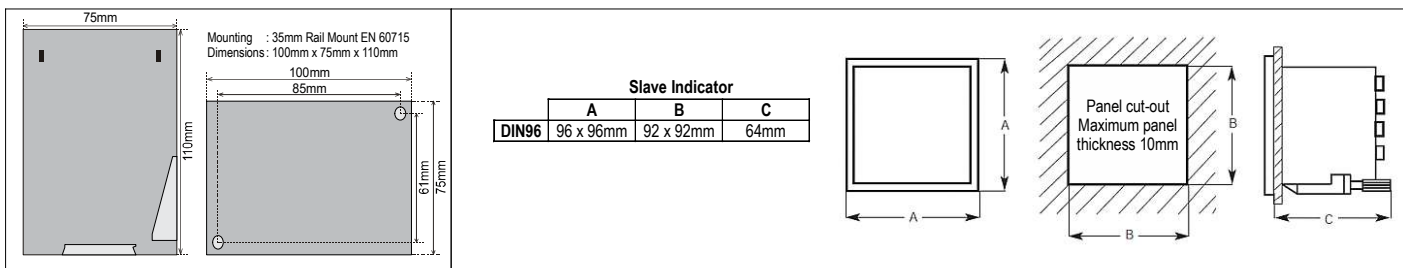
Connection

Terminal type	: Terminal Clamp and Screw
Wire max.	: T1-T4, T5-T10: AWG 24-14, 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



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

ORDERING INFORMATION

Type	: KCFV54FB
Aux. Supply	: 200-240VAC
Input Voltage	: Nom. 230V
Range	: 45-65Hz
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: KCFV54FB-SA)
Add **-SD** for models with Separate DC Aux. Supply. (Example: KCFV54FB-SD)

