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PowerCom M553-CTX

The M553-CTX PowerCom is a complete single or three phase multifunction ac power transducer, providing RS485 Modbus communication and a pulsed output in a 55mm Din enclosure.

The M553-CTX model can be used on single phase and three phase systems without modification. It has a universal power supply which is suitable for ac or dc auxiliary voltages.

The M553-CTX covers a wide range of voltage inputs and CT and VT ratios can be programmed.

COMMUNICATION

The M553-CTX uses the well established Modbus protocol. This enables remote reading and programming of the M553-CTX using a host computer.

The RS485 network allows up to 32 units to be connected in parallel, enabling them to be used with PC, PLC, RTU, Data loggers and Scada programs.

The PowerCom's communication port incorporates an auto-configure function which, when connected to an existing Modbus network, will automatically detect the network's parameters.

A red LED is provided to indicate that auxiliary power is present, and that the unit is communicating correctly.

PROGRAMMING

The following can be programmed via the RS485 port: CT and VT ratios, pulse duration, relay divisor.

SOFTWARE

MultiView set-up and monitoring software is available free of charge from our web-site: www.multitek-ltd.com

PULSED OUTPUT

An optional pulsed output can be ordered. This can be assigned to W.h Var.h (import or export) A.h or VA.h. Alternatively, it can be configured to act as set-point indicator.

SYSTEM TYPES

Single Phase
Single phase 3 wire
3 phase 3 wire balanced load
3 phase 4 wire balanced load
3 phase 3 wire unbalanced load
3 phase 4 wire unbalanced load

PARAMETERS MEASURED

* Phase Voltage (V)
* Line Voltage (V)
* Phase Current (I)
* Frequency (Hz)
* Active Power per phase (W)
* System Active Power (W)
* Reactive Power per phase (VAr)
* System Reactive Power (VAr)
* Apparent Power per phase (VA)
* System Apparent Power (VA)
* Import Active Energy (W.h)
* Export Active Energy (W.h)
* Import Reactive Energy (VAr.h)
* Export Reactive Energy (VAr.h)
* Apparent Energy (VA.h)
* Ampere Energy (A.h)
* Power Factor per phase (P.F.)
* System Power Factor (P.F.)
* Amp Demand (Ad)
* Watt Demand (Wd)
* V A Demand (VAd)
* Maximum Amp Demand (Max Ad)
* Maximum Watt Demand Import (Max Wd)
* Maximum Watt Demand Export (Max Wd)
* Maximum VA Demand (Max VAd)
* Neutral Current
* Hours Run

ORDERING INFORMATION

Information required	Example
Product Code	M553-CTX
Nominal input current specify	1 or 5A AC

GENERAL SPECIFICATION

INPUT

Rated Un	Direct connected voltages between 28 to 330V L-N. 48V to 570V L-L. (280V L-N. Nominal)
Range Un	2-120% Un
Overload	800V continous
Rated In	1A or 5A nominal
Range In	2-120% via C.T.
De-rate Point	2% In
Overload	4xIn for 1 second
Burden	0.5VA per phase Volts & Amps
Frequency	45-65Hz

ACCURACY

Specified @ 23°C 10%-Un 10%-In

Parameters unless stated	Class 0.3% to IEC 688
Volts and Amps	Class 0.25% to IEC 688
Frequency	Class 0.1Hz to IEC 688
Power Factor	Class 1.0% to IEC 688
Active & Reactive Energy 1% of reading to IEC 1036	

INSULATION

Installation category	III (480 VAC ph/ph)
Degree of pollution	2
Rated impulse withstand voltage IEC60947-1-V imp:4kV	
Electrical security	IEC 61010-1
Inputs + Aux to case	3kV rms 50Hz for 1 min
Inputs + Aux to RS485	3kV rms 50Hz for 1 min
Inputs + Aux to relay	1k5V rms 50Hz for 1 min

ELECTROMAGNETIC COMPATIBILITY

Immunity to :

electrostatic discharges:	IEC 61000-4-2-Level III
radiated radio-Hz fields:	IEC 61000-4-3-Level III
electrical fast transient/bursts:	IEC 61000-4-4-Level III
impulse waves:	IEC 61000-4-5-Level III
conducted disturbances:	IEC 61000-4-6-Level III
voltage dips & short interruptions: IEC 61000-4-11	

Emissions to:

Conducted and radiated	CISPR11-Class A

AUXILIARY

100 to 440V ac   100 to 420V dc
45 to 65Hz Burden <10VA

ENVIRONMENTAL

Working Temperature	0 to +60 deg C
Storage Temperature	-30 to +65 deg C
Temperature Coefficient	0.01% per deg C

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OPTIONS

Low voltage dc auxiliary	19-69V dc
Frequency	380-420Hz
dc measurement	

DC OPTION PARAMETERS MEASURED

* Voltage (V)
* Current (I)
* Power (W)
* Energy (W.h)
* Amp Demand
* Power Demand
* Maximum Amp Demand (Max Ad)
* Maximum Power Demand (Max Wd)
* Ampere Hours (A.h)
* Hours Run

APPLIED STANDARDS
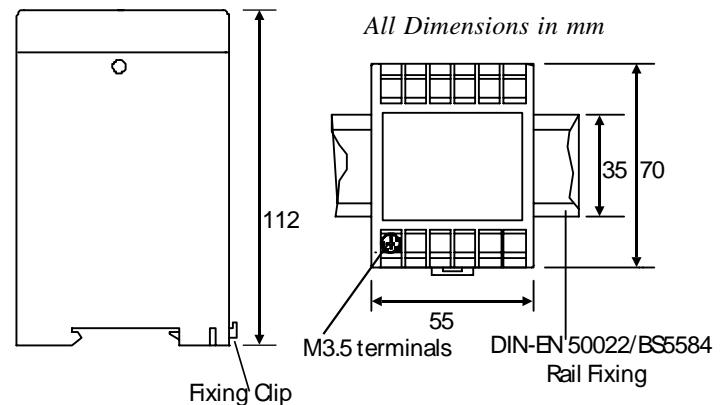
General	IEC 688 BSEN60688 BS4889 IEC 359
Safety	IEC 6101-1 2010

APPROVALS

UL, C-UL,	Pending

CASE DIMENSIONS

All Dimensions in mm

112   35 70   55

M3.5 terminals   DIN-EN 50022/BS5584 Rail Fixing

Fixing Clip

CONNECTION DIAGRAM
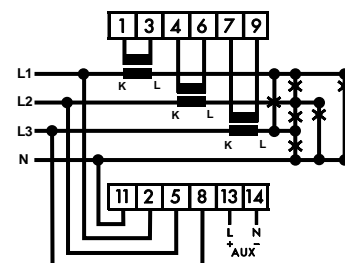
	Voltage				Current		
	L1	L2	L3	N	L1	L2	L3
1ph	√	×	×	√	√	×	×
1ph 3W	√	√	×	√	√	×	×
3ph 3W	√	√	√	×	√	×	√
3ph 4W	√	√	√	√	√	√	√
3ph 3W BAL	√	√	√	×	√	×	×
3ph 4W BAL	√	×	×	√	√	×	×

Unused voltage terminals are internally connected