Automatic demand manager

Maxchek 400 is a smart maximum demand controller with standard size 96x96 mm specifically designed for industries to keep a check on their maximum demand. It gives an alarm when demand approaches a preset value and also switches off non-essential loads in a pre-programmed logical sequence. This predictive maximum demand controller (MDC) allows stage wise load restoration to maximize the use of a sanctioned load. Maxchek 400 is most suitable for the demand control of industrial consumers, HT consumers and commercial establishments. It also support ethernet module for communication.

Application

- Commercial and industrial sanctioned demand monitoring & controlling applications
- Control panels for complete plant demand controlling
- Demand management for commerce and industry

Benefits

- Easy interface with external devices through built-in
- Modbus (RS-485)
- Detachable connectors for easy installation
- Three relay and one alarm output
- Suitable for star or delta connections and for low or
- high-voltage applications
- Alarm output for audible indication.
- Field-configurable CT/PT primary and secondary values
- using push-buttons
- Calibration LED for on-site accuracy check
- Configurable software (ConfigView) for reading of parameters and load survey
- Shift wise demand configuration

Features

- Two modes of programming - preventive mode (only alarm no control), predictive mode (alarm and automatic control)
- Predictive demand control to forewarn, take corrective measures and check maximum demand crossovers
- Multi-level (phase wise and shift wise) priority based automatic load control mechanism to disconnect low priority loads in phased manner
- Configurable demand integration period for sliding and fixed type
- Optimised load disconnection time
- Online load planning by continuously indicating loads that can be added or need to be disconnected (within safe operating limits)
- Check meter with accuracy class 0.2s,0.5s and 1.0
- Auto and push button display
- An user friendly software to program and monitor
- Control outputs for alarm and trip applications - it provides 3 control and one alarm outputs, in the form of potential free contacts
- Large four-line seven-digit display (9.7 H x 5 W mm) with quadrant identification section and bar graph for instantaneous power-level indication
- Ethernet gateway module for easy integration

CEWE
INSTRUMENT
a **Secure** brand

Maxchek 400

Enriched software - ConfigView

Connection diagram

LT3Ø4W

V1	V2	V3	VN

S1 S2	S1 S2	S1 S2
I1	I2	I3

AUX		RS-485		
+/P	-/N	+	-	SG

Auxiliary supply **P** **N**

In case of CT/PT operated meter, ensure that meter is connected on secondary side of instrument transformer.

HT3Ø3W

V1	V2	V3	VN

S1 S2	S1 S2	S1 S2
I1	I2	I3

AUX		RS-485		
+/P	-/N	+	-	SG

Auxiliary supply **P** **N**
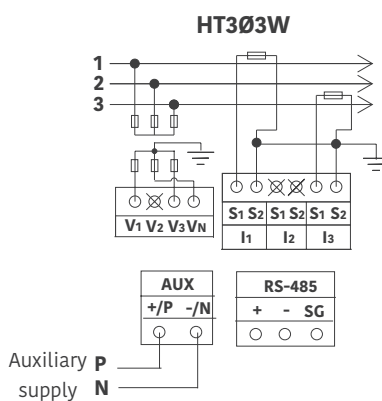
In case of 3Ø3W, VN is replaced by V2 .

HT3Ø4W

V1	V2	V3	VN

S1 S2	S1 S2	S1 S2
I1	I2	I3

AUX		RS-485		
+/P	-/N	+	-	SG

Auxiliary supply **P** **N**

⚠ SHORT CTs BEFORE OPENING CURRENT TERMINALS
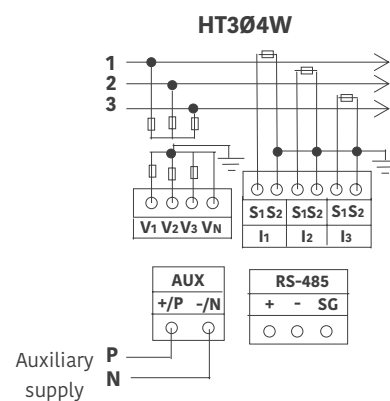
Mechanical dimensions
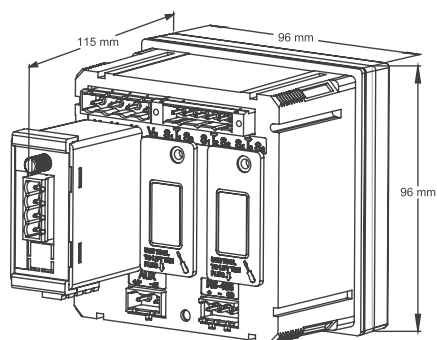
Meter with control & alarm module

Ethernet module

Meter with control & alarm and Ethernet module

Technical specifications

Electrical

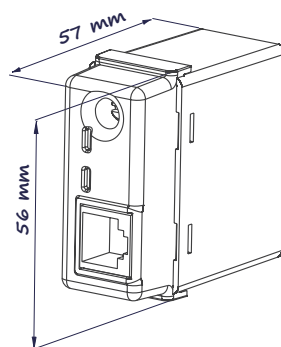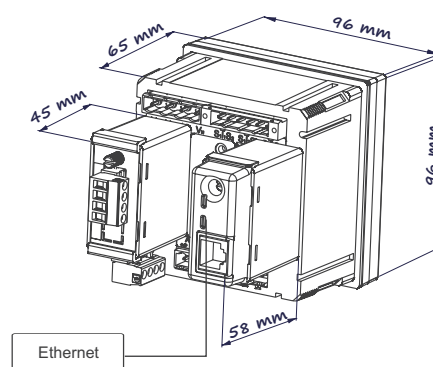|	
Connection type	Common product for HT3/ HT4/LT application
Wiring configuration	Common product for 3 P-3 W and 3 P-4 W application
Voltage range:	
Measurement voltage range	57.7 V(100V) - 240 V (415 V) AC 3 phase 4 wire (3 phase 3 wire)
	Tolerance -30% to +20% of Vn
	Aux power supply range 80 - 300 V AC/DC or 24 - 60 V DC (variant)
Current range	Available 1-2A and 5-10 A in single variant (field configurable)
Main frequency	50/60Hz with ±5%
Accuracy class	0.2s, 0.5s, 1.0
Burden	Aux burden: 3.5 VA; 8VA with module connected
	Current ckt burden: 1 A - 0.05VA per phase, 5 A - 0.25 VA per phase
	Voltage ckt burden: 0.15 VA per phase
Energy type	Active Imp (T), Apparent Imp, Active Forwarded, Apparent Forwarded
Averaging period	1min or 5min
Trip circuit	3 Circuit
Alarm activation time	Active for 30 seconds or active for whole averaging period
Short time over current	20 x Imax for 1 sec., 10 x Imax for 3 sec., 7 x Imax for 10 sec.

Compliance

Standards*	IS13779, IS14697, IEC62052-11, IEC62053-23 and IEC62053-22, IEC61010

Mechanical

Dimensions (WXHXD)	96 x 96 x 115 mm
	Cut out size 92 x 92 mm
Weight	0.5 kg (approx)
Mechanical enclosure	FRPC
Terminals	Combicon connector
Max conductor size	2.5 mm^2

Environmental

Iingress protection	IP 54 (front fascia); IP20 (at terminals)
Insulation	4 kV RMS 50 Hz
Impulse withstand	6 kV
Temperature	-20 °C to +60 °C (operating)
	-25 °C to +80 °C (storage)
Humidity	95% non-condensing

Features

Favourite page	On/Off
CT/VT primary	Configurable in field through keypad
Communication	RS485 Modbus half duplex (default) and data will be available in floating point format
Baud rate	from 1200-38400 bps (default 9600 bps)
Load survey	40 days for 6 parameters @ 30 min IP
	Options for 15 or 60-minute integration period.

Modules

Control & alarm	1 Alarm (230VAC/DC at 100mA) and 3 control output (2A at 230VAC, SPST NO type)
Ethernet	10/100base-T for Modbus over TCP/IP communication