PolyPhase BS Standard Credit Meter

5245

Technical data

The 5245 meter is a whole current credit meter with an integral 100 amp contactor and a 2 amp relay.

Date:05/12/08
Document Number IB061
5245 Technical Specification

5245 Technical Specifications

General

Voltage

Nominal Voltage U_n	
	110-130V
	220-240V
	3x127/220V…3x230/400V
Voltage Range	80-115%Un
Voltage Withstand	415V Continuous

Frequency

Nominal Frequency	50/60Hz
Frequency Variation	+/- 2%

IEC-specific data

Current

Base Current	
Direct Connection Ib	5, 10, 15, 20A
Current Max	
Imax	80, 100, 120, 125A
Starting Current	
IEC Class 1	0.4% Ib
IEC Class 2	0.5% Ib

Measurement Accuracy

Max Measuring Range	
	20mA up to 125A
Measuring Accuracy	
Active Energy IEC	Class 1 or 2
Reactive Energy IEC	Class 2 or 3

MID-specific data

Current

Base Current	
Direct Connection Iref	5,10,15, 20A
Current Max	
Imax	80, 100, 120, 125A
Starting Current	
MID Class B	0.04Itr
MID Class A	0.05Itr

Measurement Accuracy

Max Measuring Range	20mA up to 125A
Measuring Accuracy	
Active Energy MID	Class A or B
Reactive Energy IEC	Class 2 or 3

General

Operating Behaviour

Voltage Interruptions (Power Down)	
Blocking of inputs and outputs	Immediate
Standby Operation	for 0.15s
Data Storage	Immediate
Switch Off	after approx 1s
Voltage Restoration (Power Up)	
Function Standby	<5s
(depending on duration of failue)	
Detection of energy direction and phase voltage	<5s

Power Supply Quality

The meter complies with EN63052-11 Section 7.1.1 Voltage range and 7.1.2 Voltage dips and short interruptions

Power Consumption

Voltage Circuit	
Single Phase	<5W
	<25V
Polyphase	<3W
	<15VA
Current Circuit	<2.5VA

Environmental Influences

Temperature Test	IEC62053-21, IEC62053-23
Temperature Range	
Operation	-25°C to +55°C
Power Measurement Range	-40°C to +70°C
Storage	-25°C to +70°C

This complies with EN 62052-11:2003 section 6.1

Temperature Coefficient	
Range	From -25°C to +55°C
Typical mean value	±0.015% per K
IEC 50470-3	
$\cos\varphi$ =1 (from Imin to I_{max})	±0.05% per K
$\cos\varphi$=0.5 (from Itr to I_{max})	±0.07% per K
IEC 62053-23	
$\sin\varphi$ =1 (from 0.1 I_b to I_{max})	±0.10% per K
$\sin\varphi$=0.5 (from 02 I_b to I_{max})	±0.15% per K
Impermeability to IEC 60529	IP52
Shock Test	BS EN60068-2-27

Electromagnetic Compatibility

Electrostatic Discharges	to IEC 610000-4-2
Contact Discharges	8kV
Air Discharges	15kV
Electromagnetic RF Fields	to IEC 610000-4-3
80 MHz to 2 GHz	at least 10V/m
Radio Interference suppression	to IEC/CISPR 22 Class B

Fast Transient Burst Test	to IEC 610000-4-4
With basic current I_b:	
For current and voltage circuits	4kV
For auxiliary circuits >40V	4kV
With open current circuit for voltage and current circuits	4kV
Fast Transient Surge Test	to IEC 610000-4-5
Impulse Voltage	4kV
Impedance of source	2Ω
Rise/Decay time of impulse voltage	1.2µs/50µs
Rise/Decay time of impulse voltage	8µs/50µs

Insulation Strength

Insulation Strength	4.4kV at 50Hz for 80 seconds
Impulse Voltage Strength	to IEC62053-11
Impulse Voltage	6kV
Impedance of source	500Ω
Rise/Decay time of impulse voltage	1.2µs/50µs

Protection Class II to IEC626050-131 ⧈2

Display

Characteristics	
Type	7 character, 7 segment LCD
Digit size	10mm
Number of Digits	6 significant numbers 2dp

Communication interfaces

CS Interface	
Type	Serial bi-directional
Standard	IEC61107 / DIN 66258
Rated Voltage	24V DC
Max. Voltage	30V DC
Transmitter Current – on state	11mA min. 20 mA typ. 30mA Max
Off State	2.5mA Max
Communication Speed	4800 Baud
Pulse Output	
Type	SO Interface (or data stream)
Standard	IEC61393 / DIN 43864
Configurable	Wh/imp or varh/imp
Pulse Constant	Configurable (1-10000)
Supply Voltage (typ.)	24V
Supply Voltage (max.)	50V
Current	10mAdc
Pulse Length	Configurable (10mS-10000mS)

Case Material

Base, Top Cover and Terminal Cover
Flame retardant and UV stabilised polycarbonate

Weight and Dimensions

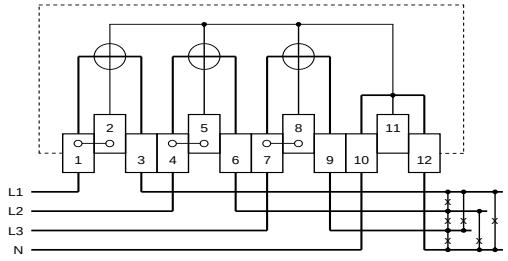
Weight	
Standard	1Kg
Dimensions	
Width	170mm
Height	182.4mm
Depth	65.5mm
Height (with extd terminal cover)	239.1mm
Terminal Details	
Arrangement	BS5685
Size	9.5mm diameter

Connections

Standard Layout and Dimensions

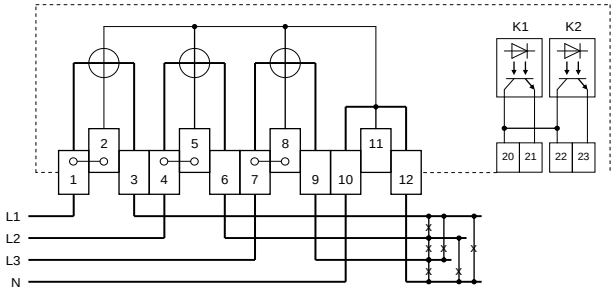
Terminal Connection Diagrams

Single Tariff Version



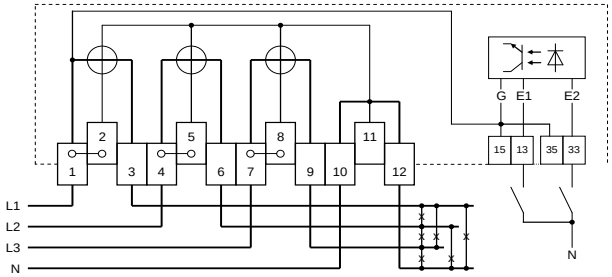
ECD Type A. 3-phase 4-wire network

Single Tariff Version with Twin Pulse Outputs



ECD Type B. 3-phase 4-wire network. 2-Pulse Outputs

Multi tariff Version with Twin External Neutral Switch



ECD Type D-N. 3-Phase 4-wire Twin external neutral switch

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