



PROFLINE 2100 - OVERVIEW

HARMONICS AND FLICKER MEASURING SYSTEM



- Single phase version
- Three phase version
- Complete measurement system
- Use existing power sources or mains

System

ProfLine 2100 is an accurate and flexible system designed to measure harmonics and flicker in accordance with IEC 61000-3-2 and IEC 61000-3-3. This is a measuring system only and no AC source is supplied. It can therefore be used with any suitable, clean AC source to measure and record any harmonics and flicker created by the EUT. A wide range of AC sources are available from Teseq, please see ProfLine 2103, 2105, 2115, 2130, 2145 datasheets for suitable systems including power sources.

1- or 3-phase

ProfLine 2100 can be supplied as either a 1-phase or 3-phase measuring system and can measure harmonics and flicker up to 16 Amps per phase. Measurements are made using precision, no burden, active hall-effect current transformers connected via a dedicated cable to a multichannel fast Data Acquisition Card (DAQ) fitted inside a PC. Three current and one voltage measuring channels are dedicated to each supply phase allowing simultaneous measurement of both current and voltage on all phases. Calculations are made using dedicated Teseq software (WIN 2100) to determine harmonics (classes A-D), inter-harmonics, flicker, dc, dt, dmax, Pst, Plt, inrush current and 24 x dmax.

Impedance

Measurement of flicker requires a fixed, stable source impedance as specified in IEC 61000-3-3 ($0.24 \Omega + j0.15 \Omega$ in the line and $0.16 \Omega + j0.1 \Omega$ in the neutral). When supplied as a complete system (see ProfLine 2103, 2105, 2115, 2130 or 2145) which include a precision AC source, the impedance is provided by a combination of a controlled source impedance and physical impedances supplied as part of the system. Users of the ProfLine 2100 measurement system must take care to provide the necessary source impedance. Hardware lumped impedances are available from Teseq, see options list.

T E S E Q

Advanced Test Solutions for EMC

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Technical information

	ProfLine 2100-1	ProfLine 2100-3
System contents	CCN 1000-1 1-phase coupling unit DAQ card Interface cable WIN 2100 test software	CCN 1000-3 1-phase coupling unit DAQ card Interface cable WIN 2100 test software
Coupling unit		
Number of phases	1	3
Measurement channels	4	12
EUT connector: Front panel	CEE 77	None
EUT connector: Rear panel	Terminal block	Terminal block
Max. voltage: Front panel	240 Vac	N/A
Max. current: Front panel	16 Arms	N/A
Max. voltage: Rear panel	300 Vac	480 Vac
Max. current: Rear panel	40 Arms/Ph. (200 A Pk for 10 ms)	40 Arms/Ph. (200 A Pk for 10 ms)
Supply power: Voltage	115/230 Vac +/- 10%	115/230 Vac +/- 10%
Supply power: Current	<0.5 A	<0.7 A
Supply power: Frequency	50/60 Hz	50/60 Hz
Dimensions (H x W x D)	89 x 427 x 560 mm	89 x 427 x 560 mm
Weight	5 kg	5 kg
DAQ card and cable		
Interface	PCI	PCI
Size	Standard height	Standard height
Resolution	16 bit	16 bit
Speed	250 kSamples/s	1.25 MSamples/s
Cable length PC to CCN	2 m	2 m

Options

- INA 2151, 1-phase IEC 61000-3-3 16 Amp reference impedance
- INA 2154, 3-phase IEC 61000-3-3 16 Amp per phase reference impedance
- CCN 1000-1L, 1-phase coupling unit with integrated IEC 61000-3-3 16 Amp impedance
- INA 2188, Rack mounting kit for CCN 1000-1, CCN 1000-1L or CCN 1000-3
- WIN 2106, Test software for IEC 61000-3-11 and IEC 61000-3-12

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