



SITEX SCU286

STANDARD CONTROL UNIT



PORTABLE X-RAY GENERATOR

Increase the reliability of on-site X-ray techniques while decreasing their costs

GENERAL FEATURES

Being designed on the basis of industrial PC boards (tropicalised SMD technology) equipped with the 80286 INTEL processor, the SITE-X standard control unit offers a degree of reliability rarely attained with industrial equipment manufactured in small batches.

Its transistor power circuit enables the operator to have virtually no knowledge of the characteristics of the network or the generating set to which it is connected. Like all the generators in the range, the SCU286 is guaranteed IP65 weatherproof. It achieves all its nominal performances between -25° and +55°C ambient temperature. Its weight is 14 kg and its ergonomics and robustness are exemplary.

MAINTENANCE

A very efficient resident maintenance software determines the origin of any failure within a few seconds with a degree of uncertainty of less than 5%. Most of the problems can now be resolved on site by replacement of the board or component indicated by the program.

PERFORMANCE

To guarantee the accuracy of the radiological parameters the SCU286 has a system for direct measurement of the high voltage delivered by the X-ray generator. Based on this data the control system maintains the stability of milliamperes and kilovolts to within $\pm 0.5\%$ in any selection range.

Because they are virtually exempt from fluctuations in the power supply, SITE-X units offer a totally constant quality of exposures.

OPERATOR INTERFACE

The front panel is made of high-strength polyester film which incorporates a sensory-type 16-key keypad. Pilot lights, powering-on, interlock switching, "START" and "STOP" functions are provided by broad and robust indicators, switches and push buttons. A high brightness display, protected by an anti-reflection screen, gives all the useful information in the language of your choice.

RMS and peak voltages, frequency of the power supply, date and time, internal temperature, choice of language or the time zone can be called up or updated from the keypad.

A freely programmable system of access codes at three levels (supervisor, operator and service engineer) limits the access to certain functions. Disconnectable if necessary, this security system is non-active by default (except for the servicing functions).

DATABASE

The SCU286 control unit is intended above all to be user-friendly. In order to reduce the number of test shots to a minimum, the operator can, if he so wishes, utilise a virtually unlimited source of standard exposures which he himself will have made during the preceding campaigns.

All the radiological parameters of exposure are memorised by operation of a single key : kilovolts, milliamperes, exposure time, film type, focus-film distance, type of materials, controlled thickness and density of the film. Future search for the optimum exposures will be based on a specific test case and will no longer necessarily be determined by the recall of an abstract serial number which moreover is impossible to memorise.

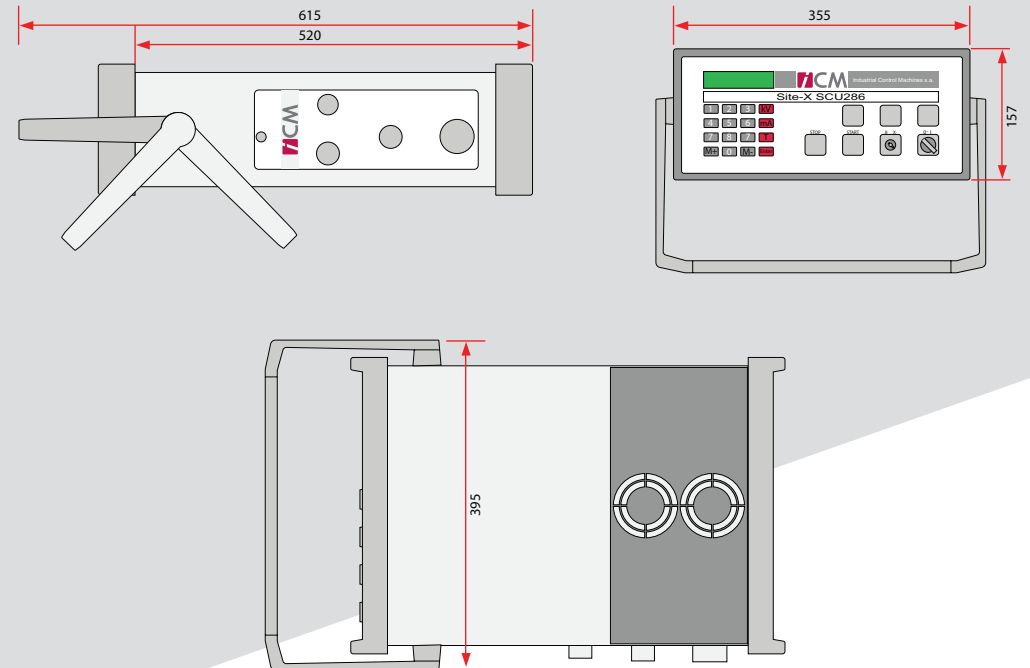
The contents of the database can readily be printed or transferred from one control unit to another through RS232 serial link.

SCU286 technical specifications :

	UNITS	SCU286
GENERAL		
Industrial PC processor/operating system	-	INTEL 80486 - 40 MHz / DOS 6
RAM/FLASH memories	-	4048 kb - 720 kb
Internal connectors for graphics card, keypad, HD and FD	-	yes
Resident maintenance softwares	-	2 levels
POWER SUPPLY		
Type of power supply	Selection	mains or power generating set
Supply voltage and frequency ranges	VAC / Hz	198 to 264 / 45 to 66 (automatic)
Max. RMS mains current (300 kV / 6mA - SITE-X D3006)	A	12 at 220 VAC (2600 VA)
Minimum power factor	-	>0.7
MEASUREMENT AND CONTROL		
Direct kV / mA measurements / Control accuracy	%	yes / +0.5 / -0.5
Simultaneous display of measurements and settings	-	yes
kV, mA setting steps and exposure times	kV/mA/s	1/0.1/1
Useful range of the timer	min / s	1 s to 99 min 59 s
Accuracy of mains control	%	+/- 0.2
Measurements and display of mains voltages and frequency	V / Hz	VRMS, VPEAK, frequency
CONTROLS AND DISPLAY		
High brightness green Vacuum Fluorescent Display	line x char.	2 x 20 with anti-reflection screen
Polyester alphanumeric keypad with sensory touch and sound effect	keys	16
Pilot light indicators (on/Xon/fuses)	-	3
Main rotary switch and security interlock switch	-	yes
Independent "START" and "STOP" push buttons	-	yes
Selection of date, time zone and language (Fr,G,D,Nl,I,E)	-	yes
3-level optional access codes - non-active by default	-	yes
Automatic preheating time and function of the selected kVs	-	yes
WEIGHT, DIMENSIONS, ENVIRONNEMENT		
Total weight	kg	14
Overall dimensions without handle (W x H x D)	mm	355 x 157 x 520
Operating temperature range	°C	-25 to +55
Storage temperature range	°C	-40 to +80
Weatherproof level	-	IP65
Carrier handle/support foot/rubber shock absorber	-	yes

DATABASE

Memory capacity of standard exposures	5000 (ext. => 20000)
Exposures parameters capable of being memorised	kV, mA, time, film, FFD, thickness, film density, materials
Search for standard exposures according to selection criteria	yes / (=> 7 criteria)
Memory capacity of executed exposures	5000 (ext. => 20000)
Printing and transfer between SCU286 of the database	yes / RS232 serial interface
Software for automatic calculation of exposure time	option



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