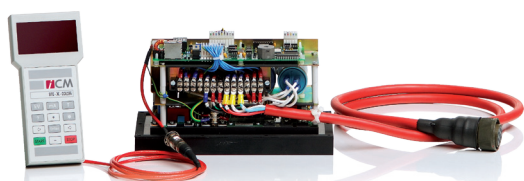




SITEX CCU186

CRAWLER CONTROL UNIT



PORTABLE X-RAY GENERATOR

Constant potential ultralightweight battery powered X-Ray Generator for NDT and Security inspections

GENERAL CHARACTERISTICS

The CCU186 control unit for crawlers offers a distinct advantage over existing products. All the performances usually achievable with standard control units are now available in the crawler configuration: automatic slow preheating, progressive rise in voltage with each exposure, selection of set values in steps of 1 kV and 0.1 mA, etc.

Being fitted entirely with electronic components of the industrial type (-25°C to 80°C), the CCU186 is perfectly suited to the often extreme conditions of automatic intra-tube control campaign.

GENERATORS

All the generators in the SITEX range are automatically identified and controlled by the CCU186 : the interchangeability is total and can be implemented instantaneously on the site.

Moreover, these same generators will operate smoothly with the standard control unit SCU286, once the intra-tube testing campaign has been completed.

CCU186R REMOTE CONTROL

Fitting a complete control unit, including display and keypad, to a crawler needlessly exposes components which are more fragile by nature to the extreme intra-tube conditions. The ICM solution is an independent pocket-size remote control unit : the CCU186R.

This provides the operator/CCU186 interface only when the radiological parameters of the campaign are being programmed. As soon as the preheating has been completed and the kVs and mAs have been keyed in, the remote control is disconnected : the crawler is then ready.

COMMUNICATION

The CCU186 is a control unit marketed exclusively as an O.E.M. product. By definition it always forms an integral part of the larger assembly constituting the complete crawler. Its inputs-except for the unique 120VDC power supply-form a direct and simple communication with the electronics of the crawler itself.

While the CCU186R controls the preheating and the kV and mA programming procedure, the crawler, by closing a simple contact, controls the execution of the exposure and its duration. In return, for each of the exposures, it receives confirmation that they have been executed efficiently and in

conformity with the programmed kV and mA radiological parameters.

PERFORMANCE

For users it is vitally important to discharge the various constituents of the battery (usually 10 elements of 12 volts) simultaneously. For this purpose the CCU186 needs only one supply voltage (from 105 to 140 VDC). Whatever the actual voltage delivered by the battery depending on its state of charge, the kilovolts and milliamperes are maintained strictly constant to within $\pm 0.5\%$ by an accurate control system.

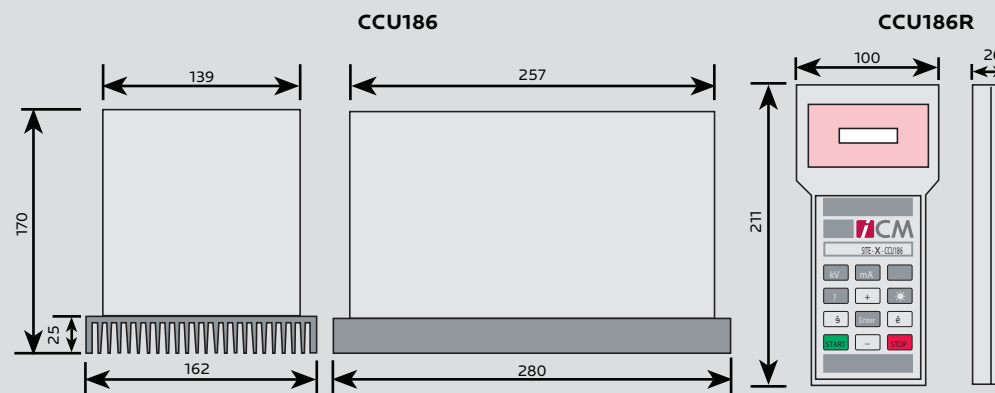
To save the available energy, the CCU186 has an automatic stand-by system which reduces the general consumption to a minimum by, for example, disconnecting the cooling fans when no command has been issued for several minutes. During the campaign any accidental interruption in the power supply immediately causes the settings to be saved to the memory thus enabling the unit to be restarted again without difficulty.

CASING

The CCU186 is available as a compact unit, embodying all the components and optimally wired. It can easily be incorporated into most crawlers.

CCU186 / CCU186R technical specifications :

	UNITS	CCU186 / CCU186R
GENERAL		
Microcontroller processor	-	8 bits - 8 MHz
Type of electronic components	-	Industrial series (-25°C to + 85°C)
POWER SUPPLY		
Type of power supply	-	Pb or Cd-Ni batteries
Unique supply voltage range	VDC	105 to 140
Max. mean current (300kV/3mA - SITE-X C3003)	A	7
MEASUREMENT AND CONTROL		
Direct kV and mA measurements - control accuracy	%	+0.5 / -0.5
Display of programmed parameters (CCU186R)	-	yes
kV, mA programming step (CCU186R)	kV/mA	1/0.1
Useful range of the internal preheating timer (CCU186R)	min	2 to 30 (1 min step)
Battery voltage control accuracy	%	± 0.2
CONTROLS AND DISPLAY (CCU186R)		
LED display with variable brightness (CCU186R)	line x	1 x 8 with anti-reflection screen
Sensory type polyester alphanumeric keypad (CCU186R)	char	12
General switch on function	keys	provided by the Crawler
“START”, “STOP” and exposure time functions	-	provided by the Crawler
Semi-automatic preheating at selected kVs	-	yes
WEIGHT, DIMENSIONS, ENVIRONNEMENT		
Total weight	kg	4
Overall dimensions of CCU186 (W x H x D)	mm	280 x 170 x 162
Overall dimensions of CCU186R (W x H x D)	mm	100 x 211 x 26
Operating temperature range	°C	-25 to +85
Storage temperature range	°C	-40 to +85



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