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T E C H N I C A L D A T A S H E E T

AchillesICP incorporating LANode[®] The Cathodic Protection Management System

Cathodic Protection systems today are growing as a cost-effective option for the civil, structural and building engineer faced with the task of maintaining and ensuring the durability of structures. They do however need specific management which cannot always be performed manually even by the seasoned specialist.

The answer can be found in the **AchillesICP** System. This is one of many software management systems offered by C-Probe under the Achilles Suite of Structural Healthcare Systems for the management of corrosion and protection of reinforced concrete and building structures.

The system incorporates new generation hardware architecture evolving from programmable logic controllers to more flexible network architectures.

This allows both simple and complex network configurations, meaning that there is virtually no limitation to the expansion of the system. Simply decide on the quantity and distribution of anode zoning and measurement locations within the system design and AchillesICP will meet these requirements.

As a result, **AchillesICP** systems are available in non-networked stand-alone units but will combine to form a network of thousands of nodes from a single Network Access Unit (NAU).

The flexibility continues with the networking system allowing the choice of power and data transmission by simple mains, twisted pair or fibre optic cabling networks.

Monitoring and control of AchillesICP is achieved through C-Probe's interactive CAD, data-basing and reporting facility, known as Achilles interactive Management Server (AiMS). Standard features include, but are not limited to, the automated acquisition of corrosion potentials and voltage/ current power outputs and the performance trending in graphical outputs allowing easy analysis of steel responses to CP protection.

This secure server allows the user to manage a whole facility or to "zoom-in" to specific locations for criterion investigation. All server and user PC software utilises the latest advances in Microsoft Windows and Crystal reporting software.

Principal Components and Features:

A. Power and Control Unit (PU)

AC Input:	110/ 240VAC; single phase; 50Hz or 60Hz.
DC Output:	24V; 3Amp (PU)
Control:	Digitally Controlled Constant Current or Voltage
Functioning:	Continuous or Intermittent (programmable).
Enclosure:	IP65 rated GRP as standard (please discuss requirements)
Other Features:	Low noise 50mV p-p Lightening Surge Protection (to 4000V)

B. Measurement Unit (MU) or Measurement LANode[®]:

No. of Channels:	16 fully differential (potential monitoring)
Resolution:	18 bit; 16cps
Communication Speed:	up to 2.5Mbps
Architecture:	peer-to-peer; free topology
Networking:	neutral with choice of mains, twisted pair or fibre optic

C. Rate Measurement Unit (RMU):

No. of Channels:	increments of 4 fully differential (potential monitoring) or 2 channel LPR and 2 channel potential monitoring.
Resolution:	18 bit; 16cps
Communication Speed:	up to 2.5Mbps
Architecture:	peer-to-peer; free topology
Networking:	choice of mains, twisted pair or fibre optic

D. Network Access Unit (NAU): single network communication and management module

An IP65 enclosure which allows communication with the network either on-site or remotely via various methods, such as landline, GPRS and wireless technology, giving control of all power unit voltage/ amperage outputs and embedded sensors. Also in this enclosure are the network power supply and the data logger/scheduler/alarming modules.