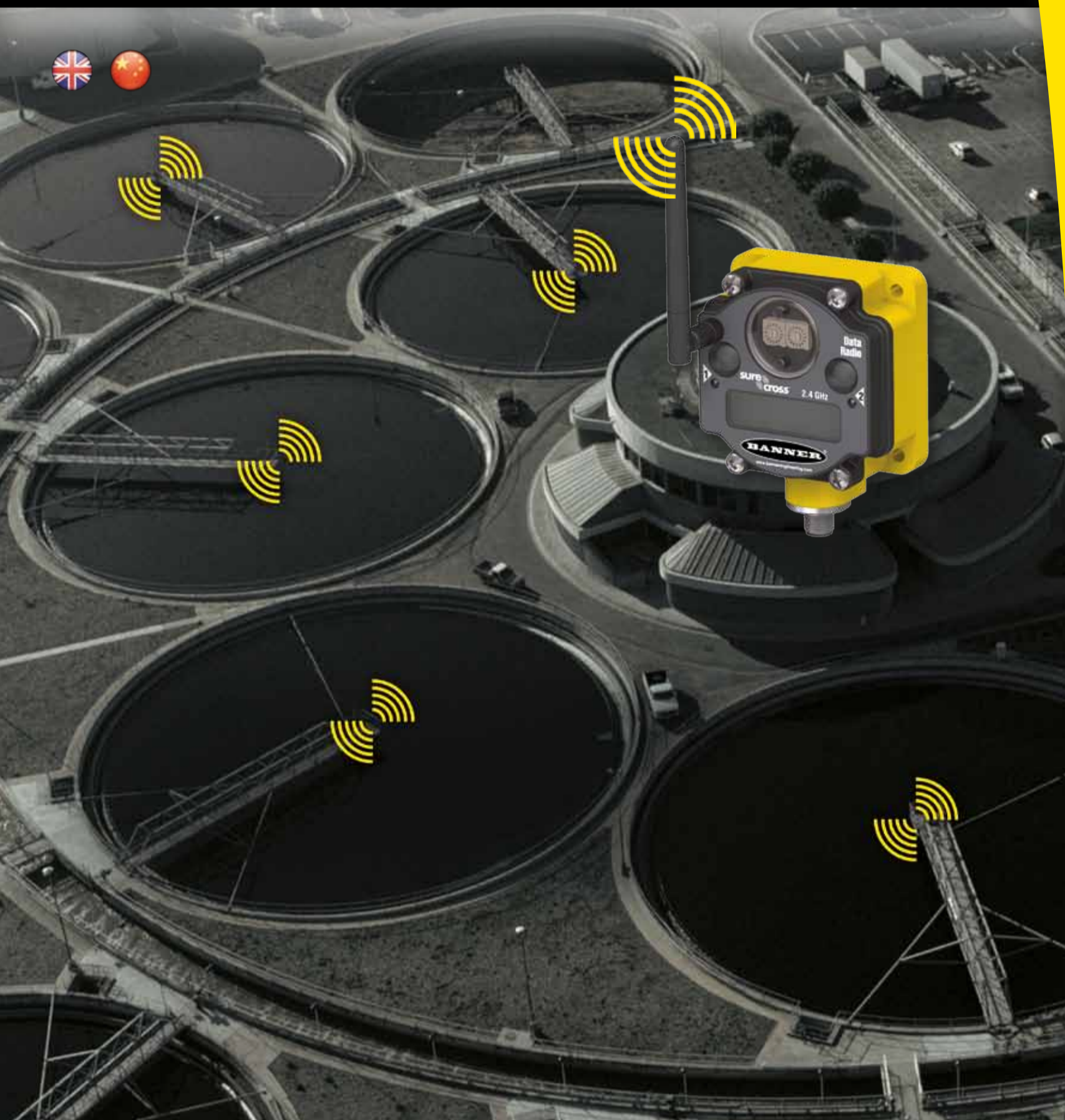


Environmental Wireless Solutions

针对环境的无线解决方案

BANNER[®]
more sensors, more solutions



BANNER ENGINEERING COMPETENCIES



- Worldwide sales and distribution with global customer support and local specialist networks give the best solutions to your application
- Strong commitment to R & D, technology and innovation with over 15 % of employees dedicated to product development
- Over 20000 products to solve a wide range of applications and providing customized sensing products for specific customer requirements in all industries
- Expert logistics together with local stock provides fast worldwide delivery
- Global market leader and number one brand name for photoelectric sensors in North America
- Within factory automation, Banner Engineering is recognized for its high quality in sensing, vision and safety

邦纳公司介绍



- 全球销售、客户支持以及本地化专家服务网络为您的应用提供最佳解决方案
- 具有强大的定制产品研发和产品革新能力，超过15%的雇员专门从事产品开发
- 20000多种产品满足众多的应用场合，并且可以为来自各行业的特殊客户要求提供产品定制服务。
- 良好的物流系统和本地库存为您提供快速的全球递送
- 全球市场的领导者，北美光电传感器的第一品牌
- 在工厂自动化领域，邦纳工程凭借其在传感、视觉和安全方面的高品质和而闻名

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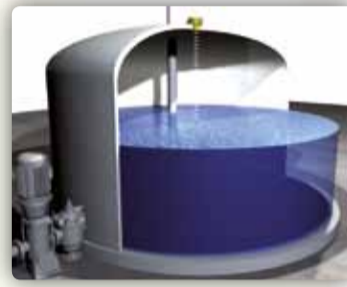
WATER TREATMENT 水处理



Monitoring multiple sensing points including fill level, pH, conductivity, and flow—often from varied locations in a large water treatment plant—can be a challenge. With four analogue inputs, a single SureCross Node can easily centralize and transmit critical monitoring information from multiple Sensors or controllers. Banner's unique power management capability enables a single Node equipped with a FlexPower™ optimized QT50U or T30UX ultrasonic analogue sensor (level detection) to operate for years on a single DX81 battery power supply.



要监视多个传感检测点，诸如液位、pH值、电导率和大型水处理厂的不同位置的流量检测，这种检测往往是一种挑战。采用邦纳公司的无线产品，只需要安装一个含有4路模拟量输入的SureCross节点就可以同时传送来自于多个传感器或控制器的关键信号。邦纳独特的电源管理功能使得连接有经过优化的FlexPower™型QT50U或T30UX超声波传感器（液位探测）的节点在单个DX81电池盒供电的情况下连续工作若干年。



Solar pannel power supply possible 可选太阳能电池



ENERGY 能源



Wind powered installations monitor wind direction and speed and solar installations track the movement of the sun to maximize the efficiency of the system. One SureCross Node with digital, analogue, and counter inputs can gather multiple data types and wirelessly transmit this data back to a Gateway installed in the control room.



风力驱动装置监测风向和风速而日向装置追踪太阳运动轨迹，以此使系统效率最大化。一个含有开关量、模拟量和计数功能的SureCross节点可以收集多种数据类型，然后经由无线回传至位于中控室内的网关。

GAS ANALYSIS 气体分析



Specific controllers and analyzers are installed to perform a continuous emission monitoring (CEM) of chimney emissions, to detect the release of dangerous gases, or to analyze ambient air quality. Gas analysis data from different locations can be wirelessly transmitted to a central location, eliminating the need for installing cables. The DX80 MultiHop Data Radio connected to the controller's communication port transmits all the information to a master radio in a centrally located control room.



烟气持续监测系统（CEM）需要安装多台特定的控制器和分析仪器实现对烟囱排放进行连续监测从而检测到危险气体的释放或者分析周边空气质量。不同位置的气体分析数据经由无线被传送到中控室，完全不需要传统的通讯线缆。将DX80 MultiHop Data Radio与控制器通讯端口连接，能够把所有信息直接传送到位于中控室内的主站。



BIOGAS

沼气



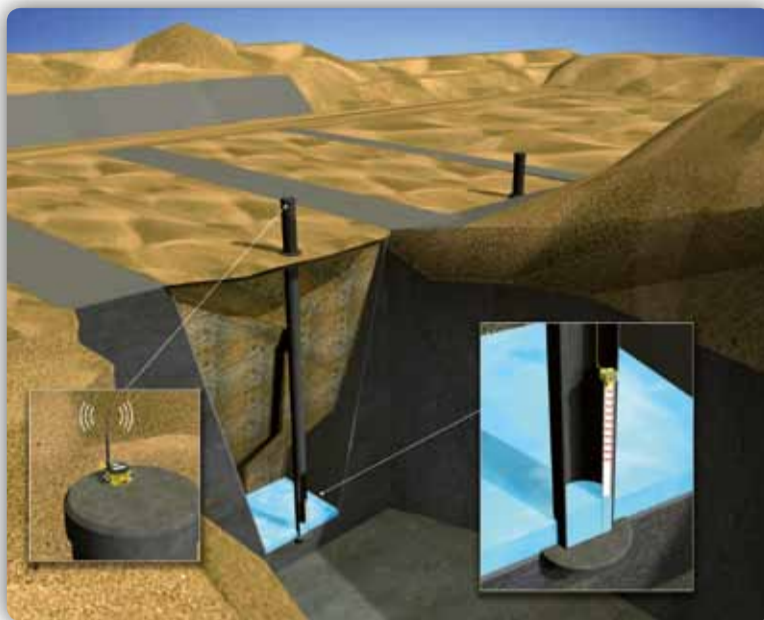
To meet governmental regulations, it is important to accurately monitor methane gas production, removal, venting, and burning. Knowledge of both methane flow and temperature at the flare stack can define when CH₄ is being emitted to the atmosphere. The DX99 FlexPower™ Nodes can be installed in EX area with a Zone 0 ATEX certification. Use the analogue input to determine methane production levels and flow and use the thermocouple model to measure the temperature of a vent to verify the continuous combustion of methane.



为遵守政府法规，准确地监测甲烷气的生成、转移、清除和燃烧状态是很重要的。通过对火炬口处甲烷气流量和温度的监测可以确定CH₄甲烷被排放到大气的时间。DX99 FlexPower™型节点可以被安装在Zone 0等级的危险场合。使用模拟量输入信号探测甲烷生成量和流量，使用热电偶节点测量火炬口温度来核实甲烷气的连续燃烧。



LANDFILL 垃圾填埋



Leachate removal from a landfill well is a primary function. Although different types of pumps are used, all pumps need to be installed with a totalizing counter mounted at the top of the well head to monitor the pump cycles and to calculate the total volume of leachate removed from the well. Instead of manually monitoring the leachate level and collecting the pump count data, use FlexPower™ Counter Nodes to wirelessly send data from the pumps back to a central control location to save time and eliminate errors.



去除垃圾填埋井中的渗液是基本要求。虽然使用不同类型的泵，但是所有的泵都需要安装一个位于井上的计数装置，统计泵的启停次数，同时计算出从井中抽取渗液的体积。为了取代人工测量渗液的液位和收集泵的启停次数，使用一个FlexPower™型计数节点以无线方式将数据从泵回传至中控室，以节省时间，消除错误。

ATEX Dust and gas certified housing
符合灰尘和气体防爆要求的外罩



COMPOST 堆肥



To efficiently compost waste, continuous temperature readings are required from the compost heap or windrow. Manual data collection and risk of contamination are eliminated using a SureCross Node equipped with a dedicated thermocouple probe to automatically monitor the compost temperature. Temperature sensor readings are wirelessly transmitted back to the Gateway or host system for real-time data collection, analysis, and logging. Timely and accurate temperature data helps operators determine the optimum time between compost rotations. Accurate temperature monitoring is also required to ensure compost achieves the minimum temperature required to kill dangerous bacteria.



为了有效地将废弃物制成堆肥，需要对堆肥和干草列实施连续的温度监测。利用一个已连接专用热电偶探针的SureCross节点实现自动监视堆肥温度，取消人工数据收集，避免堆肥被污染的危险。为了实时收集、分析、记录数据，温度传感器读数通过无线回传至网关或上位系统。及时而又准确的温度数据帮助作业员确定堆肥翻动最佳的间隔时间。另外为了确保堆肥温度到达杀死有害细菌的最小温度，也需要对温度进行监测。



Environmental Wireless Solutions 针对环境的无线解决方案



Sensors

- Presence/Absence Detection
- Foreground & Background Suppression
- GO/NO GO Inspection
- Gating and Triggering
- Parts Counting
- Level and Distance Measurement
- Positioning
- Contrast and Color Sensing



Vision

- Vision Sensors with Onboard User Interface
- Pattern Recognition
- Traceability (Barcode, Datamatrix and Text Reading)
- OCR/OCV
- Complex Part Inspection
- Part Orientation
- Assembly Verification
- Color Inspections



Wireless I/O

- Slip Ring Replacement
- Tank Farm Monitoring
- Livestock Environmental Monitoring
- Water and Wastewater Treatment
- HVAC Remote Monitoring
- Traffic Monitoring & Control
- Remote Sensing in Process Automation
- Cable Replacement
- ATEX Approved Solutions



Lighting & Indicators

- Bin & Part Picking
- Error/Mistake Proofing
- Pick-to-Light & Put-to-Light
- Operator Guidance
- Call for Parts
- Incorrect Pick Signal
- Remote Start/Stop Indication
- Work lights and cabinet lighting



Machine Safety

- Safety Light Screens
- Optical Non-Contact Safety Systems
- Ergonomic Two-hand Control Devices
- Safety Modules
- Emergency Stop Devices
- Safety Interlocking
- Laser Scanners for Safety Applications

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Banner offers a full range of sensing solutions

