Touchpoint Pro

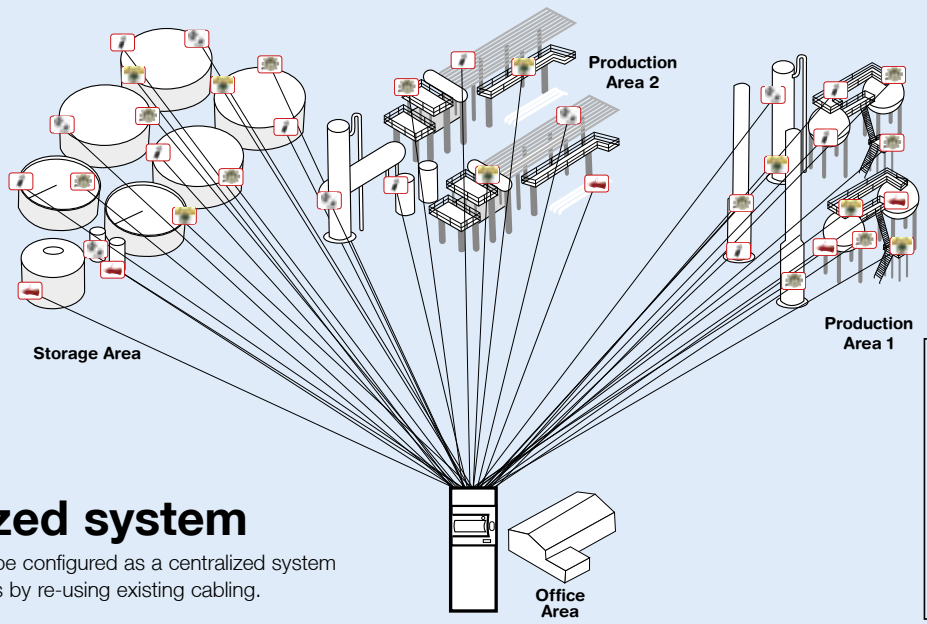
Honeywell

Flexible Gas Control System

The ideal safety system

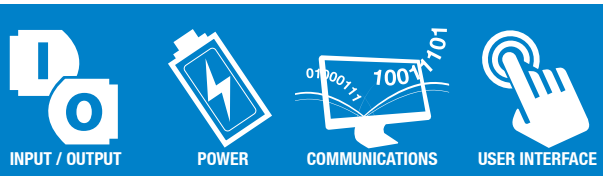
Honeywell's Touchpoint Pro makes gas control system design, installation, configuration and operation simple. Touchpoint Pro uses a 'building block' approach, providing unrivalled flexibility. Any system can be built from just four main building blocks:

1. Central controller with color LCD touch screen user interface
2. Plug-in Input/Output (I/O) modules
3. Backplane power and communications highway
4. Plug-in power supplies



Centralized system

Touchpoint Pro can be configured as a centralized system helping to save costs by re-using existing cabling.



These basic components can be mounted in cabinets or racks (or a combination) and the I/O modules freely mixed and matched in any combination. From small-scale systems to large, fully integrated gas and shutdown systems, Touchpoint Pro has the flexibility to meet all gas control requirements. The building block approach employed by Touchpoint Pro delivers real value by being able to adapt to each unique system requirement.

New Site Installations:
Remote I/O modules can deliver large savings in cabling costs when compared with the traditional 'home run' cabling approach of a centralized system.

Existing Site Upgrades and Expansions:
The cost of upgrading or expanding an existing system is reduced by the ability to use existing field device cabling.

Integrators and Engineering Houses:
The building block approach allows easy modification of gas I/O as the client's requirements change, without reprogramming or redesign.

Touchpoint Pro features a modular, building block approach providing a flexible safety system platform that adapts easily. Ease of use and intuitive configuration ensures that installation, set-up and ongoing maintenance costs are reduced, providing a 'no compromise' solution designed to reduce the cost of on-site safety.

☑ Touchpoint Pro is the most flexible and versatile gas and logic control system on the market

- Modular design
  - Ability to build any system - centralized, distributed or a mix of both
  - Meets the needs of new build, upgrade and Engineering House applications
  - Allows ease of expansion

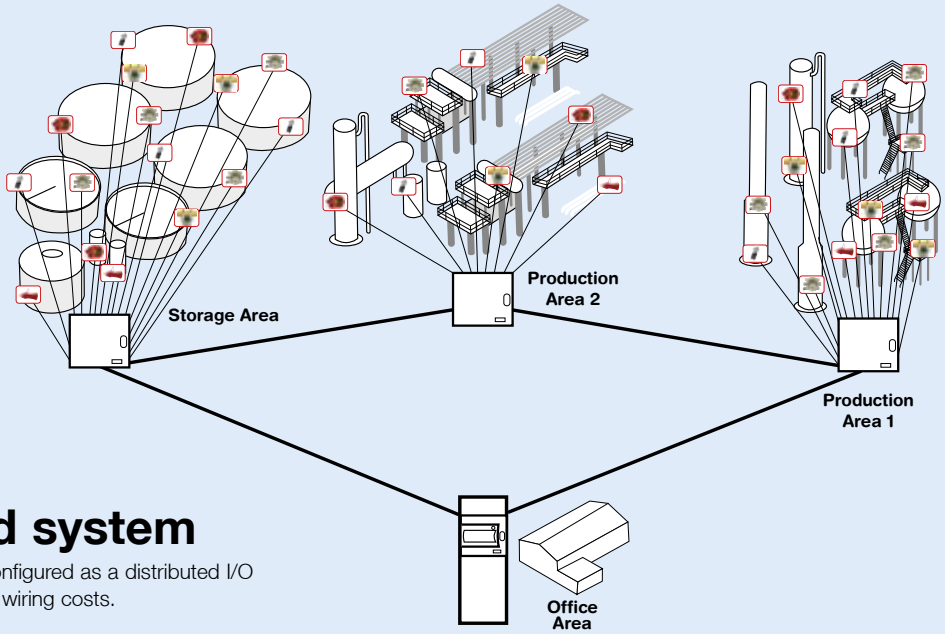
☑ Using Touchpoint Pro means getting more value for your money

- Latest innovative technology
  - Remote I/O modules
  - Touch Screen User Interface
  - Web Server
  - Redundancy
  - "Self Healing Network"
- Complying with the latest legislations and regulations
  - Makes daily work safe, reduces operation costs and makes your budget go further

☑ Touchpoint Pro provides 100% operational availability

- Ring Network and redundant components ensure that the system is always up and running
- No shutdowns, no downtime costs

☑ Touchpoint Pro is a truly new system and not a remake of an existing system



Distributed system

Touchpoint Pro can be configured as a distributed I/O system helping to reduce wiring costs.

Why choose Touchpoint Pro?

Flexibility

Touchpoint Pro has been designed to deliver flexibility, allowing the system to be freely configured to meet customers' varying needs.

As a global leader in life safety products and services, Honeywell is at the forefront of safety system technology.

The new Touchpoint Pro controller illustrates our expertise in providing a fully independent safety system that has the capability to be integrated into a larger site safety system.

- Touchpoint Pro accepts inputs from a wide range of flammable and toxic gas detectors
- Touchpoint Pro is compatible with most third party flame detectors, gas detectors and manual call points
- Touchpoint Pro offers a comprehensive range of outputs including relays, digital outputs and industry standard protocols like Modbus®
- The easy plug-in I/O modules and power supply units, mounted on a communication and power rail assembly, allow highly flexible configuration, expansion and modification
- Touchpoint Pro's modularity also makes the system easy to expand, with the ability to add new I/Os as required, delivering a future-proof solution that meets changing site needs for years to come
- Touchpoint Pro provides an independent "all-in-one" safety system to meet the needs of small/medium sized plants
- Touchpoint Pro's modularity means that any system topology can be built, including centralized, distributed I/Os, or a mix of both. This makes Touchpoint Pro capable of meeting the needs of new build, upgrade and engineering house applications

Best Practice

SIL 2: The perfect solution for small/medium plants looking to optimize uptime and reduce risk.

The higher the Safety Integrity Level (SIL), the more expensive a solution is likely to be. This means that the selection of the right SIL level is very important. The majority of small and medium sites benefit the most from a SIL 2 rated safety system, as it offers enhanced safety over SIL 1 and a considerable cost advantage over SIL 3, which is more suited to a site where more complex or hazardous processes are taking place.

An independently verified SIL 2 solution: From conception to manufacture

Touchpoint Pro has been designed to comply with the requirements of SIL 2. This means that the safety system can offer additional peace of mind to users by demonstrating that Honeywell's engineering processes, manufacture and component build have also been tested, as well as the actual components' electrical, firmware and logic elements.

Savings

Touchpoint Pro's flexible configuration, installation, set-up and ongoing use can offer large savings compared to other control systems.

In fact, Touchpoint Pro can potentially reduce the total cost per channel by as much as 50%* compared with conventional control systems.

*All savings calculations are based on our experience in industrial gas detection applications. Actual savings may be greater or less dependent on specific individual applications.

Component overview

Central Controller with User Interface

The heart of the Touchpoint Pro is the central controller, which includes the user interface.

The user interface features a full color LCD touch screen, and provides engineers with an intuitive solution to system set-up and deployment. Easily accessible icons, supported by drop-down menus ensure that even the most complex of system configurations can be commissioned with efficiency.

Aside from ease of use, Touchpoint Pro's user interface also includes some valuable aspects that help engineers save time, whilst setting up and commissioning a system.

- Easily accessible system status that can be seen at a glance
- Intuitive infrastructure that features Forward/Backward/Reject functionality for simplified navigation and use
- Selectable pre-loaded field device settings, allowing the automatic population of default data
- Flexibility to inhibit parts of the system easily, helping to permit simplified and cost-effective ongoing maintenance

Sensor Catalog

The central controller is loaded with a sensor catalog, which contains a complete listing of all Honeywell Analytics' gas sensors, each with a full default configuration setting. A user can choose to configure input channel settings from the sensor catalog, resulting in a three step configuration process – select channel ID, program channel tags and select sensor and gas. The rest of the configuration will be loaded automatically.
The full configuration can be viewed afterwards, and individual parameters changed if desired.

Using the Web Server, access live Touchpoint Pro information from the comfort of an office

Additional User Interfaces

In addition to the touch screen user interface, the central controller has a number of connectivity options:

Web Server

The central controller has a Web Server interface, which can be accessed when Touchpoint Pro is connected to a network. Normal operations and interactions are available, for example view status and event history, and acknowledge, reset or inhibit channels. Exceptions are critical safety functions such as configuration or calibration. This offers the possibility of system monitoring and data analysis from a remote location.

PC Connections

For configuration of large systems, users may prefer to use a PC rather than the touch screen, for comfort and efficiency. A PC can be connected via Ethernet, and optional PC Configuration Software is available which combines many of the configuration screens, reducing configuration time.

Modbus® Interface Board

Touchpoint Pro can be supplied with an optional Modbus® RTU output. In this case a Bus Interface Board containing a dual redundant RS485 interface is added to the central controller.

Redundancy

The central controller is critical to the function of the Touchpoint Pro system, therefore to maximize system availability, a Redundant Control Center Board (CCB) option is available. The Redundant CCB monitors the Master CCB and if any fault or communication failure occurs, the system immediately switches to the Redundant CCB.

Component overview

Input / Output Module

The Touchpoint Pro Input/Output modules can be combined up to a maximum of 16 input modules (64 channels) and 32 output modules (128 channels). Modules can be located in any Touchpoint Pro enclosure. Power distribution is via the Communication/Power Rail.

- Analog Input Module 4-20 mA
- Analog Input Module mV-Bridge
- Digital Input Module
- Relay Output Module

Communication / Power Rail

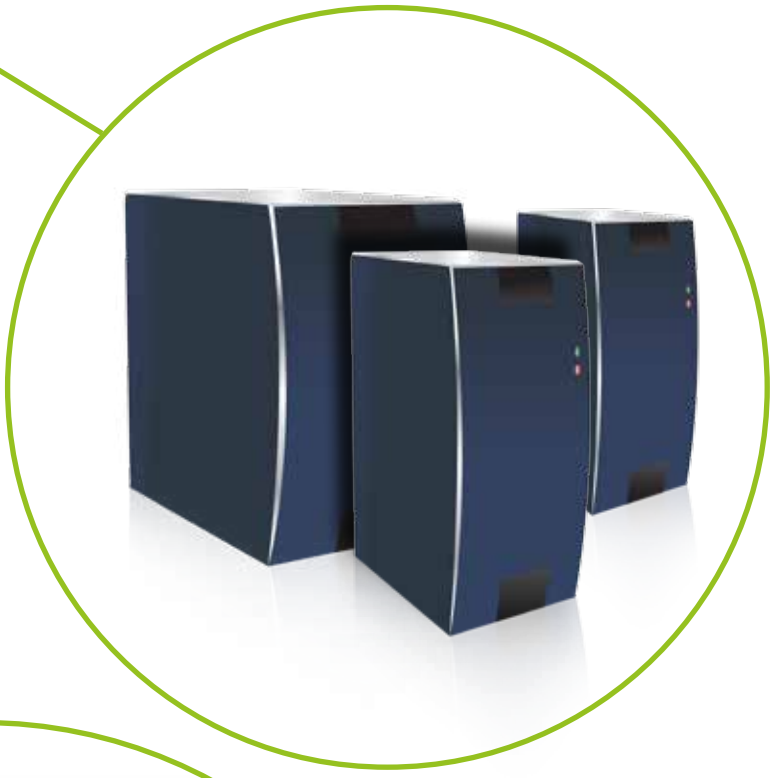
The Touchpoint Pro Communication/Power Rail provides direct power and network connection to the Input/Output modules, minimizing the wiring required. There is a single connection for the 24 Vdc supply and the network cables connect to the Ring Coupling module, which handles the communication between the modules and the central controller.

Depending on the power supply option chosen and the enclosure version, the Communication/ Power Rail has space for 5, 7, 9, or 10 Input/Output modules.

The Ring Network is the communication link between all Input/Output modules in a Touchpoint Pro system and the central controller. The Ring Network is the only connection required between a local Touchpoint Pro unit (containing the central controller and user interface) and remote Touchpoint Pro units. The Ring Network is implemented for redundancy as two loops transmitting in opposite directions (Ring A and Ring B). The network is self-healing since each module only communicates with the one next to it. If a module fails, the modules after it continue to transmit data in the direction away from the failed module, while the ones before it transmit in the other direction. Thus the Touchpoint Pro system can immediately detect and locate a failed module, without affecting the availability of the rest of the system.

Power Supplies

A number of power supply options are available, including 120 W, 240 W and 480 W 24 Vdc power supply units, a redundancy module which switches to an alternative supply in the case of failure and a UPS module which charges a back-up battery to be used in the event of a mains power failure.



Enclosures

Touchpoint Pro offers flexibility in how the system can be housed. The Touchpoint Pro system is comprised of four basic components – plug-in Input/Output modules, plug-in power supplies, a backplane power and communications highway and central controller/user interface with an LCD color touch screen.

The system's modular design allows these elements to be freely mounted in a variety of configurations including cabinets and racks, delivering the freedom to create a system topology that meets specific needs.

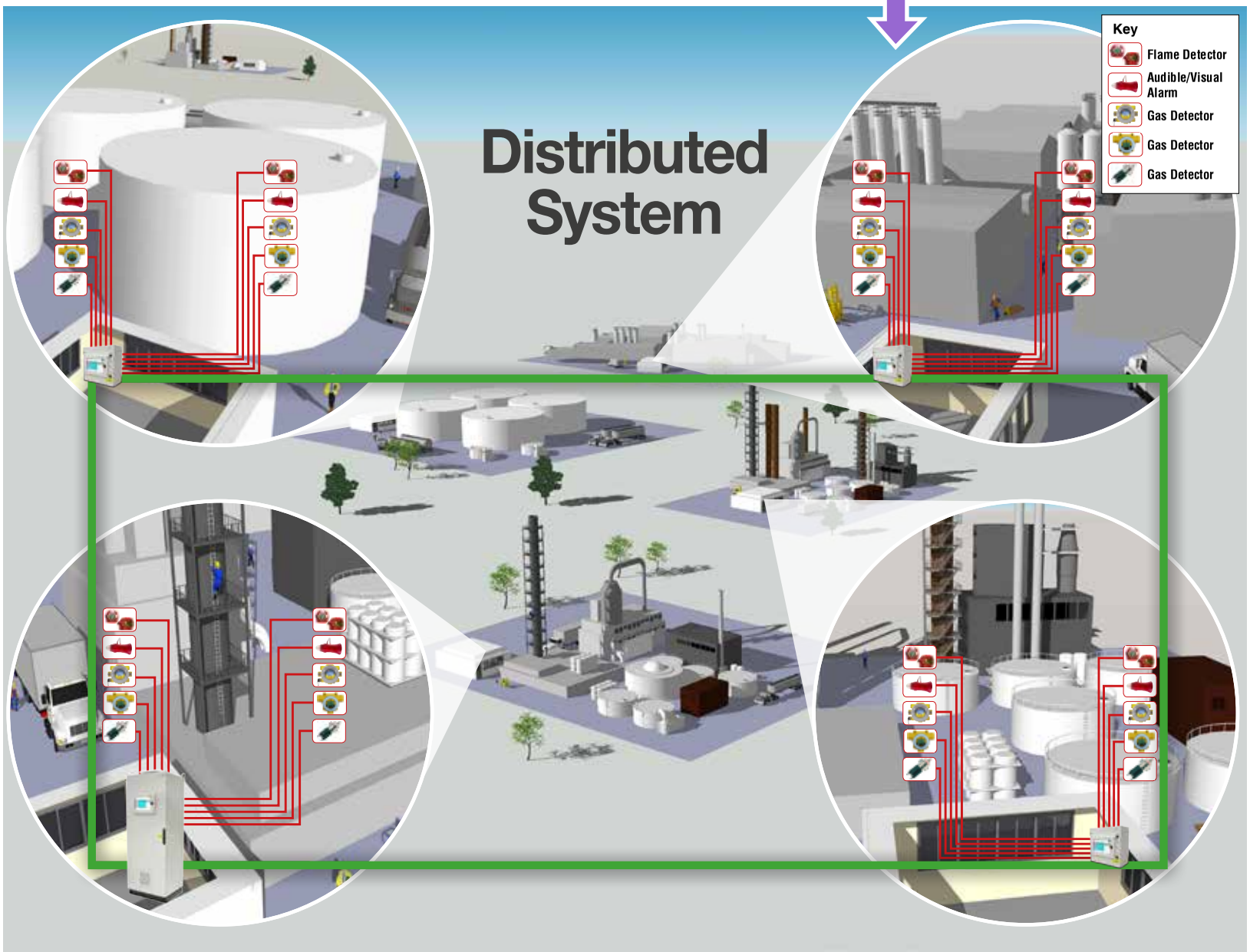
System examples

Please see the illustrations for top level examples of a centralized and distributed system topology. Touchpoint Pro is so flexible it permits almost any type of system configuration.

- Save the cost of re-cabling
- Latest, easy to use touch screen control
- Upgrade of controller to the latest standards in an existing panel or cabinet

- Simple to expand or modify as site needs changeover time

- Less cable required, reducing the cost of cable and associated installation
- State-of-the-art control system compliant with all the latest standards

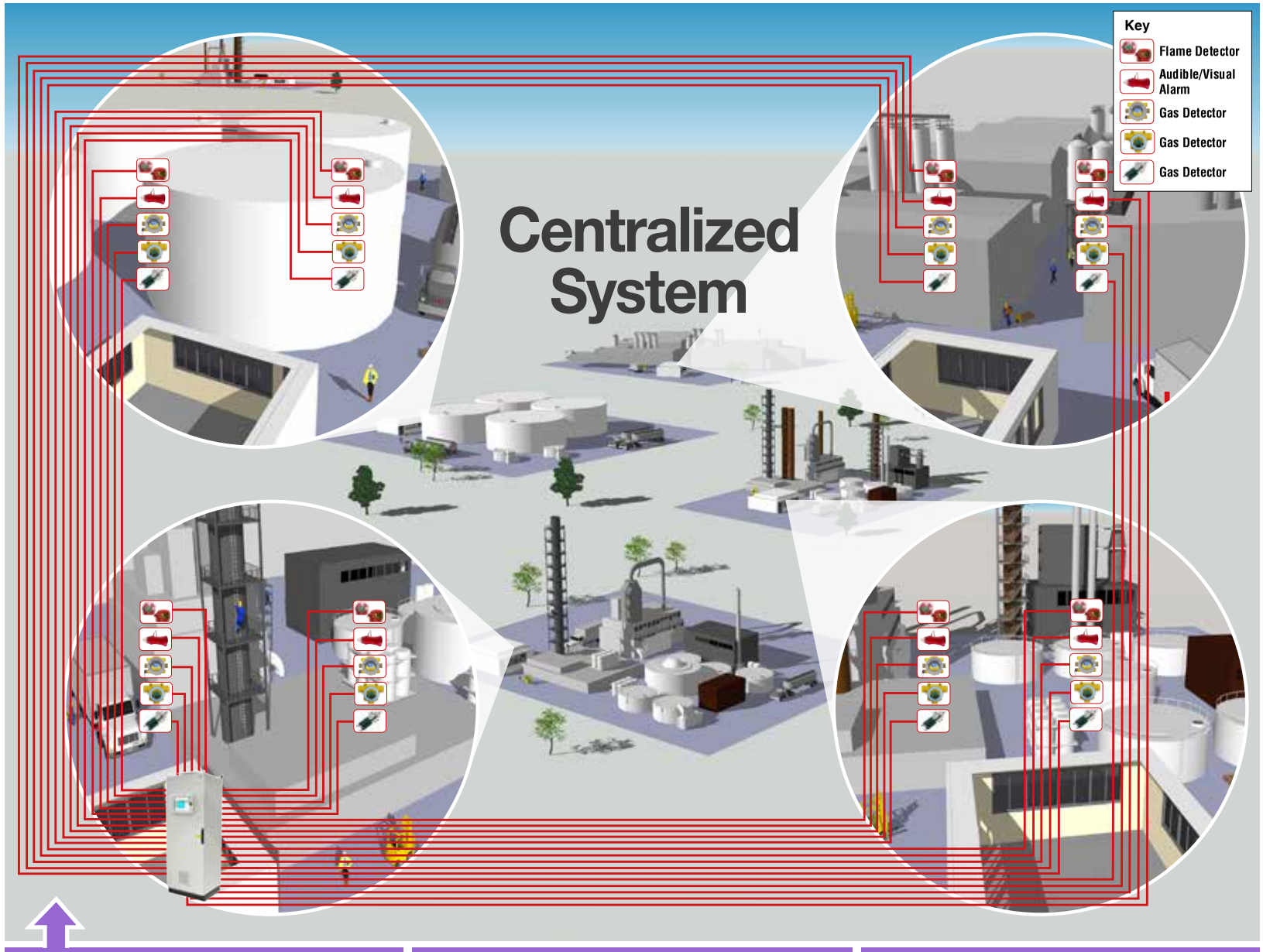


USER INTERFACE

COMMUNICATIONS

POWER

INPUT / OUTPUT

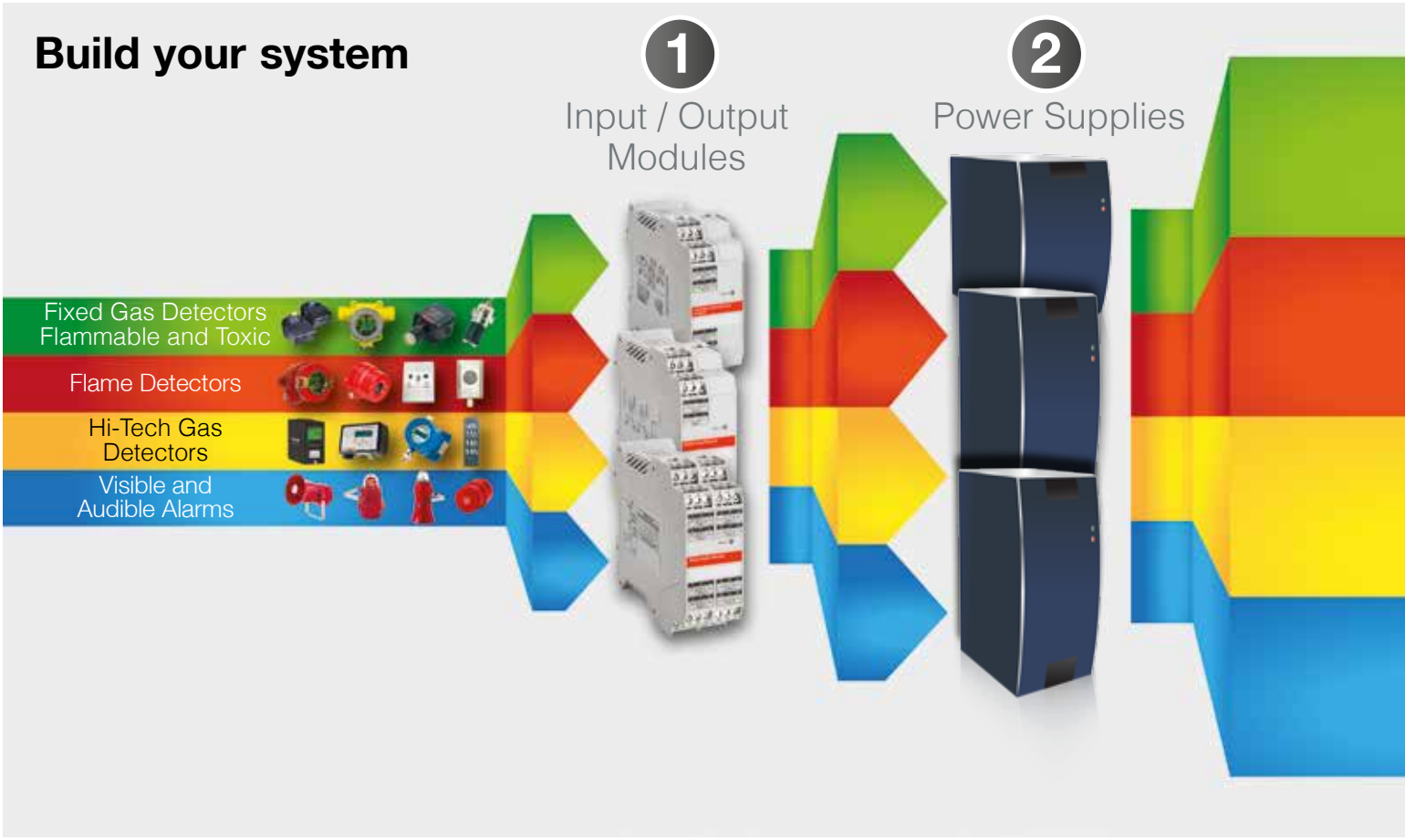


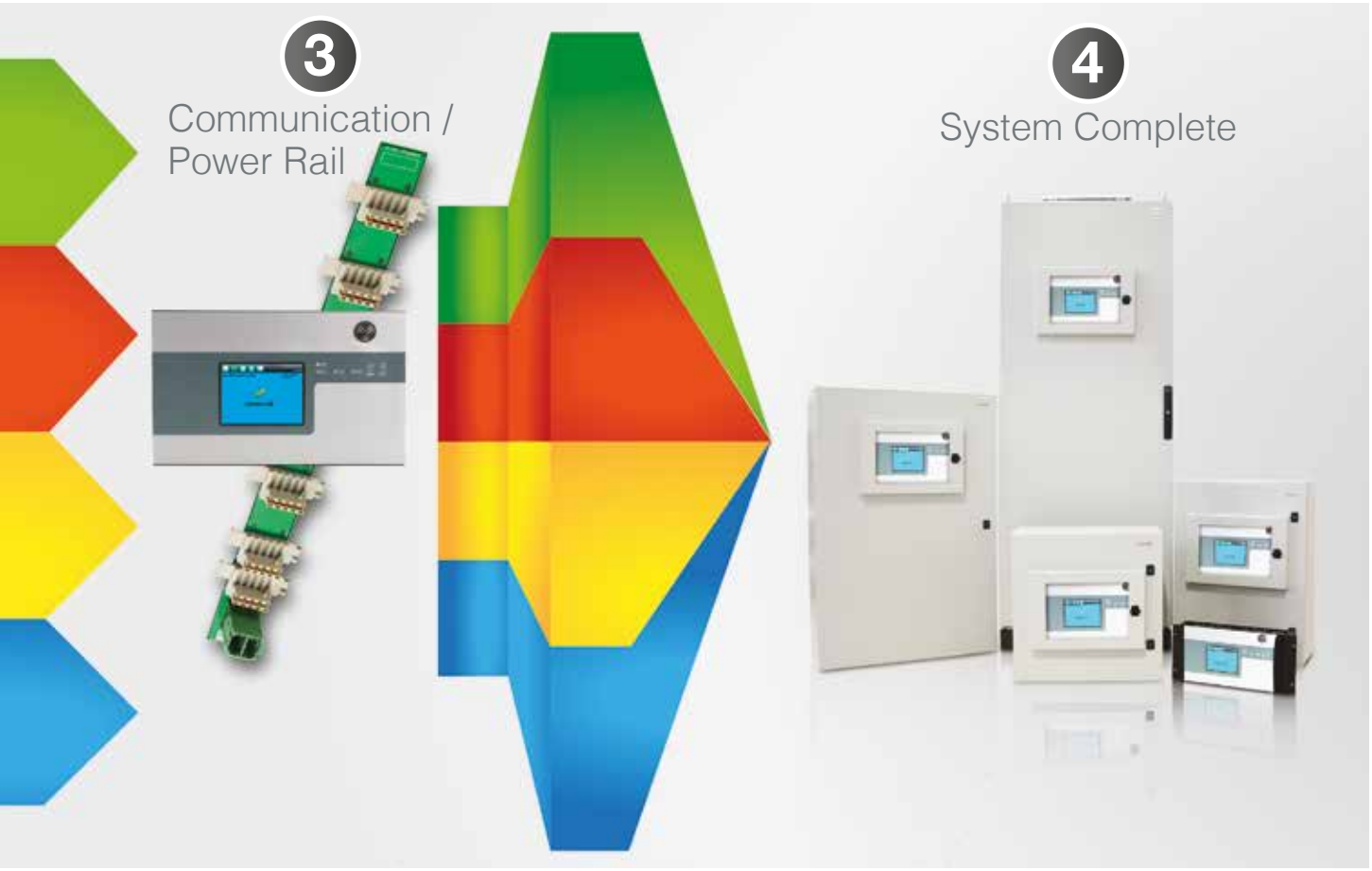
The example above shows how a Touchpoint Pro system could be installed using traditional 'home-run' cabling. This approach could be chosen tore-use existing cabling, or simply due to operator preference.

A combined approach could be used, for example to expand an existing system. New Inputs and Outputs required due to an expansion of a production area could be connected to a remote Touchpoint Pro unit, while the existing system and cabling are wired directly to the Touchpoint Pro central controller.

The example below shows the Touchpoint Pro system installed using a distributed architecture, illustrating the cabling savings that can be achieved. Clusters of Inputs and Outputs are connected to remote Touchpoint Pro enclosures, which are linked to the Touchpoint Pro central controller by the Ring Network.

Build your system





Consultancy

Value-added expert guidance on choosing the right safety management system

There are so many factors to consider when selecting the right control solution for your site, and this can make sourcing a safety system capable of delivering the aspects you require a complex and arduous process. With this in mind, the provision of impartial expert advice can be highly favourable, helping to reduce the time spent sourcing a solution to meet exact needs.

Whatever your application, we would like to offer you the opportunity to take advantage of our value-added expert consultancy service for guidance on integrating a new safety management system:

- We can help you evaluate any existing system and infrastructure you have on site
- We can advise you on how to re-purpose any existing infrastructure or field devices, etc, so you only pay for the new aspects you really need
- We can conduct a full evaluation of all your requirements and advise on suitable system options to meet your requirements
- Advice and guidance on configuration and how to maximise a system to meet exact requirements
- Guidance on configuration options to maximize ongoing cost reduction
- Full showcase of Touchpoint Pro and demonstration of how it could add value to your site, within the context of your specific needs

Technical Specifications

Technical Specifications	
System	Centralized or distributed system
Enclosure	
Wall Mount Controller Enclosure	
Dimensions (H x W x D)	23.6 x 23.6 x 11.8″ (600 x 600 x 300 mm) (Mild Steel) 31.4 x 23.6 x 11.8″ (800 x 600 x 300 mm) (Mild Steel) 47.2 x 23.6 x 11.8″ (1200 x 600 x 300 mm) (Mild Steel)
Wall Mount Remote Unit Enclosure	
Dimensions (H x W x D)	23.6 x 23.6 x 11.8″ (600 x 600 x 300 mm) (Mild Steel) 31.4 x 23.6 x 11.8″ (800 x 600 x 300 mm) (Mild Steel)
19” 5U Rack Unit	
Dimensions (H x W x D)	19 x 8.7 x 4.3″ (483 x 222 x 110 mm) (Mild Steel)
Floor Standing Cabinets (Front or Rear Access)	
Dimensions (H x W x D)	78.7 x 31.4 x 23.6″ (2000 x 800 x 600 mm) (Mild Steel)
Control Module and User Interface	
LCD Touch Screen	5.7″ TFT Color LCD with LED Backlight (resistive touch screen) 320 x 240 pixels (QVGA) Resolution Active area 4.5(H) x 3.4″ (V) (115.2 x 86.4 mm)
Front Panel Dimension	19 x 8.7″ (483 x 222 mm)
Operating Temperature	-4°F to 131°F (-20°C to +55°C)
Storage Temperature	-4°F to 131°F (-20°C to +55°C)
Operating Humidity	10% to 90% RH (non-condensing)
Input Supply	
Input Voltage	18-32 Vdc (24 Vdc nominal)
Voltage Ripple	50 mVp-p (maximum)
Controls and Indicators	
Front Panel LED	Green Power LED Red Alarm LED Yellow Fault LED Yellow Inhibit LED
Front Panel Buttons	Alarm Accept Push Button, Alarm Reset Push Button; Alarm Buzzer
Relay Outputs	2 System State Relays
Redundancy	Redundant Control Centre Board (CCB) Ring Network
External Communication	
Interfaces	Redundant RS485 Modbus RTU interface Ethernet
Input/ Output Modules	
Common Specifications	
Dimensions (H x W x D)	1.3 x 3.9 x 4.5″ (35 x 99.5 x 114.5 mm)
Power Supply	18-32 Vdc (24 Vdc nominal)
DIN rail compatibility	TS-35 / 15
Operating Temperature Range	-40°F to 131°F (-40°C to 55°C)
Operating Humidity Range	10 to 90% RH (non-condensing)

Inputs	Up to 16 Input Modules (64 Input channels) per system Analog Input Module 4-20 mA; 4-channels for 2 or 3 wire 20 mA detector signals Analog Input Module mV-Bridge; 4-channels for mV-Bridge signals Digital Input Module; 4-channels for switched input devices
Outputs	Up to 32 Output Modules (128 Output channels) per system Relay Output Module; 4-channels incorporating 4 single pole change over (SPCO) relays
Sensors	Catalytic or IR for combustible 4-20 mA transmitters Electrochemical for toxic and Oxygen Conventional smoke, heat and fire detectors
Communication / Power Rail	
Description	5, 7, 9, or 10-way Communication / Power Rail consists of 1 DIN Rail, 1 Ring Coupling Module (RCM) and 5, 7, 9, or 10-way backplanes
Power Supply	Operating voltage range - 18 Vdc to 32 Vdc (double-check)
Power Supply mounted on Din-Rail	120 W 24 Vdc, 240 W 24 Vdc, 480 W 24 Vdc, Power Supply Redundancy Module (RDN Module), Uninterruptible Power Supply Module (UPS)
Back-up Battery	
Description	24 V sealed lead acid battery, 12 Ah or 27 Ah options
Electrical Connection	2 x 12 Vdc batteries in series
Dimensions (H x W x D)	11.8 x 15.5 x 8.4″ (300 x 395 x 215 mm)
Weight	12 Ah version: 34.6 lb (15.7 kg) 27 Ah version: 55.1 lb (25 kg)
Approvals	
Compliance	Compliance with EMC/RFI (EN 50270:2006) and LVD (EN 61010-1:2010) CSA-C22.2 No. 61010-1-04, UL Std. No. 61010-1 (2nd Edition)
Advanced requirements	ATEX Performance Approvals - EN 50271:2010; EN 60079-29-1; EN 45544-1 /-2 /-3; EN 50104:2010 C22.2 No. 152-M1984, FM Std. 6310 and 6320 *Contact Honeywell Analytics for availability
Highest level of safety	IEC/EN 61508 and EN 50402 SIL2 certification *Contact Honeywell Analytics for SIL 2 configuration availability
Detailed ordering information available upon request.	

INPUT / OUTPUT

POWER

COMMUNICATIONS

USER INTERFACE

Honeywell Analytics Gas Detection Offerings

Honeywell Analytics gas detectors protect people, assets and environment from toxic and combustible gas hazards, helping to create safer, more comfortable, secure and productive environments. Our strength derives from Honeywell's leadership in sensor technology; in fact Honeywell operates four sensor manufacturing plants, supplying an entire industry with its core detective element.

Industrial

Renowned Sieger and Manning gas detection systems with advanced electrochemical, infrared and open path sensing technologies.

» Applications: oil and gas, cold storage, water/wastewater treatment, chemicals, engine rooms, plastics and fibers, agriculture, printing and light industrial

Commercial

Gas detection from standalone units to fully engineered, multi-point systems, all offering cost-effective regulatory compliance.

» Applications: parking structures, chillers, mechanical rooms, office towers, commercial buildings, shopping centers, swimming pools, golf courses, schools and universities, laboratories

High Tech/Government

Reliable gas and chemical detection including infrared spectroscopy (MST) with no cross interference, to Chemcassette paper-based solutions (MDA Scientific) offering detection down to parts per billion.

» Applications: semiconductor manufacturing, aerospace propulsion, specialty chemicals industry, research laboratories, emergency response

Find out more:
www.honeywellanalytics.com

Contact Honeywell Analytics:

Americas
Honeywell Analytics Inc.
405 Barclay Blvd.
Lincolnshire, IL USA 60069
Tel: 847.955.8200
Toll free: 800.538.0363
Fax: 847.955.8210
detectgas@honeywell.com

MICROWATT
Making Safety Work
Tollfree in Western Canada: 1-888-388-1592
microwatt.com • mwsales@microwatt.com

www.honeywell.com

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