














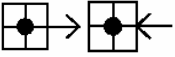



The following information provides a brief overview of symbology used to represent Fire and Gas devices within both design documentation and to provide the control system presentation to operational personnel. The reader should be aware that this document is presented from the view of an oil and gas control system professional. It is therefore possible that symbology will differ between industries.

Gas Detection	
Symbol	Description
	Point Gas Detector.
	Open Path Gas Detector, transmitter shown with arrow leaving symbol and receiver with arrow entering symbol
	H ₂ S Detector
Fire Detection	
Symbol	Description
	Infrared Flame Detector, pointer is aligned to indicate detector direction of view
	Ultraviolet Flame Detector, pointer is aligned to indicate detector direction of view
	Heat Detector
	Smoke Detector
	Very Early Smoke Detection Apparatus (VESDA)
Manual Actions	
Symbol	Description
	Deluge Release
	Foam Release
	Fire Pump Start Button
	Safety Shower Flow Switch

Operator Interface	
Symbol	Description
	Manual Alarm Call-point (MAC)
	Audible Alarm
	Visual Alarm
Miscellaneous	
Symbol	Description
	Oil Mist Detector, transmitter shown with arrow leaving and receiver with arrow entering symbol
	Aspirator cabinet

During detailed design, detectors are positioned according to the results of the area surveys. Engineering drawings may show simple bubbles containing device tag numbers, tagged symbols as shown in the table above or a combination of both. It may be necessary to install detectors at different elevations within an area. In this case it is common to use a numeric indicator adjacent to the symbol to represent the physical location of the detector such as 0 for grade, 1 at intermediate level and 2 at high level.

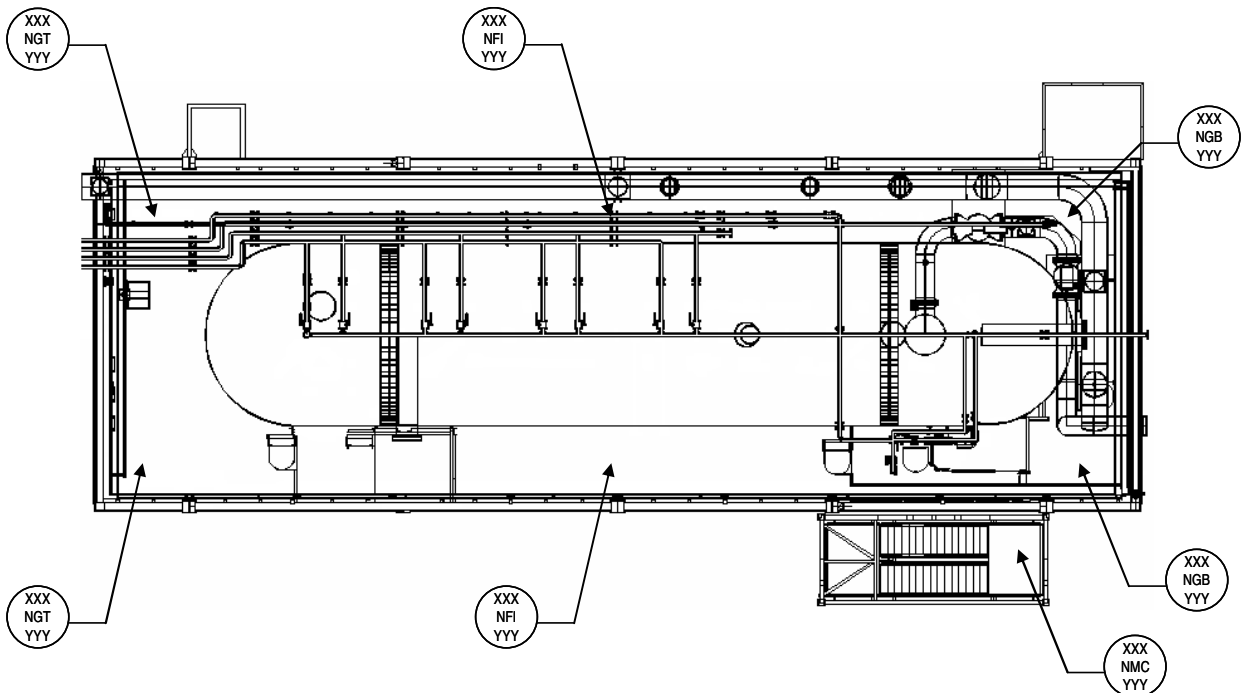


Fig 1, typical example of detector layout around a vessel

Layout drawings tend to be used to generate the control system graphics to mimic the physical plant layout. It is not uncommon for the graphics to show key vessels and hazards along with escape routes, emergency exits, stairways and ladders. The Fire and Gas symbols are used as the basis for the library graphic elements and are further developed to react to alarm conditions by manipulating symbol attributes such as colour or size.

The operator interface also provides wind speed and direction data derived from the site weather station such that due consideration is given to prevailing weather conditions during incident management.

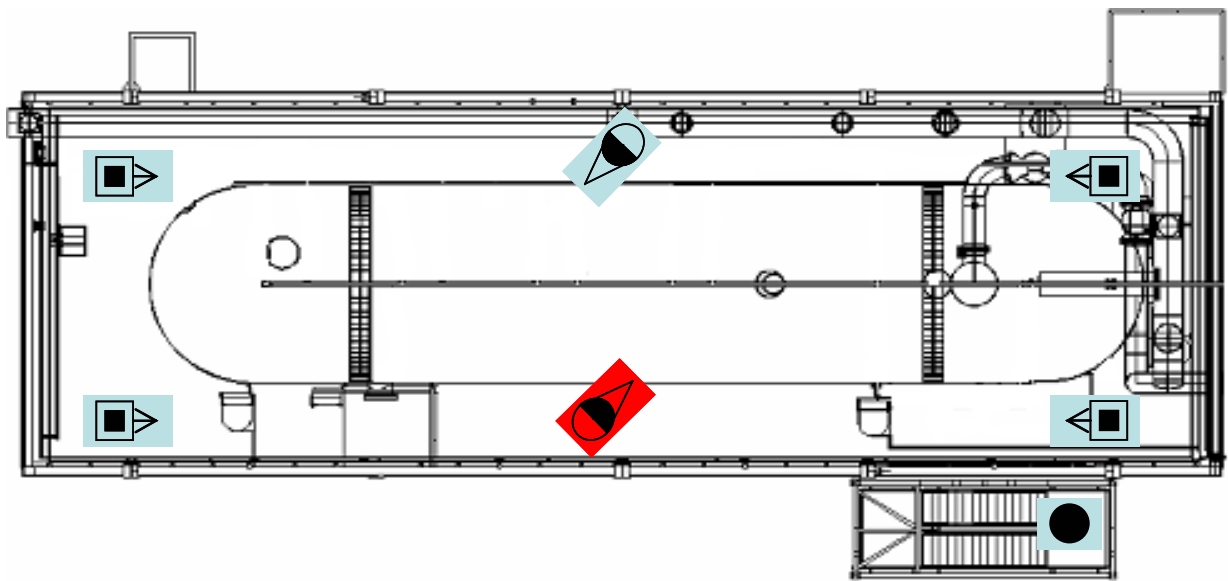


Fig 2, example detector layout presented as an operator graphic – note the flame detector coloured red to indicate an alarm condition