

SmartTrap+ Data Sheet

SmartTrap+, is a product which incorporates signals from sensors into the interlocking sequence. For operators needing to ensure higher levels of process safety, the SmartTrap+ is an ideal solution. By incorporating the best of traditional mechanical interlocking with process sensor information to ensure all vessels are safe to access, it will help to reduce accidents and reduce downtime.

SmartTrap+ incorporates permissive signals and a door lock proximity switch (4-20mA) as standard. The signals can include (but are not limited to) pressure detection, gas detection, flow/level and pig detection.



DESCRIPTION (PIGGING AND CHANGEOVER APPLICATIONS)



During a pigging operation certain safety conditions need to be met: the vessel pressure should be at a safe level and all dangerous gases and residue must be removed before opening the pig door. Mechanical interlocking guarantees that all required valve operations are performed, but cannot guarantee the outcomes of these operations.

For example, opening and closing a vent valve does not give real time information that the vessel pressure has actually reached a safe level; while opening and closing a drain valve does not guarantee that all residue has been removed.

By incorporating signals from other field devices like pressure or H₂S/ CO₂ sensors into the interlocking sequence, the SmartTrap+ ensures interlock keys can only be released if particular process conditions have been met. So, for example, this could mean that the key for opening the vessel closure door will only be released when the pressure inside the vessel is acceptable and no dangerous gasses or residue are detected.

