

Safety Warning Notice No 6

Addition of Alarm, Intercom and Access Control Systems to Existing Powered Doors and Gates:

Alarm, intercom or access control systems are very often retrospectively connected to activate an existing powered door or gate system. When connected, these devices become an integral part of the overall control system of the automation; integrity of the control system is central to the safety of all automation systems.

Those installing an alarm, intercom or access control may not have the skills and experience to assess the safety of the automation systems that they might encounter and, hence, precautions must be taken to prevent creating or adding to a dangerous situation when connecting this type of equipment.

Anyone installing, repairing, altering or maintaining an automated system is duty bound by the Health and Safety at Work Act 1974 to report and act on unsafe systems or situations that they encounter as part of their work and should not undertake any work that would not result in a safe outcome.

In order to prevent a hazardous situation certain precautions need to be taken:

- It must be ascertained that the automation is currently safe before work commences. Making alterations or additions to an unsafe automation system will place the person making the alteration or addition in breach of section 3 of the Health and Safety at Work Act 1974. The required safety assessment of the existing automation could be executed by the installer on site (if they are in possession of the required competence) or by a third party prior to their arrival. Where a third party has made the assessment, documentary evidence of the automation system safety will be required before commencement.
- The access control, intercom or alarm interconnection point with the automation control panel must be verified as being suitable to connect to by someone who understands in detail the automation system safety, control function and control logic. This person must also ensure that using the proposed equipment on the specified command will not have a negative effect on the operational safety of the automation.
- The access control, intercom or alarm must be configured so that it will not introduce faults to the automation control; for example, most control panels need to be switched by a volt free contact.

- The access control, intercom or alarm must be able to switch the automation system control voltage present without damage to itself or creating false activations. Some automation systems use control voltages as high as 40v that can cause access control, intercom or alarm system relay protection to trigger and thus create unwanted commands to the automation. These false activations could create a dangerous situation.
- The integrity of cabling and wiring used to connect an access control, intercom or alarm to the automation control systems must be able to withstand the electrical, electromagnetic, environmental and physical influences it will be subject to throughout its installed length.

The cabling must be able to resist faults that could give rise to false activations of the gate system or, indeed, damage either the gate control or the connected apparatus such as:

- short circuit caused by physical damage
- signal cross talk and induced voltages

This can, in many cases, be achieved by the appropriate use of:

- cables correctly rated for current and voltage
- earthed screened cable
- armoured cable
- cable in conduit
- running cables separate from other cables containing higher voltage bands
- Any fire alarm, intercom or access control activation device must be installed in a location that will not put the person using the device in a place of danger whilst using it and be of a suitable IP rating for the environment and location.

Once installed and commissioned, thought must be given to updating and passing on user instructions, user warnings and maintenance records to reflect the new configuration.

This guidance given overleaf should be applied in light of, and in addition to, any other relevant legislation and standards that might be applicable to an alarm, intercom or access control in its chosen location, a selection of which are provided below:

- The Regulatory Reform (Fire Safety) Order 2005 (England & Wales)
- Fire (Scotland) Act 2005 Fire Safety (Scotland) Regulations 2006
- Fire and Rescue Services (Northern Ireland) Order 2006 Fire Safety Regulations (Northern Ireland) 2010
- Building regulations - specific provisions covering disabled access and electrical safety
- Equality Act 2010
- Electricity at Work Regulations 1989
- Supply of Machinery (Safety) Regulations 2008 - (Machinery Directive)
- Low Voltage Electrical Equipment (Safety) Regulations 1994 - (Low Voltage Directive)
- Electro Magnetic Compatibility Regulations 2006 - (Electro Magnetic Compatibility Directive)
- Health and Safety at Work Act 1974
- The Radio Equipment and Telecommunications Terminal Equipment Regulations 2000 - (R&TTE Directive)
- BS 5839 - (Fire detection and fire alarm systems for buildings)
- BS 7671 - (Wiring regulations)
- EN 12453 - (Power operated vehicular doors, gates and barriers accessible to pedestrians)
- EN 16005 - (Power operated pedestrian doors)

Contact us for more information

Email: info@dhfonline.org.uk

Telephone: (0)1827 52337

Address: **dhf** 42 Heath Street, Tamworth, Staffordshire B79 7JH

© Copyright **dhf** (Door & Hardware Federation) 2017

No part of this publication may be reproduced in any form without prior permission in writing from **dhf**. E&OE