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Incorporating the Association of Burglary Insurance Surveyors Limited,
the Association of Fire Insurance Surveyors and
the Fire Insurance Surveyors Society

Alarm Alert 17 - October 2017

Subject: PD 6669: 2017 *Guidance for the provision of Alarm Transmission Systems (ATS) for Alarm Systems in the UK*

This new 'published document' (PD) from BSI has now been published and came into effect on 30 June 2017.

Overview

There has been no BS document with the same purpose prior to PD 6669. However, the document has a similar function to the well-known, and long-standing, PD 6662 in that it interprets, and partly extends, the main standard on which it is based. In the case of PD 6662 the underlying standard, or more accurately, suite of standards, is the BS EN 50131-X series; *Alarm systems- Intrusion and hold-up systems*. In the case of PD 6669 the underlying standard is BS EN 50136: 2012 series; *Alarm transmission systems and equipment*. However, unlike PD 6662, the contents of PD 6669 are applicable to all types of alarm system i.e. fire and social alarms, in addition to intruder alarms, as is the case with the underlying standard.

In essence the document builds on the existing BS EN 50136 series for alarm transmission
systems by providing additional guidance, such as additional ATS performance categories and actions to be taken when the availability fails to meet the required levels, alongside fitting and installation advice to improve the security and reliability of ATS. The document is in the form of 'guidance and recommendations'. It is not a specification or code of practice as such but, of

course, claims of compliance against it will be made by providers and sought by specifiers.

'Reporting times'

The 'reporting time' of an ATS is the period from the time a fault occurs in the ATS until the fault information is reported to the receiving centre transceiver in the ARC or in the 'secure centre' (see below). BS EN 50136-1 2012 contains a table (table 3) setting out the maximum reporting times for the different categories of ATS including the so-called 'ATS reporting time'. This is the time by which the concurrent state of failure of both paths of a dual path system must be reported at the ARC. In this scenario one path failed either within OR OUTSIDE the reporting time of the first path to fail.

However PD 6669 introduces a new term – 'catastrophic failure'. In this scenario a path fails followed by the failure of the other path WITHIN the 'reporting time' of the first path to fail. Taking dual path category DP3 as an example, the primary path reporting time is 3 minutes. The alternative path reporting time is 25 hours but this steps up to 3 minutes in the event of the failure of the primary path (although PD 6669 does not require this stepped-up performance to be sustained longer than 120 hours). The ATS reporting time is 6 minutes. These reporting times are common both to BS EN 50136 and PD 6669 but in addition, PD 6669 calls for the reporting of catastrophic failure (as defined above) in 4 minutes. The following table, populated selectively from table B.1 of PD6669, contains all the dual path category reporting times including a new category, DP2+:

ATS category	DP1	DP2	DP2+	DP3	DP4
Primary ATP failure reporting time	25 h	30 min	10 min	3 min	90 s
Alternative ATP failure maximum period when primary operational	50 h	25 h	25 h	25 h	5 h
Alternative ATP failure maximum period when primary failed [a)]	25 h	30 min	10 min	3 min	90 s
Catastrophic failure	25 h	31 min	11 min	4 min	3 min
ATS reporting time	50 h	60 min	20 min	6 min	3 min

[a)] When the primary ATP has failed, the performance of the alternative ATP 'steps up' as explained above.

The characteristics of the new category DP2+ are the same as DP2 in all respects except for the reporting times shown. The concepts of catastrophic reporting and a new reporting category DP2+, sitting as it does between the 30 minute reporting of DP2 and the 3 minute reporting of DP3, were introduced as a result of arguments put to the industry and BSI committee by RISCAuthority representing insurers and supportive stakeholders.

In addition, a new single path category is created namely SP3+ which has a reporting time of 10 minutes and thus sits between the 30 minute reporting time of SP3 and the 3 minute reporting time of SP4.

Important: notes on specifying ATS

1. The additional categories SP3+ and DP2+, now available by virtue of the publication of PD 6669, are unique to the UK and are options that do not appear

in the latest version of the System Requirements standard BS EN 50131-1 which will be available from 01 Jan 2018 (and on which a further Alarm Alert will be published later). Until the present time insurers, have tended to specify signalling category by reference to table 10 of that standard – 'grade 4 signalling' as a general rule – as faults are detected and reported within 3 minutes at that category.

2. When the revised BS EN 50131-1 comes into force, members previously specifying 'grade 4 signalling' would, if they require equivalent performance, need to specify 'grade 3 option E' signalling according to the revised version of the standard, not forgetting to specify any audible warning devices that may be required.

3. However, members willing to accept performance at the new SP3+ and DP2+ categories will need to specify by reference to PD6669 as BS EN 50131-1 does not recognise these categories. Once the new system standard (BS EN 50131-1) is introduced, members will have the option of specifying either of the two new categories (SP3 + and DP2 +) by reference to PD6669 in addition to the categories otherwise available the BS EN 50131-1 table 10 notification options. These two new categories will be usable at either system Grade 2 or system Grade 3 per BS EN 50131-1 table 10.

Single path faults

Both BS EN 50136 and PD 6669 allow the reporting of a single path fault in a dual path system to be delayed by agreement provided service is not lost and the reporting of a confirmed alarm is unaffected as a result of the delayed reporting but PD 6669 recommends that the maximum delay not exceed 96 hours. This is the default – a different period may be agreed between
the alarm company and the customer.

In addition, PD6669 recommends that single path faults in a dual path system should not be displayed on the control equipment at the premises. The reason for this is that confusion arises if the user is made aware of the fault before the fault is reported to the ARC. However, should the user or a stakeholder such as the insurer require single path faults to be displayed on the control equipment and/or notified to the user in a different timescale (e.g. immediately) then this must be made known to the alarm company. There is, though, an obvious 'nuisance' factor and the user and/or specifier may wish to explore this with the alarm company before the decision is taken.

'Call-back'

In the UK (at least) some dual path signalling products using GPRS as the normal platform for one path feature a so-called 'call-back' feature whereby the device reverts to the GSM format should the GPRS path fail. The drafting committee determined that, for the avoidance of doubt as to whether this in itself amounted to a dual path connection, the text would contain the following explanatory clause:

'When the ATS uses two differing communication techniques over the same ATP, this is considered to be a single ATP, e.g. a ATS which normally uses GPRS but can switch to GSM to maintain service is considered a single ATP. Similarly, a system that communicates using internet protocol via ADSL but can switch to a ATS using tones on the same phone line is a single ATP.'

Availability

Availability refers to the percentage of time that the requirements of an applicable category are met. For example the percentage availability at DP2 is

required to be 99% and at DP3 99.8% in BS EN 50136. Availability figures are required to be available for inspection at any time. Unlike the underlying standard BS EN 50136, PD 6669 requires action to be taken to improve poor availability and keep a record of what action was taken or the reason for no action.

Furthermore PD 6669 recognises that poor performance on one path might be masked by the high availability of the other and therefore considers this information to be of more value than overall ATS availability since it enables problems with the alternative ATP to be identified prior to a failure. Consequently, unlike the underlying standard, PD 6669 includes target availability levels for individual paths and requires actual path availability to be recorded on a 7-day availability basis which, at DP2 and DP2+ is set at 90%, and DP3, at 96%.

'Hosted' systems

In a hosted system the receiving centre transceiver (RCT) is not located in the ARC but in a so-called 'secure location'. These secure locations amount to control centres operated by the alarm transmission system provider in which the provider monitors the performance of the system and can control the flow of signals to the ARC. For example, should the customer and alarm company agree a particular policy for the management of single path failures and/or unconfirmed alarm conditions, that management will take place in the secure centre rather than in the ARC. These secure centres have to conform to the requirements of one or other of a selection of international standards for such operations e.g. ARCs and data centres.

PD 6669 states that where a hosted configuration exists, the transmission link between the secure location and the ARC is to be to the same, or better, standard

as the highest category of ATS serviced by the RCT. Note however that this transmission link is not necessarily duplicated.

Good installation practice

A further annex contains installation guidance specifically for intruder and hold-up alarm applications. The recommendations are similar to those appearing in LPS1277.

Conclusions

The contents of PD6669 are a mixed bag but the one key benefit is that the yawning gap in the reporting times between particular ATS categories of most use to insurers has been filled in the UK by two additional categories (SP3+ and DP2+) that insurers pressed for in the drafting of the various iterations of LPS1277, a standard that met with a certain amount of resistance on the part of ATS providers and the alarm sector generally.

These new categories represent an opportunity for stakeholders such as insurers to specify suitable and cost effective category ATS in those cases where use of a high security ATS with a 3 minute 'reporting time' is not essential or completely justifiable. The publication of PD 6669 means that for the first time ATS can be specified by PD6669 category and need not call for the specification of a particular branded product. This should come as a relief to those of us worn down over the years by being at the receiving end of the constant competing claims and counter claims of the various providers in this market!

Probably the second most important gain is the concept enshrined in PD 6669, but not the underlying standard, of 'catastrophic failure' which at last eliminates the greater part of the unnecessary delay in the presentation of a full confirmed

alarm condition following the simultaneous or near-simultaneous overcoming of the ATS equipment or both signalling paths as occurs in 'smash-and-rush-in' attacks in which a sledgehammer is taken to the alarm equipment.

Finally, the more exacting requirements for availability reporting and remediation and also for best practice at the installation stage, carrying forward similar practice included at insurers request in LPS1277, are also very worthwhile improvements.

At this point it has yet to be officially confirmed (although it's assumed to be a mere formality) that the NPCC (formerly ACPO) will recognise PD6669 and embrace it in their policy and, in general, few of the other 'stakeholders' such as industry bodies, the inspectorates and the providers themselves have done enough to prepare themselves and their affiliates for the changes. However it's assumed that the adjustments in the ATS market will gather momentum in the New Year when modified products and documents will become available. AiS will keep you updated as things develop.