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The Impact of Digital Telephone Lines on Lift Alarms



Liftex 2022





What is the 'digital switch'? Nationwide mass upgrade of analogue copper telecoms

infrastructure, to latest fibre based digital technology

- upgraded to fibre optic
- switch telephone network (PSTN, aka "Landlines"):
 - 48V power on phones lines removed
- by 2025
- now...

 As a society our ever increasing demand for data means that the copper network is no longer fit for purpose so needs to be

• This also means the end of analogue support on the public Reduction in support for analogue signalling • Full fibre will deliver an estimated £59bn boost to UK productivity

Previous changes to the PSTN have not affected lift alarms until





257k lift alarms in the UK are connected to landlines

- need analogue signalling to operate correctly
- communication providers (CPs)
- Dec 2025
- increase the pace of the roll out/impact

Impact on Lift Alarms

• Vast majority of the lift alarms installed are analogue devices, so

Current analogue support on fibre lines varies between

Analogue support will be withdrawn across the UK network in

"Stop Sell" of analogue services in Sept 2023 will further

Pace of change 7 million lines and counting...

- Liftex 2019:
 - 685k premises served by fibre
- reach 10 million by the end of the year

 'Stop Sell' program aka "Stealth Copper Migration" • When an exchange reaches 75% fibre, no new analogue services can be ordered **Definition of "new"** is very broad, including:

- - Change of CP
 - Working line take over

Targeting 3 million premises by end of 2020 – 4.8 million

• Fibre now serves 7 million premises in the UK, projected to

• 658 exchanges are currently under Stop Sell September 2023 the UK will enter a National Stop Sell



Testing current technology **Test Labs and Field Trials**

- Network Terminal (ONT) and a fibre router
- Vodafone, Zen
 - Sky and Virgin Media labs
- (sponsor) and Galliard Homes

• 'Master socket' ("phone socket") will be replaced with an Optical Avire have tested our equipment at the Openreach digital services lab which includes the following CPS: BT, TalkTalk, Sky,

• Avire has also run extended testing at the BT, TalkTalk,

• Field trial was conducted between Avire, Sky, Openreach

Case study to be published by Openreach



Testing

- - Performance varies between CPs
 - concern
- Provision of battery backups is still unclear
 - lines*

*Ofcom only require battery backups to be provided for 'vulnerable customers' and, even then, only to place 999 calls – not suitable for lift alarms

Battery Backups and ATAs

 Some CPs are using analogue telephone adaptors (ATAs) to allow existing analogue devices to connect to fibre lines • Disruption of alarm calls has been seen which is a

• Battery backups will <u>not</u> be provided as standard on fibre

 Lack of remote monitoring for battery backups means that on site visual inspection will be required; risk of battery backup failing and the fault not being detected



Solutions

Fixed Line versus Gateways

- building, not the lift maintenance company.
- Considerations for fibre lines:
 - ATA configuration
 - inspection) of battery backup*
- & maintained by your lift maintenance provider:
 - In-build battery with remote monitoring
 - strength

• Provisioning of telephone lines is the responsibility of the

• Battery backups: provisioning & maintaining (visual

 Alternative is to move to a 4G gateway which can be provisioned Roaming (non-steered) SIM cards to maximise signal

*EN81-28: minimum 1 hour backup with 15 mins of voice call capability

BS EN81-28:2022 Safety rules for the construction and installation of lifts — Lifts for the transport of persons and goods. Part28: Remote alarm on passenger and goods

Annex A (normative)

Typical 2-way communication between lift(s) and rescue service



Call to Action

Understand and Review

- Lift owners need to understand the following: Alarm equipment currently installed
- moving forward
 - any work that may be needed

 Compatibility with a fibre line? • Fibre roll out status (especially STOP SELL) in your area

• Work with your lift maintenance provider to define the best plan

• Avoid a "resource crunch" in 2025 by engaging early on





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