



DEPARTMENT OF FIRE AND EMERGENCY SERVICES
DIRECT BRIGADE ALARM (DBA) TECHNICAL BULLETIN
August 2019 (ADVICE 17)
AS 1670.1 2015/2018 Fire Rating of Cabling

DFES expect fire detection cabling, fittings and fixtures to be fire rated as per AS 1670.1 2015/2018 Clause 3.26 with a rating of WS5XW as defined in AS/NZS 3013.

AS 1670.1:2015 and AS 1670.1:2018 require that the entire transmission path (including departing, in-between and return paths of cable) for any of the below systems, to be 2-hour fire rated WS5XW as defined in AS/NZS 3013.

Clause 3.26 requires the following to have fire rated transmission paths;

- a) Power Supply Equipment
- b) Interface cabling FFCP-MCC, to mechanical switchboard and from mechanical switchboard to mechanical equipment controlled by FFCP or required to operate as part of a smoke management system.
- c) Networked FDCIE
- d) Distributed FDCIE
- e) Non latching supply air detectors.
- f) EWCIE external to FDCIE enclosure
- g) Fire Suppression systems initiating devices (e.g. sprinkler pressure or flow switches)
- h) Fire Suppression system actuating devices (e.g., gas/foam/wet chemical suppression systems)
- i) Smoke detectors initiating zone pressurisation systems including exit/stair pressurisation (fire rated cabling to first and last device within each fire compartment and short circuit isolators on first and last device within each compartment if loop protects more than one fire compartment.
See Figure B.2.1 & Figure B.2.2 from AS 1670.1:2018)

DFES will not accept the combination of smoke detection zones or other devices with sections of non-fire rated cabling and devices requiring fire rated cabling in accordance with AS 1670.1 2015/2018 Clause 3.26 on the same loop except for the below circumstances regarding fire isolated stairs/exits.

AS 1670.1:2018 Clause 3.26 offers a concession where if the transmission path is installed within a fire rated/isolated stair or exit having an FRL not less than -/120/120, then the cable may not be fire rated within fire isolated stairwell, however all other parts of the transmission path, i.e. from the fire isolated stairwell to the FIP shall be fire rated, and this includes both ends of the transmission path loop where it enters and exits the fire isolated stairwell.



The above concession applies to fire isolated stairs and exits only, it does not apply to fire rated or fire isolated rooms, risers, shafts etc. The above-mentioned concession also excludes AS 1670.4 transmission path protection requirements. EWIS/SSISEP and WIP(s) cabling are not to be installed within the fire isolated stair/exit.

Any premises requiring a DBA connection shall comply with the latest prescribed version of AS 1670.1, and the latest published version of the DFES DBA Connection Code or technical bulletins. Failing with these requirements will have DBA connection application withheld/delayed until compliance is achieved.

DFES has consulted with FP-002 committee members involved in the production and updating of AS1670.1 & AS 1670.4 Australian Standards to produce this bulletin.

This technical bulletin (ADVICE 17) supersedes technical bulletin (ADVICE 12) issued in August 2015 and takes precedence over all other technical bulletin re this issue.

For further advice or clarification re this matter, contact the Direct Brigade Alarm (DBA) at dba@dfes.wa.gov.au or 08 9395 9300.