

Dead-Front Trims

What is a dead-front trim?

The term dead-front is defined by the NEC (National Electrical Code) as, "Without live parts exposed to a person on the operating side of the equipment," and usually applies to electrical panels, in which the front or accessible part is insulated from line voltage and can be operated without receiving an electric shock. In recessed luminaires, the term dead-front usually implies the trim is constructed out of a material such as polycarbonate, with good electrical insulation properties. DMF Lighting provides trims, such as the M4TRSWHDF, which completely cover the metal parts of the underlying luminaire, thus creating an electrical insulation barrier or dead-front.

Why is this feature useful?

The 2014¹ NEC, in section 410.10 (D) Bathtub and Shower Areas states,

No parts of cord-connected luminaires, chain-, cable-, or cord-suspended luminaires, lighting track, pendants, or ceiling-suspended (paddle) fans shall be located within a zone measured 900 mm (3ft) horizontally and 2.5 m (8ft) vertically from the top of the bathtub rim or shower stall threshold. This zone is all encompassing and includes the space directly over the tub or shower stall. Luminaires located within the actual outside dimension of the bathtub or shower to a height of 2.5 m (8 ft) vertically from the top of the bathtub rim or shower threshold shall be marked suitable for damp locations, or marked for wet locations where subject to shower spray.

The NEC only requires that downlight luminaires located within the outside dimension of a shower, be wet location listed, if subject to shower spray. Some local codes such as the City of Seattle Electrical Code² go one step further than the NEC and add:

Luminaires, with exposed metal parts that are grounded, must be ground fault circuit interrupter protected.

The requirement to add GFI protection to the luminaire circuit within the shower or bathtub zone adds complexity and cost. Contractors use the dead-front trim as a way to get around the GFI requirement, as it is only applicable to grounded metal trims.

¹ Note: 2020 NEC, no change to section 410.10 (D)

² City of Seattle - Electrical Code, Ordinance 124593, Effective November 12, 2014 Seattle Amendments to the 2014 edition of the National Electrical Code plus adopted Washington State Administrative Rules (WAC 296-46B)