## Canalis KLE busbar trunking

The lighting trunking shall be designed and manufactured to comply with IEC 439-2 (BS EN 60439-2) and will be suitable for use at 230 V single phase or 400 V, 3-phase, 4 wire, 50 Hz supply.

The trunking will meet the degree of protection IP 31 as defined by IEC 529 (BS 5420).

The trunking casing will be manufactured from galvanised sheet steel forming an enclosed rigid structure to accept suspension brackets normally at 3 metre centres unless stated otherwise elsewhere and be able to support the light fittings. The phase and neutral conductors will be of equal cross-sectional area (2.5 mm<sup>2</sup> for the 20 A rating) and manufactured from tinned copper, fully insulated and supported at the tap-off outlets and at each end of the trunking. The casing will provide the protective conductor. There shall be tap-off outlets at every 1.0 metre centres on one side only of the trunking, these will have finger protection to prevent accidental contact with live conductors.

The lighting trunking will be available as 3 metre lengths and be capable of being cut to length on site as required to complete a run. The joining of lengths shall be with an integral self aligning simultaneous mechanical and electrical joint with a single captive screw to assure the electrical continuity of the protective conductor.

Connectors shall be prewired and rated at 6 at 10 A. The connected line shall be identifiable by external visual inspection.

It shall be possible to mount a cable duct onto the busbar trunking.

Suggested manufacturer, Telemecanique (KLE range).

# Canalis KBA busbar trunking

The lighting trunking shall be designed and manufactured to comply with IEC 439-2 (BS EN 60439-2) and will be suitable for use at 230 V single phase or 400 V, 3-phase, 4 wire, 50 Hz supply.

The trunking will meet the degree of protection IP 54 as defined by IEC 529 (BS 5420).

The trunking casing shall be made from a single sheet of galvanised steel crimped along one face to give strength. The casing shall also serve as the protective conductor. The conductors shall be tinned copper, insulated and of equal size (2.5 mm<sup>2</sup> for 25 A or 6.0 mm<sup>2</sup> for 40 A). The manufacturer will also include 2 control wires where necessary. A tap-off outlet will be at every 0.5 m or 1.0 m on one side only of the trunking.

The electrical and mechanical joint shall be connected simultaneously and secured by a single captive screw.

Proprietary flexible elements shall be available from the manufacturer to facilitate directional changes of the lighting runs.

Fixing brackets will be designed to enable the introduction of cables into an added cable duct, without removing the trunking from the fixing. The fixing brackets will be capable of supporting the trunking at up to 4 metre centres, as stated elsewhere.

Suggested manufacturer, Telemecanique (KBA range).

## Canalis KBB busbar trunking

The lighting trunking shall be designed and manufactured to comply with IEC 439-2 (BS EN 60439-2) and will be suitable for use at 230 V single phase or 400 V, 3-phase, 4 wire, 50 Hz supply.

The trunking will meet the degree of protection IP 54 as defined by IEC 529 (BS 5420).

The trunking casing shall be made from a single sheet of galvanised steel crimped along one face to give strength. The casing shall also serve as the protective conductor. The conductors shall be tinned copper, insulated and of equal size  $(2.5 \text{ mm}^2 \text{ for } 25 \text{ A or } 6.0 \text{ mm}^2 \text{ for } 40 \text{ A})$ . The manufacturer will also include 2 control wires where necessary. A tap-off outlet will be at every 1.0 m on one or both sides of the trunking.

The electrical joint shall connect all live conductors simultaneously and the mechanical joint shall be made by two bolts, providing the earth continuity and maintaining IP 54 rating.

Proprietary flexible elements shall be available from the manufacturer to facilitate directional changes of the lighting runs.

Fixing brackets will be designed to enable the introduction of cables into an added cable duct, without removing the trunking from the fixing. The fixing brackets will be capable of supporting the trunking at up to 6 metre centres, as stated elsewhere.

The tap-off units shall be available as prewired or with terminals for direct connection. The conductors to which the tapoff unit is connected shall be displayed for visual inspection. The tap-off units shall have facility to accept colour coded interlock pieces.

Suggested manufacturer, Telemecanique (KBB range).

## Canalis KN busbar trunking

The busbar trunking shall be designed and manufactured to comply with IEC 439-2 (BS EN 60439-2) and will be suitable for use at 415 V, 3-phase, 4 wire, 50 Hz supply and be suitable for the current rating and prospective fault level current detailed elsewhere.

The trunking will meet the degree of protection IP 11 as defined by IEC 529 and shall be capable of an enhanced level of protection to IP 54 (with the addition of accessories).

The trunking casing will be manufactured from galvanised sheet steel forming an enclosed rigid structure acting as the protective conductor. The trunking will be available as 3 metre or 2 metre lengths, each length supplied complete with mechanical coupling and spring loaded electrical contacts to provide a quality electromechanical joint automatically.

The trunking shall be available as 40 A, 63 A or 100 A rating. The external dimensions of the casing to remain constant irrespective of the rating. The phase and neutral conductors will be of equal cross-sectional area and all joints and connection points will be silver plated copper.

Power tap-off points will be available at 0.5 metre centres on one side of the trunking. The tap-off outlets will be protected by automatic shutters to prevent accidental contact with live parts. The shutter will be operated by inserting and removing the tap-off unit.

Where remote control switching is required, three insulated copper conductors shall form an integral part of the busbar trunking, power from these conductors will be "tapped-off' through the tap-off outlets in the same way as the power conductors.

Proprietary flexible elements shall be available from the manufacturer to facilitate directional changes of the trunking runs.

Fixing brackets will be designed for suspension or wall mounting at a distance of 3 metres unless stated differently elsewhere.

Tap-off units shall be plug-in allowing connection and disconnection without danger to the user. When the tap-off unit is plugged in, the protective conductor will be made before the phase conductors and assure the polarising of the tap-off unit.

The tap-off unit range must be such that fuses and/or modular equipment can be fitted. It must be possible to interlock (dedicate) the tap-offs using colour coded devices on the busbar tap-off outlet and tap-off units.

All insulating material and insulated components (tap-off units, feed units, etc.) used will conform to Vo UL 94 such that no corrosive or toxic gases are released in the event of excessive heat or fire.

#### Canalis KS busbar trunking

The medium power busbar trunking in ratings from 100 A to 800 A shall be designed and manufactured to comply with IEC 439-2 (BS EN 60439-2) and IP 52 protection as defined by IEC 529; with the possibility of improving the rating to IP 54.

The busbar trunking will operate on a 415 V, 3-phase, 4 wire, 50 Hz supply and be suitable in use for the current rating, prospective fault level current and IP rating detailed elsewhere.

Trunking casing will be manufactured from two pieces of galvanised steel forming an enclosed non-ventilated trunking. A tap-off outlet will be provided every 500 mm (for current ratings up to 250 A) and 1000 mm (for current ratings 315 A up to 800 A) on both sides of the trunking. The tap-off outlet will be protected by an automatic shutter operated by the earth conductor of a tap-off unit.

The three phase and neutral conductors will be of an equal size, aluminium and supported by glass fibre reinforced polyester insulators. Each conductor will be fixed in the middle of its length to ensure equal differential movement. A protective conductor being greater or equal to 50% of the phase conductors will be connected to the casing at every joint section. At every tap-off outlet and joint position, the conductors will have silver plated copper surfaces.

The joint will be made by silver plated flexible contacts designed to absorb the differential movement between the conductors and the casing. Completion of the mechanical connection will be made by three captive bolts. After completion it must be possible to ensure the joint is complete and correct by visual inspection. The busbar will be designed to be supported every 3 metres by a proprietary bracket.

The tap-off units shall have ratings of IP 40 when in operation and IP 20 when the unit door is open, as defined by IEC 529. They will be suitable for off or on-load isolation with either BS88 fuses, MCB, modular or MCCB type equipment as stated elsewhere. These tap-off units will only be capable of insertion and removal from the energised busbar system when off load and will have an interlock to assure mechanical connection before being operational. They will be designed so that the protective conductor makes and breaks before the phase and neutral conductors and the correct polarity is assured.

Suggested manufacturer, Telemecanique.