

"Connections to Energise Your Ideas"



MODULAR WIRING SYSTEMS PRODUCTS



INDEX

Approvals	p 3
Technical Specifications	p 4
Products.....	p 6
Schemes.....	p 22

www.modularwiring.com

Modular Wiring Systems reserves the right to make at any time and without previous notice, variations on products described in this catalogue.





Technical Specifications

1.1 Introduction.

This document outlines the general product configuration and specification for use of the System 32 products.

The system comprises of armoured components to distribute 230V power to lighting LCM's and Fan Coil Units.

1.2 Lighting

Supplies to LCM's are provided from the local risers via 6/9 port MDB's using System 32 armourolite/armoured components.

From the MDB's, Extender Cables (i.e. metal clad cable and polycarbonate connector assemblies) are installed to feed the requirements of the installation comprising of 6 pole 3 wire + Shielded Twisted Pair. Extender Cables lengths are supplied in increments to a maximum length of 20 m's.

Each lighting control module may be supplied to site pre-wired with a modular wiring 'T' connection. This product may differ depending on the lighting controls manufacturer appointed. A signal bus cable for distributed control throughout this part of the modular system is run remotely of MDB/Home Run Cable via the 10th port (in the case of a 9 port MDB). For extender cables and Lighting T's the bus is run integrally.

1.3 Power

Supplies to Fan Coil Units are provided from the local risers via 6 or 9 port power out MDB's using System 32 armoured components.

From the MDB's, Extender Cables (i.e. metal clad cable and polycarbonate connector assemblies) are installed to feed the requirements of the installation comprising of 6 pole 3 wire extenders. Extender Cable lengths are supplied in increments to a maximum length of 20 m's. The fan coil units may be supplied to site pre-wired with a switch fused connection 'T'. The 'T' incorporates a double pole switch with illuminated indication when switched on and a 10 amp fuse link as standard.

1.4 Component Description - System 32

The component parts of the system comprise the following:

1. Master distribution boxes (MDB's) for lighting and power comprising of either 6 or 9 port with an additional port for the signal bus (i.e. 6 or 9 No: power/lighting out & 1 No plug in bus) providing connections for armoured extender cables. These have armoured home-run cables fixed at the MDB with glands at the distribution board end for field termination.



2. Armourolite lighting extender cables comprising 6 pole male plug (source end) and 6 pole female socket (destination end) for connection from MDB's to T's at lighting control modules, providing 3 -wire mains with signal BUS throughout.
3. Armourolite lighting T's c/w 6 pole socket/plug connections and cable drop suitable for termination at lighting control modules via 20mm Ø knock-out providing 3-wire mains signal BUS.
4. Armoured power extender cables comprising 6 pole male plug (source end) and 6 pole female socket (destination end) for connection from MDB's to fuse spur 'T's connected to the FCU's, providing 3 -wire mains throughout.
5. Armoured power Fused Spur T's c/w 6 pole socket/plug connections with a neon indicator switch and a double pole switch 10 amp fuse and holder. A 1.5m 2.5mm² 3 core flex connection is supplied pre wired.



Technical Specifications

1.5 Conductors

The conductors used through the system comprise one or more of the following:

1. Conductors used in lighting and power home-run cables shall be 4mm² single-core having Class 5 flexible Cu to BSEN 60228. The cables shall be compliant to BS 7211.
2. Conductors used in armoured lighting shall be 2.5mm² and power extender cables shall be 4.00mm² single-core having Class 5 flexible Cu to BSEN 60228. The cables shall be compliant to BS 7211.
3. Conductors for lighting signal bus shall be 0.85mm² twisted pair to BSEN 60228.
4. All cables are manufactured in a BASEC certified ISO 9001 environment.
5. CENELEC Harmonization Document HD 308 S2: 2001

1.6 Armoured Cable

All cable conductors are contained within a spiral interlocked, aluminium armouring. Conductors within the armour are Mylor[®] wrapped to prevent snagging within the outer sheath.

The overall cable assembly complies with UL 1592.

In the case of the Home Run each individual conductor are marked continuously throughout the length at 150mm spacing with the corresponding port number of the MDB.



1.7 Armoured Extender Cable Connectors

The Extender Cables for linear distribution comprise of polycarbonate connectors of the male pin and female receptacle type and are up to 32 amp rated depending on product selection. The mating of the connectors together provides a safe connection. The pin heights are configured such that on initial mating, the Earth pin shall be the first to mate and last to break before any other pin. The earth pin shall be connected directly to the outer metal armour of the cable at one end only of the extender cable assembly (so preventing earth loop circuits). Separate connection pins are used for every earth connection.

Connectors are fitted with two clips, one either side of the port to prevent sideways movement. The clips shall provide secure fastenings for the connection to the Extender Cables for lateral distribution.

Connectors are compliant to BSEN 61535 and are coded to prevent lighting and power circuits being interconnected.

1.8 Standards

Components comprise factory-assembled units compliant with BSEN 61535:2009.

Armoured Extenders Cables are ATE tested and labelled with the following information:

- Resistance measurement of each core in milliohms.
- Time of manufacture
- Assembly location
- Serial number

The degree of protection for the system is IP20 (when connected).

The system is manufactured in an ISO 9001:2008 environment.

Modular Wiring Systems which is part of the Tratos Group, Tratos Ltd is an ISO 14001 company.



MWS PRODUCTS

EXTENDER - 1 ARMOURED - 6 CORE 4mm

MWS 90002

Standard armoured power extender feeding power requirements for ring circuits. MC 6 core cable, with EI5 thermosetting insulation.

CONSTRUCTION

- **Armour:**
Flexible aluminium conduit armour strip.
- **Conductors:**
Plain Annealed Copper Wires to BS EN 60228.
Flexible copper construction Class 5 flexible Sizes 1.0mm² to 6.0mm².
- **Insulation:**
Thermosetting insulation type EI5 to BS 7211 Flame Retardant low smoke and halogen free.

TEMPERATURE RATINGS

- 90°C Maximum conductor operating temperature.

VOLTAGE RATINGS

- BS 7211 Tables 3b - 450/750V - Harmonised code designation H07Z-K.

RELEVANT STANDARDS

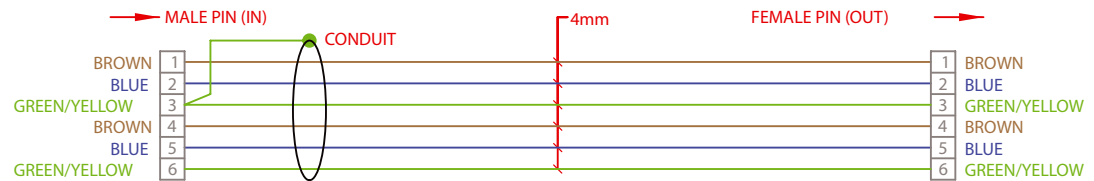
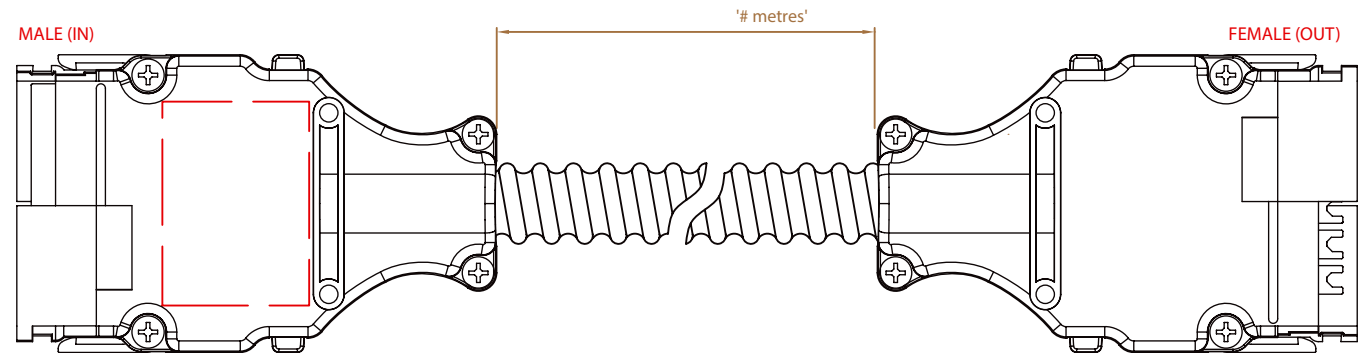
- BS7211 – Electric Cables, Thermosetting insulated, for voltages up to and including 450/750 V.
- For Electric power, lighting and internal wiring, and having a low emission of smoke and corrosive gases when affected by fire.

TESTS

- **DC resistance:** All cables measured for DC Resistance ohms/km @ 20° C.
- **Voltage:** All cables tested @ 2.5kV/DC for 5 Mins.
- Fully assembled products are then ATE testing including IR test and continuity.

IDENTIFICATION

- **Embossed:** x TRATOS x BASEC BS.7211 HO7Z-K (Including CSA).
- **Core identification:** brown-blue - green - yellow.
- Product complete with full test label.





EXTENDER - 1 ARMOURED - 3 CORE 4mm

MWS 90006

Standard armoured power extender feeding power requirements for radio circuits. MC 3 core cable, with EI5 thermosetting insulation.

CONSTRUCTION

- **Armour:**
Flexible aluminium conduit armour strip.
- **Conductors:**
Plain Annealed Copper Wires to BS EN 60228.
Flexible copper construction Class 5 flexible Sizes 1.0mm² to 6.0mm².
- **Insulation:**
Thermosetting insulation type EI5 to BS 7211 Flame Retardant low smoke and halogen free.

TEMPERATURE RATINGS

- 90°C Maximum conductor operating temperature.

VOLTAGE RATINGS

- BS 7211 Tables 3b - 450/750V - Harmonised code designation H07Z-K.

RELEVANT STANDARDS

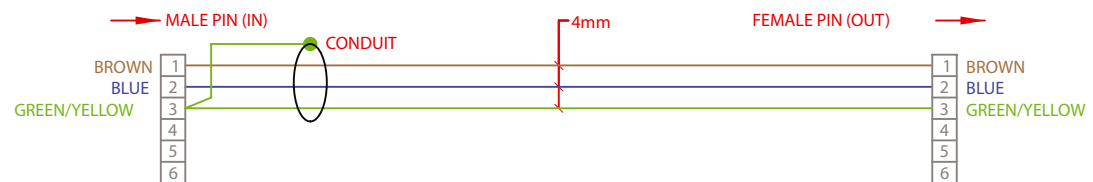
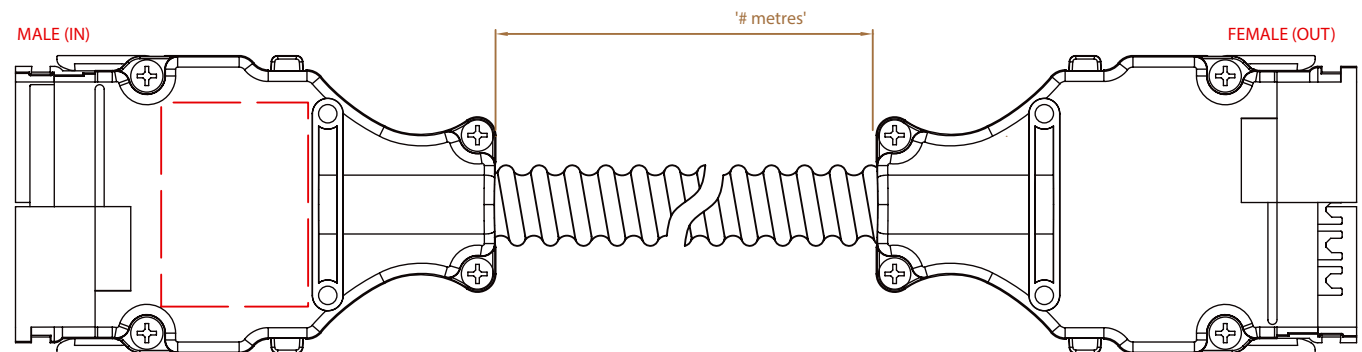
- BS7211 – Electric Cables, Thermosetting insulated, for voltages up to and including 450/750 V.
- For Electric power, lighting and internal wiring, and having a low emission of smoke and corrosive gases when affected by fire.

TESTS

- **DC resistance:** All cables measured for DC Resistance ohms/km @ 20° C.
- **Voltage:** All cables tested @ 2.5kV/DC for 5 Mins.
- Fully assembled products are then ATE testing including IR test and continuity.

IDENTIFICATION

- **Embossed:** x TRATOS x BASEC BS.7211 HO7Z-K (Including CSA).
- **Core identification:** brown-blue - green - yellow.
- Product complete with full test label.



MWS PRODUCTS

EXTENDER - 1 ARMOURELITE - 3 CORE 2.5mm + SDP

MWS 91001

Standard Lighting extender armoured product feeding lighting circuits including a data pair for lighting control.

CONSTRUCTION

- **Armour:**
Flexible aluminium conduit armour strip.
- **Conductors:**
Plain Annealed Copper Wires to BS EN 60228.
Flexible copper construction Class 5 flexible Sizes 1.0mm² to 6.0mm².
Dali pair 1.5mm x10 twists per metre.
- **Insulation:**
Thermosetting insulation type EI5 to BS 7211 Flame Retardant low smoke and halogen free.

TEMPERATURE RATINGS

- 90°C Maximum conductor operating temperature.

VOLTAGE RATINGS

- BS 7211 Tables 3b - 450/750V - Harmonised code designation H07Z-K.

RELEVANT STANDARDS

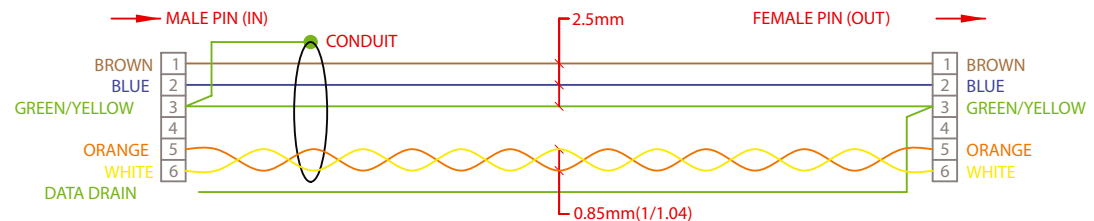
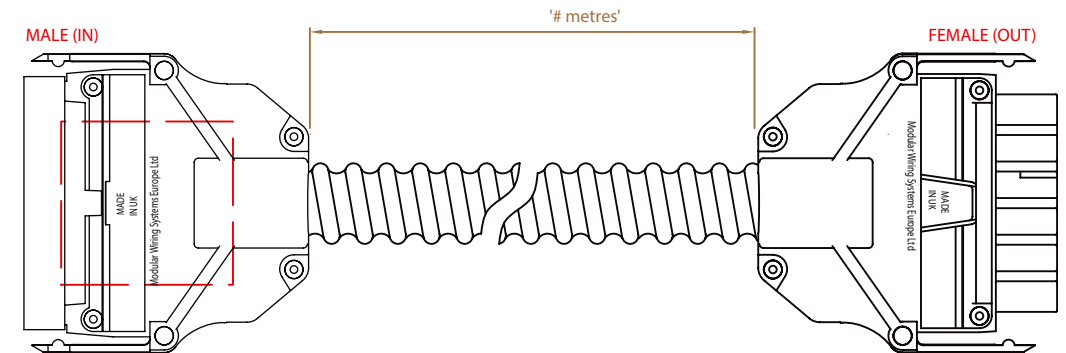
- BS7211 – Electric Cables, Thermosetting insulated, for voltages up to and including 450/750 V.
- For Electric power, lighting and internal wiring, and having a low emission of smoke and corrosive gases when affected by fire.

TESTS

- **DC resistance:** All cables measured for DC Resistance ohms/km @ 20° C.
- **Voltage:** All cables tested @ 2.5kV/DC for 5 Mins.
- Fully assembled products are then ATE testing including IR test and continuity.

IDENTIFICATION

- **Embossed:** x TRATOS x BASEC BS.7211 H07Z-K (Including CSA).
- **Core identification:** brown-blue - green - yellow, orange and white.
- Product complete with full test label.





EXTENDER - 1 ARMOURELITE - 4 CORE 2.5mm +SDP

MWS 91005

Standard Lighting extender armoured product feeding lighting circuits including a dali pair for lighting control.

CONSTRUCTION

- **Armour:**
Flexible aluminium conduit armour strip.
- **Conductors:**
Plain Annealed Copper Wires to BS EN 60228.
Flexible copper construction Class 5 flexible Sizes 1.0mm² to 6.0mm².
Dali pair 1.5mm x10 twists per metre.
- **Insulation:**
Thermosetting insulation type EI5 to BS 7211 Flame Retardant low smoke and halogen free.

TEMPERATURE RATINGS

- 90°C Maximum conductor operating temperature.

VOLTAGE RATINGS

- BS 7211 Tables 3b - 450/750V - Harmonised code designation H07Z-K.

RELEVANT STANDARDS

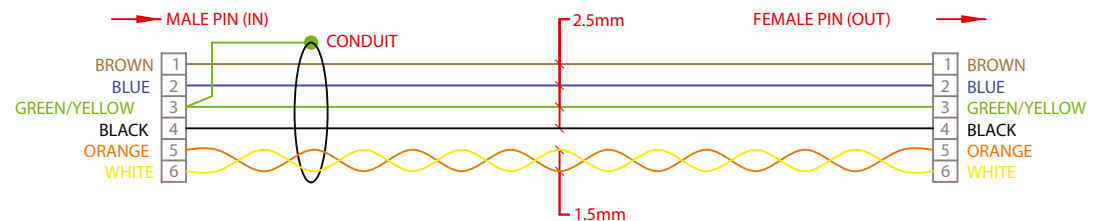
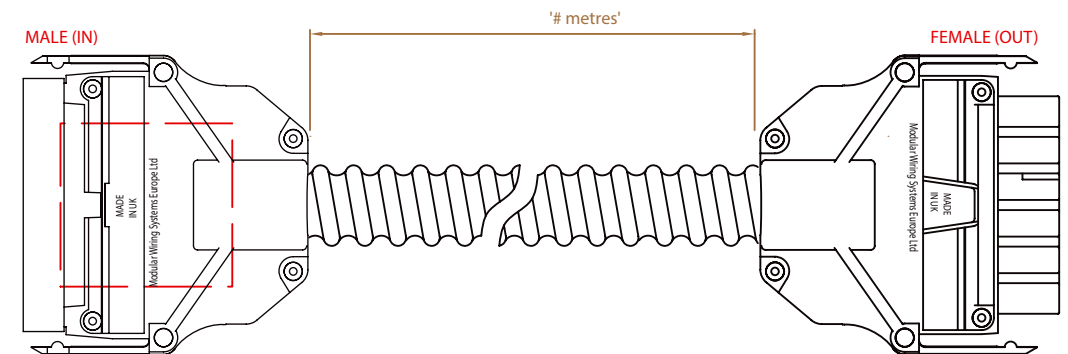
- BS7211 – Electric Cables, Thermosetting insulated, for voltages up to and including 450/750 V.
- For Electric power, lighting and internal wiring, and having a low emission of smoke and corrosive gases when affected by fire.

TESTS

- **DC resistance:** All cables measured for DC Resistance ohms/km @ 20° C.
- **Voltage:** All cables tested @ 2.5kV/DC for 5 Mins.
- Fully assembled products are then ATE testing including IR test and continuity.

IDENTIFICATION

- **Embossed:** x TRATOS x BASEC BS.7211 H07Z-K (Including CSA).
- **Core identification:** brown-blue - green - yellow, black +Dali pair orange and white.
- Product complete with full test label.



MWS PRODUCTS

CONVERTER - ARMOURED - 3 CORE 2.5mm + SDP

MWS 92070

Armoured aluminium convertor cable, from the mdb to the first lighting point in the circuit.

CONSTRUCTION

- **Armour:**
Flexible aluminium conduit armour strip.
- **Conductors:**
Plain Annealed Copper Wires to BS EN 60228.
Flexible copper construction Class 5 flexible Sizes 1.0mm² to 6.0mm².
Dali pair 1.5mm x10 twists per metre.
- **Insulation:**
Thermosetting insulation type EI5 to BS 7211 Flame Retardent low smoke and halogen free.

TEMPERATURE RATINGS

- 90°C Maximum conductor operating temperature.

VOLTAGE RATINGS

- BS 7211 Tables 3b - 450/750V - Harmonised code designation H07Z-K.

RELEVANT STANDARDS

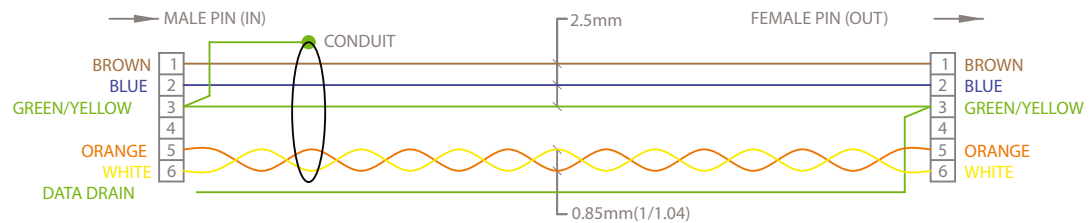
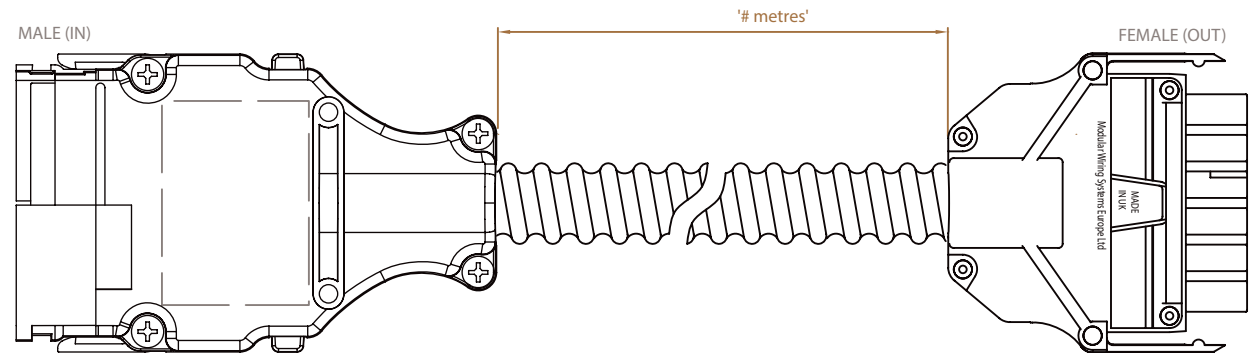
- BS7211 – Electric Cables, Thermosetting insulated, for voltages up to and including 450/750 V.
- For Electric power, lighting and internal wiring, and having a low emission of smoke and corrosive gases when affected by fire.

TESTS

- **DC resistance:** All cables measured for DC Resistance ohms/km @ 20° C.
- **Voltage:** All cables tested @ 2.5kV/DC for 5 Mins.
- Fully assembled products are then ATE testing including IR test and continuity.

IDENTIFICATION

- **Embossed:** x TRATOS x BASEC BS.7211 H07Z-K (Including CSA).
- **Core identification:** brown-blue - green - yellow + Dali pair orange and white.
- Product complete with full test label.





WHIPEND - ARMOURED - 3 CORE 2.5mm

MWS 93010

Power Armoured whipend distributing power to final points in a circuit.

CONSTRUCTION

- **Armour:**
Flexible aluminium conduit armour strip. Pre-fitted quick fix gland and lock nut.
- **Conductors:**
Plain Annealed Copper Wires to BS EN 60228.
Flexible copper construction Class 5 flexible Sizes 1.0mm² to 6.0mm².
- **Insulation:**
Thermosetting insulation type EI5 to BS 7211 Flame Retardant low smoke and halogen free.

TEMPERATURE RATINGS

- 90°C Maximum conductor operating temperature.

VOLTAGE RATINGS

- BS 7211 Tables 3b - 450/750V - Harmonised code designation H07Z-K.

RELEVANT STANDARDS

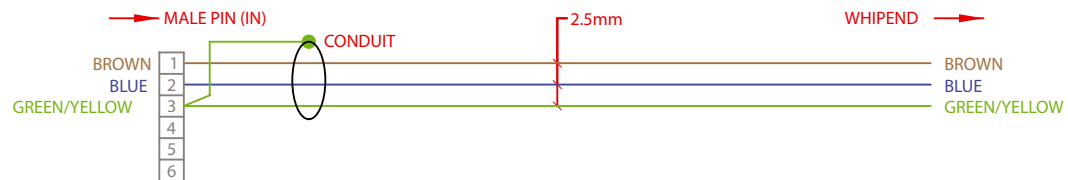
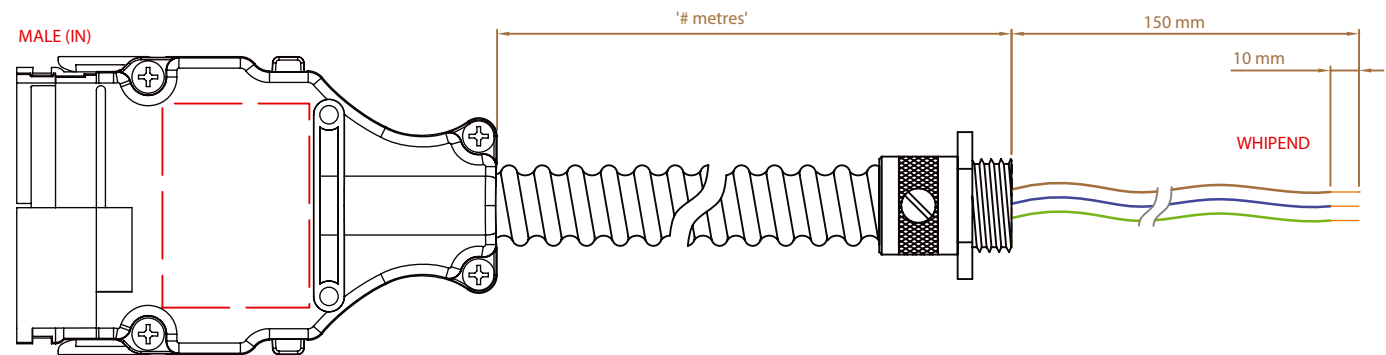
- BS7211 – Electric Cables, Thermosetting insulated, for voltages up to and including 450/750 V.
- For Electric power, lighting and internal wiring, and having a low emission of smoke and corrosive gases when affected by fire.

TESTS

- **DC resistance:** All cables measured for DC Resistance ohms/km @ 20° C.
- **Voltage:** All cables tested @ 2.5kV/DC for 5 Mins.
- Fully assembled products are then ATE testing including IR test and continuity.

IDENTIFICATION

- **Embossed:** x TRATOS x BASEC BS.7211 HO7Z-K (Including CSA).
- **Core identification:** brown-blue - green - yellow.,
- Product complete with full test label.



MWS PRODUCTS

DISTRIBUTION CABLE - ARMoured - 6 CORE 4mm

MWS 93022

Power Armoured whipend distributing power to final points in a ring circuit.

CONSTRUCTION

- **Armour:**
Flexible aluminium conduit armour strip. Pre-fitted quick fix gland and lock nut.
- **Conductors:**
Plain Annealed Copper Wires to BS EN 60228.
Flexible copper construction Class 5 flexible Sizes 1.0mm² to 6.0mm
- **Insulation:**
Thermosetting insulation type EI5 to BS 7211 Flame Retardant low smoke and halogen free.

TEMPERATURE RATINGS

- 90°C Maximum conductor operating temperature.

VOLTAGE RATINGS

- BS 7211 Tables 3b - 450/750V - Harmonised code designation H07Z-K.

RELEVANT STANDARDS

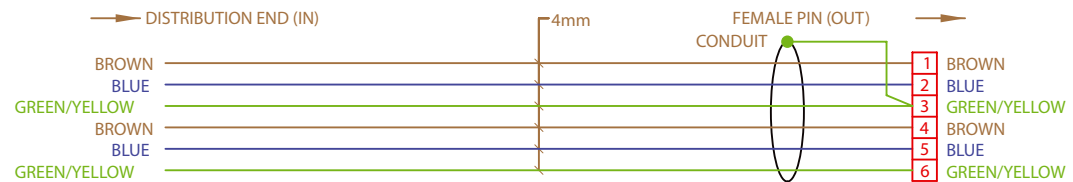
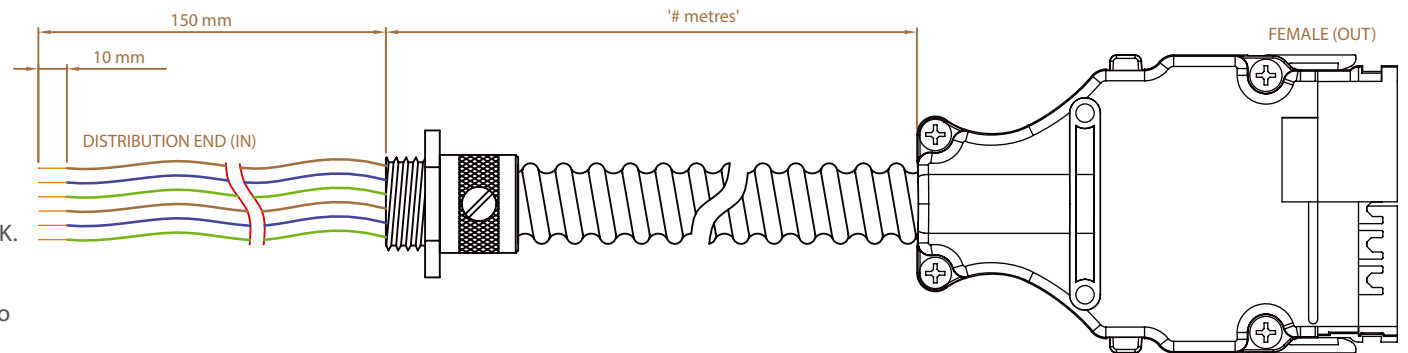
- BS7211 – Electric Cables, Thermosetting insulated, for voltages up to and including 450/750 V.
- For Electric power, lighting and internal wiring, and having a low emission of smoke and corrosive gases when affected by fire.

TESTS

- **DC resistance:** All cables measured for DC Resistance ohms/km @ 20° C.
- **Voltage:** All cables tested @ 2.5kV/DC for 5 Mins.
- Fully assembled products are then ATE testing including IR test and continuity.contuinity.

IDENTIFICATION

- **Embossed:** x TRATOS x BASEC BS.7211 H07Z-K (Including CSA).
- **Core identification:** brown-blue - green - yellow.,
- Product complete with full test label.





DISTRIBUTION CABLE - ARMoured – SDP NETWORK DATA

MWS 93028

Data armoured distribution cable to be plugged into the MDB to distribute data around the MDB.

CONSTRUCTION

- **Armour:**
Flexible aluminium conduit armour strip. Pre-fitted quick fix gland and lock nut.
- **Conductors:**
Plain Annealed Copper Wires to BS EN 60228.
Flexible copper construction Class 5 Orange +White 0.85mm + data drain.
- **Insulation:**
Thermosetting insulation type EI5 to BS 7211 Flame Retardant low smoke and halogen free.

TEMPERATURE RATINGS

- 90°C Maximum conductor operating temperature.

VOLTAGE RATINGS

- BS 7211 Tables 3b - 450/750V - Harmonised code designation H07Z-K.

RELEVANT STANDARDS

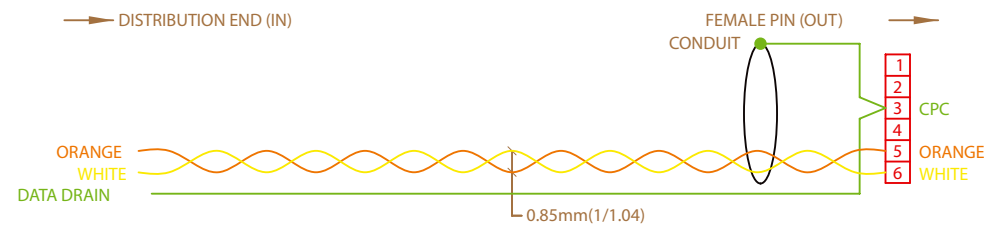
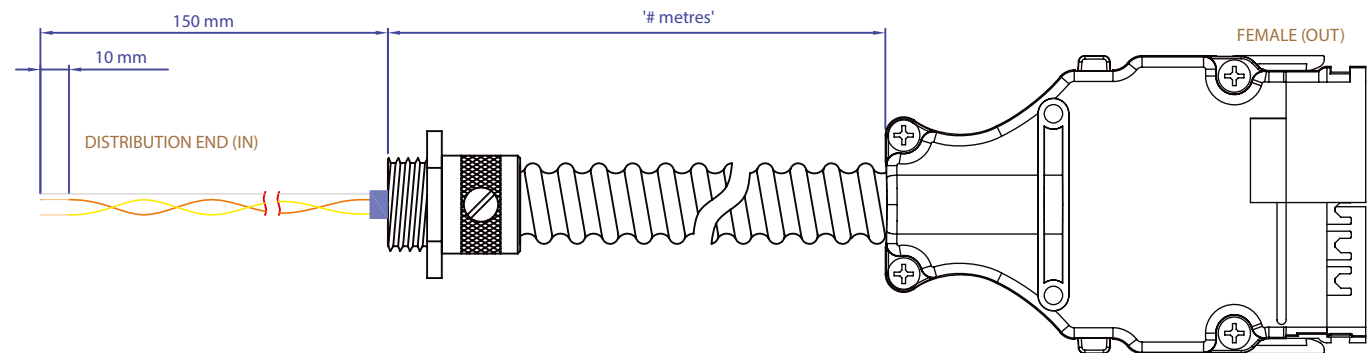
- BS7211 – Electric Cables, Thermosetting insulated, for voltages up to and including 450/750 V.
- For Electric power, lighting and internal wiring, and having a low emission of smoke and corrosive gases when affected by fire.

TESTS

- **DC resistance:** All cables measured for DC Resistance ohms/km @ 20° C.
- **Voltage:** All cables tested @ 2.5kV/DC for 5 Mins.
- Fully assembled products are then ATE testing including IR test and continuity.

IDENTIFICATION

- **Embossed:** x TRATOS x BASEC BS.7211 HO7Z-K (Including CSA).
- **Core identification:** Data pair orange and white.
- Product complete with full test label.



MWS PRODUCTS

WHIPEND - ARMOURED - 3 CORE 4mm

MWS 93046

Power Armoured whipend distributing power to final points in a circuit.

CONSTRUCTION

- **Armour:**
Flexible aluminium conduit armour strip. Pre-fitted quick fix gland and lock nut.
- **Conductors:**
Plain Annealed Copper Wires to BS EN 60228.
Flexible copper construction Class 5 flexible Sizes 1.0mm² to 6.0mm².
- **Insulation:**
Thermosetting insulation type EI5 to BS 7211 Flame Retardant low smoke and halogen free.

TEMPERATURE RATINGS

- 90°C Maximum conductor operating temperature.

VOLTAGE RATINGS

- BS 7211 Tables 3b - 450/750V - Harmonised code designation H07Z-K.

RELEVANT STANDARDS

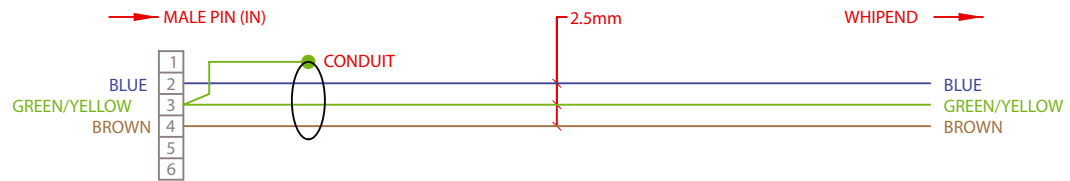
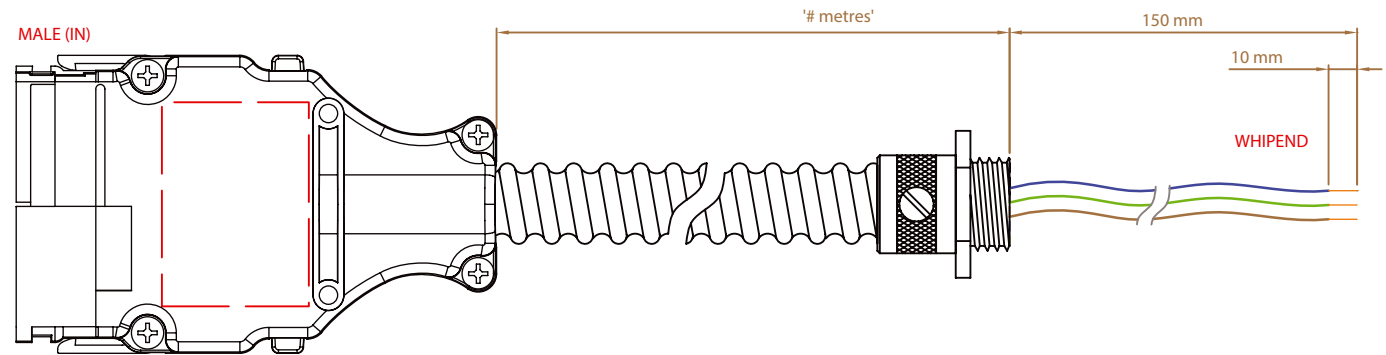
- BS7211 – Electric Cables, Thermosetting insulated, for voltages up to and including 450/750 V.
- For Electric power, lighting and internal wiring, and having a low emission of smoke and corrosive gases when affected by fire.

TESTS

- **DC resistance:** All cables measured for DC Resistance ohms/km @ 20° C.
- **Voltage:** All cables tested @ 2.5kV/DC for 5 Mins.
- Fully assembled products are then ATE testing including IR test and continuity.

IDENTIFICATION

- **Embossed:** x TRATOS x BASEC BS.7211 H07Z-K (Including CSA).
- **Core identification:** brown-blue - green - yellow.
- Product complete with full test label.





WHIPEND TEE - ARMoured - 3 CORE 2.5mm

MWS 93066

Power Armoured T with Armoured drop feeding radial circuits outlets.

CONSTRUCTION

- **Armour:**
Flexible aluminium conduit armour strip. Pre-fitted quick fix gland and lock nut.
- **Conductors:**
Plain Annealed Copper Wires to BS EN 60228.
Flexible copper construction Class 5 flexible Sizes 1.0mm² to 6.0mm².
- **Mould:** v0 rated Polycarbonate.
- **Insulation:**
Thermosetting insulation type EI5 to BS 7211 Flame Retardant low smoke and halogen free.

TEMPERATURE RATINGS

- 90°C Maximum conductor operating temperature.

VOLTAGE RATINGS

- BS 7211 Tables 3b - 450/750V - Harmonised code designation H07Z-K.

RELEVANT STANDARDS

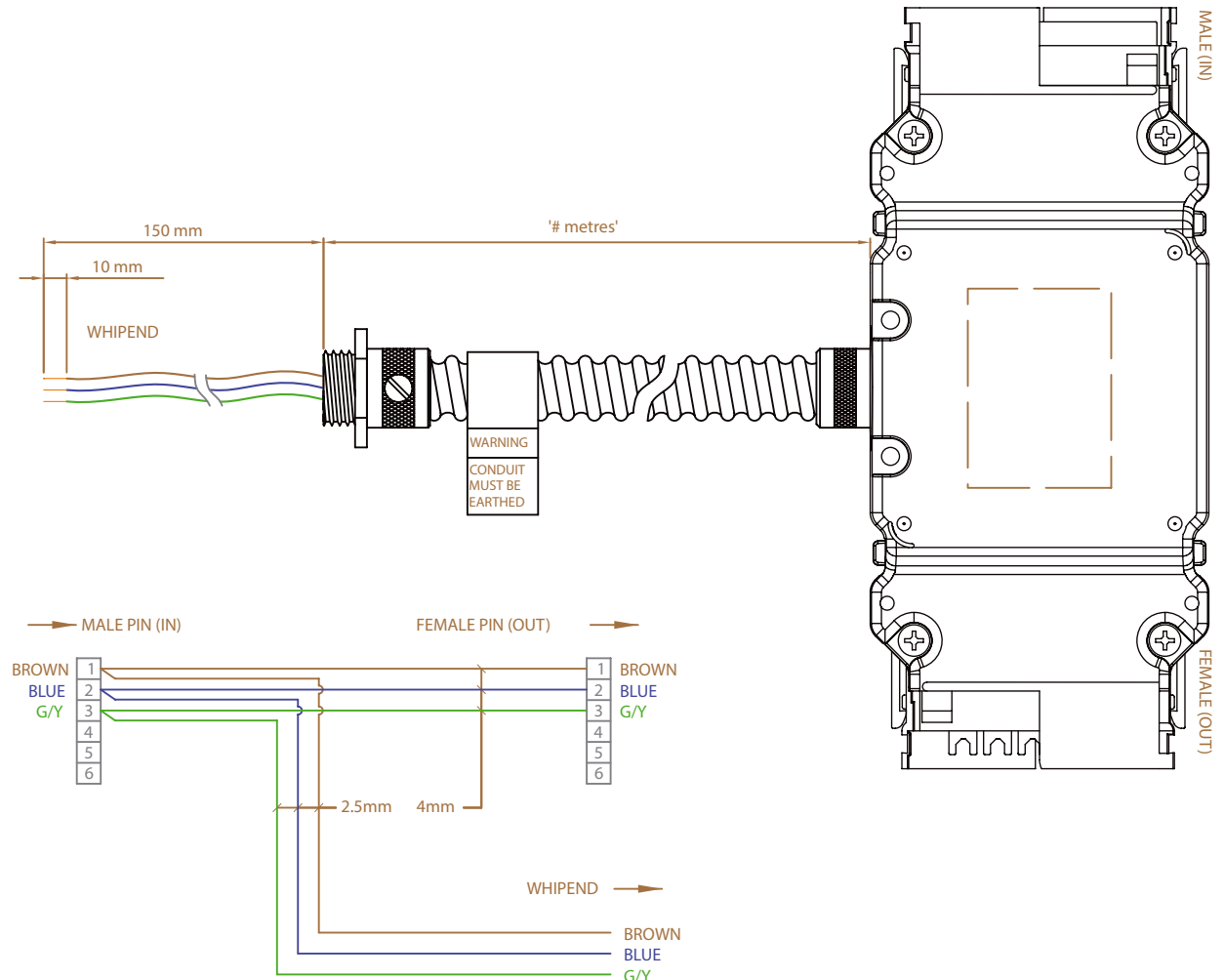
- BS7211 – Electric Cables, Thermosetting insulated, for voltages up to and including 450/750 V.
- For Electric power, lighting and internal wiring, and having a low emission of smoke and corrosive gases when affected by fire.

TESTS

- **DC resistance:** All cables measured for DC Resistance ohms/km @ 20° C.
- **Voltage:** All cables tested @ 2.5kV/DC for 5 Mins.
- Fully assembled products are then ATE testing including IR test and continuity.

IDENTIFICATION

- **Embossed:** x TRATOS x BASEC BS.7211 HO7Z-K (Including CSA).
- **Core identification:** brown-blue - green - yellow.
- Product complete with full test label.



MWS PRODUCTS

WHIPEND TEE - ARMOURED - 3 CORE 2.5mm-10 Amp SWITCH FUSE

MWS 93100

Power Armoured T complete with 10 Amp fuse spur t complete with neon switch, commonly used on FCU and high level power.

CONSTRUCTION

- **Cable type:**
Unarmoured flex LSZH outer sheath, internal core Ei5 cable.
- **Conductors:**
Plain Annealed Copper Wires to BS EN 60228.
Flexible copper construction Class 5 flexible Sizes 1.0mm² to 6.0mm².
- **Mould:** v0 rated Polycarbonate.
- **Insulation:**
Thermosetting insulation type EI5 to BS 7211 Flame Retardant low smoke and halogen free.

TEMPERATURE RATINGS

- 90°C Maximum conductor operating temperature.

VOLTAGE RATINGS

- BS 7211 Tables 3b - 450/750V - Harmonised code designation H07Z-K

RELEVANT STANDARDS

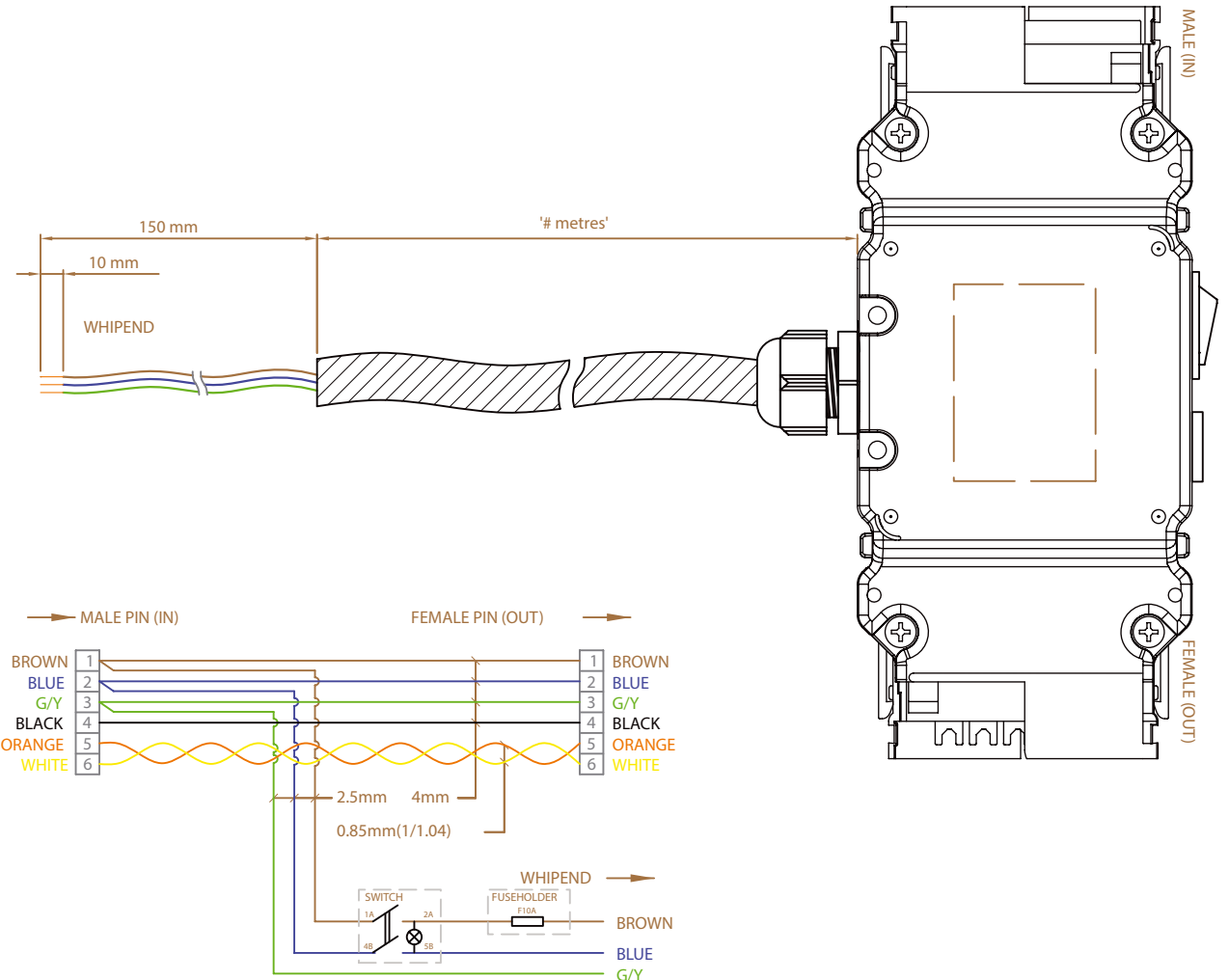
- BS7211 – Electric Cables, Thermosetting insulated, for voltages up to and including 450/750 V.
- For Electric power, lighting and internal wiring, and having a low emission of smoke and corrosive gases when affected by fire.

TESTS

- **DC resistance:** All cables measured for DC Resistance ohms/km @ 20° C.
- **Voltage:** All cables tested @ 2.5kV/DC for 5 Mins.
- Fully assembled products are then ATE testing including IR test and continuity.

IDENTIFICATION

- **Embossed:** x TRATOS x BASEC BS.7211 HO7Z-K (Including CSA).
- **Core identification:** brown-blue - green - yellow, black and orange + white.
- Product complete with full test label.





TEE - ARMOURELITE - 6 POLE LIGHTING T PIECE

MWS 95001a

Lighting T piece, commonly used for luminaries or LCM'S

CONSTRUCTION

- **Conductors:** copper busbar.
- **Mould:** v0 rated Polycarbonate.
- **Insulation:**
Thermosetting insulation type EI5 to BS 7211 Flame Retardant low smoke and halogen free.

TEMPERATURE RATINGS

- 90°C Maximum conductor operating temperature.

VOLTAGE RATINGS

- BS 7211 Tables 3b - 450/750V - Harmonised code designation H07Z-K.

RELEVANT STANDARDS

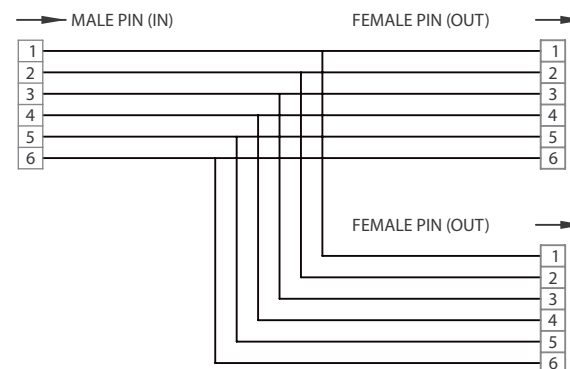
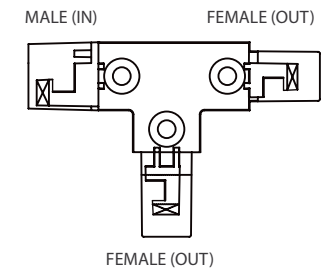
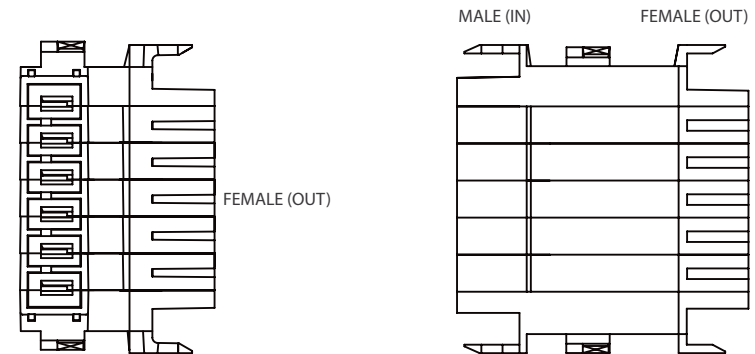
- BS7211 – Electric Cables, Thermosetting insulated, for voltages up to and including 450/750 V.
- For Electric power, lighting and internal wiring, and having a low emission of smoke and corrosive gases when affected by fire.

TESTS

- **DC resistance:** All cables measured for DC Resistance ohms/km @ 20° C.
- **Voltage:** All cables tested @ 2.5kV/DC for 5 Mins.
- Fully assembled products are then ATE testing including IR test and continuity.

IDENTIFICATION

- Product complete with full test label.



MWS PRODUCTS

WHIPEND - UNARMoured - 3 CORE 1.5mm

MWS 96019

Lighting unarmoured whipend generally used for feeding Luminaires.

CONSTRUCTION

- **Cable type:**
Unarmoured flex LSZH outer sheath, internal core Ei5 cable.
- **Conductors:**
Plain Annealed Copper Wires to BS EN 60228.
Flexible copper construction Class 5 flexible Sizes 1.0mm² to 6.0mm².
- **Insulation:**
Thermosetting insulation type EI5 to BS 7211 Flame Retardant low smoke and halogen free.

TEMPERATURE RATINGS

- 90°C Maximum conductor operating temperature.

VOLTAGE RATINGS

- BS 7211 Tables 3b - 450/750V - Harmonised code designation H07Z-K.

RELEVANT STANDARDS

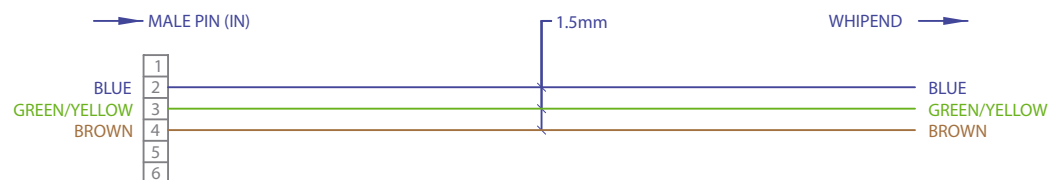
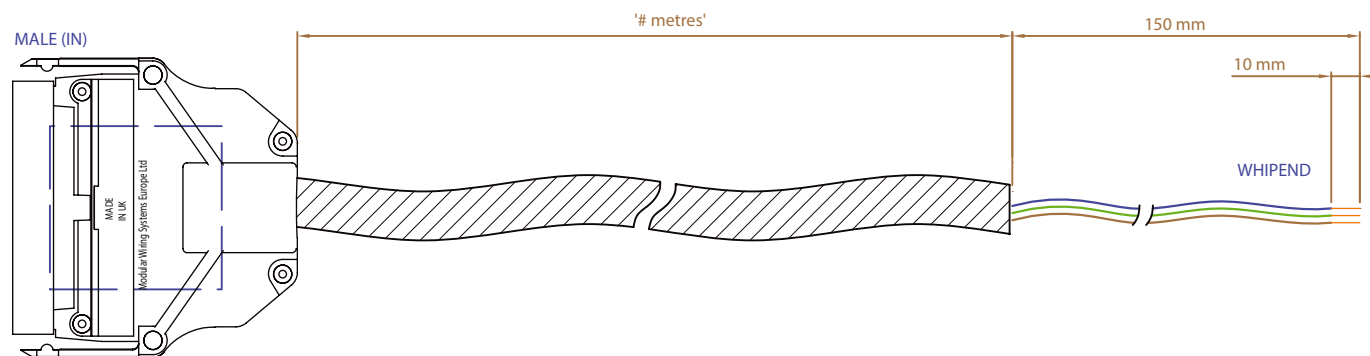
- BS7211 – Electric Cables, Thermosetting insulated, for voltages up to and including 450/750 V.
- For Electric power, lighting and internal wiring, and having a low emission of smoke and corrosive gases when affected by fire.

TESTS

- **DC resistance:** All cables measured for DC Resistance ohms/km @ 20° C.
- **Voltage:** All cables tested @ 2.5kV/DC for 5 Mins.
- Fully assembled products are then ATE testing including IR test and continuity.

IDENTIFICATION

- **Embossed:** x TRATOS x BASEC BS.7211 H07Z-K (Including CSA).
- **Core identification:** brown-blue - green - yellow.
- Product complete with full test label.





WHIPEND - ARMOURED - 3 CORE 2.5mm + SDP

MWS 97002

Lighting Armoured whipend generally used for feeding LCMS

CONSTRUCTION

- **Armour:**
Flexible aluminium conduit armour strip. Pre-fitted quick fix gland and lock nut.
- **Conductors:**
Plain Annealed Copper Wires to BS EN 60228.
Flexible copper construction Class 5 flexible Sizes 1.0mm² to 6.0mm².
- **Insulation:**
Thermosetting insulation type EI5 to BS 7211 Flame Retardant low smoke and halogen free.

TEMPERATURE RATINGS

- 90°C Maximum conductor operating temperature.

VOLTAGE RATINGS

- BS 7211 Tables 3b - 450/750V - Harmonised code designation H07Z-K.

RELEVANT STANDARDS

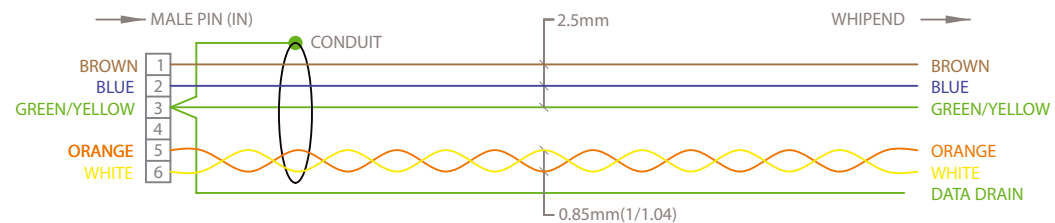
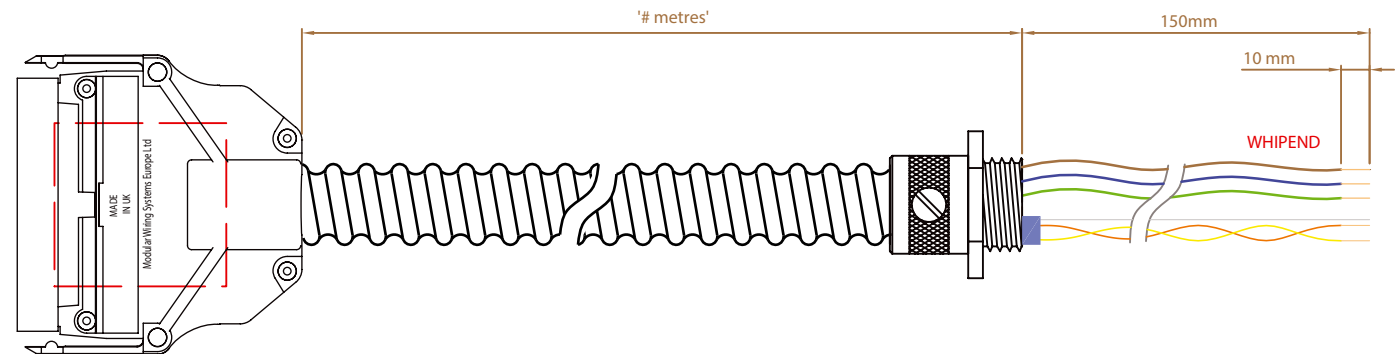
- BS7211 – Electric Cables, Thermosetting insulated, for voltages up to and including 450/750 V.
- For Electric power, lighting and internal wiring, and having a low emission of smoke and corrosive gases when affected by fire.

TESTS

- **DC resistance:** All cables measured for DC Resistance ohms/km @ 20° C.
- **Voltage:** All cables tested @ 2.5kV/DC for 5 Mins.
- Fully assembled products are then ATE testing including IR test and continuity.

IDENTIFICATION

- **Embossed:** x TRATOS x BASEC BS.7211 HO7Z-K (Including CSA).
- **Core identification:** brown-blue - green - yellow, orange and white
- Product complete with full test label.



CONNECTORS

MWS Connectors 32amp

Generic fully owned mould for all 32amp rated products.

CONSTRUCTION

- **Polymer:**
Engineering grade polymer polycarbonate to:
 - Notched impact strength DIN55 453.
 - MFR 300/1.2 ISO 1133.
 - Glow wire test 850 c 2mm.
 - VDE 0471 Teil 1.2.

TEMPERATURE RATINGS

- 90°C Maximum conductor operating temperature.

VOLTAGE RATINGS

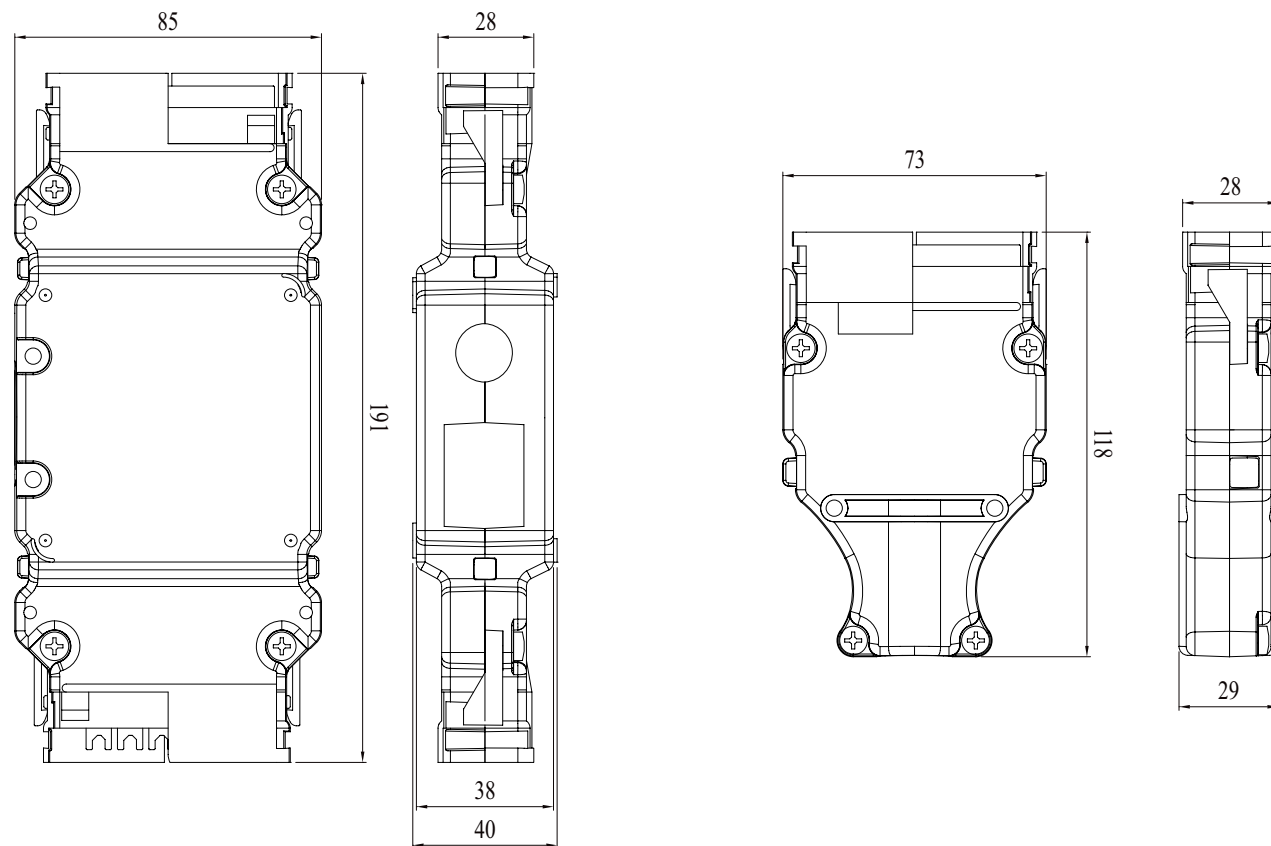
- 100/400V.

TESTS

- Fully assembled products are then ATE testing including IR test and continuity.

IDENTIFICATION

- **Embossed:** Modular Wiring Systems Ltd.
- Product complete with full test label.





CONNECTORS

MWS Connectors Tee pieces

Generic fully owned mould for armoullite systems.

CONSTRUCTION

• Polymer:

- Engineering grade polymer polycarbonate to:
 - Notched impact strength DIN55 453.
 - MFR 300/1.2 ISO 1133.
 - Glow wire test 850 c 2mm.
 - VDE 0471 Teil 1.2.

TEMPERATURE RATINGS

- 90°C Maximum conductor operating temperature.

VOLTAGE RATINGS

- 100/400V .

RELEVANT STANDARDS

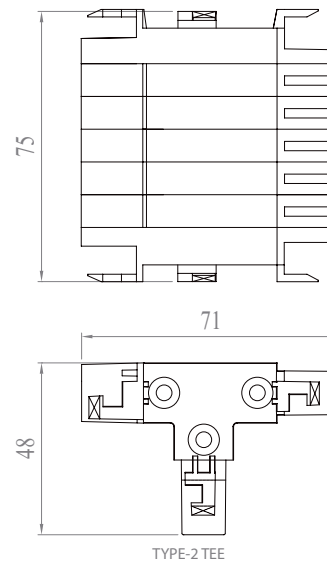
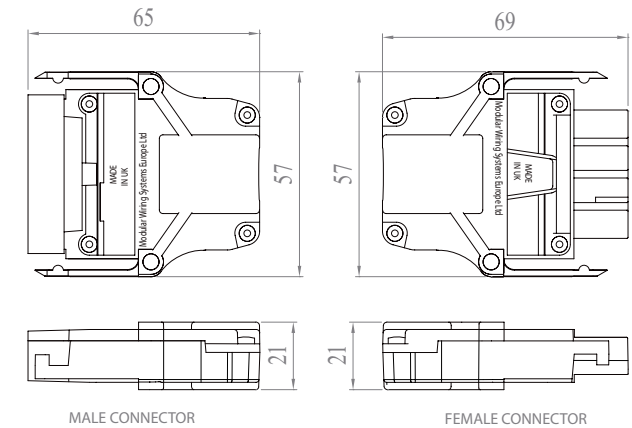
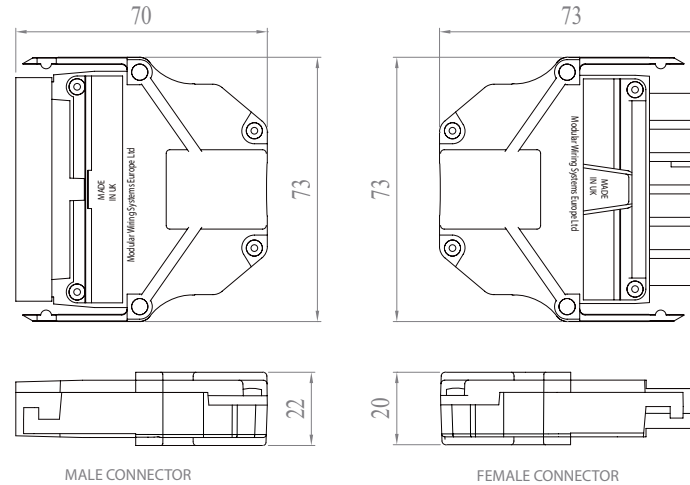
- BS 61535.
- **Terminals Construction:** DIN 46342 part 1 & DIN46247 part 1,2 &3.
- **Terminal Crimping standards:** DIN 41611/3.
- **Contact and crimp resistance:** 288 $\mu\Omega$.

TESTS

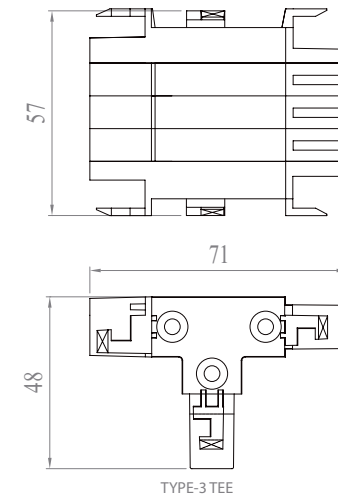
- Fully assembled products are then ATE testing including IR test and continuity.

IDENTIFICATION

- **Embossed:** Modular Wiring Systems Ltd.
- Product complete with full test label.



Type 1



Type 2

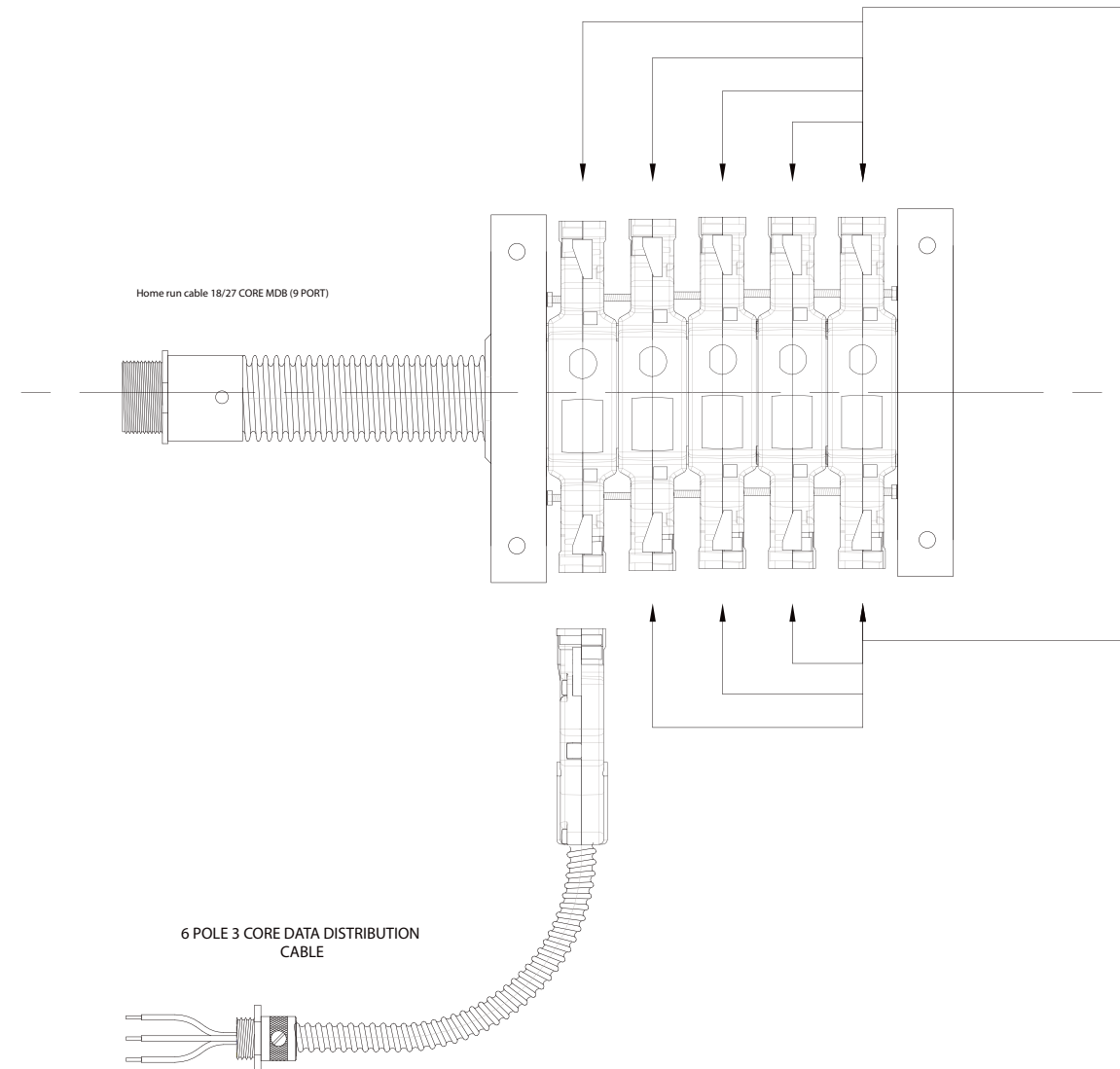
SCHEME

MWS MDB POWER & POWER WITH DATA

This scheme shows a 27 core 9 port MDB with a data distribution cable.

The top line of products show an armoured power system, power extenders feeding a switched fused T with an unarmoured drop. With the circuit continuing, this system is available in 4mm and 6mm options in the home run and extenders.

The bottom line of products show how the same can be done incorporating a data pair for BMS systems. Both can be fed from the same MDB.





MALE
(IN)

6 POLE 3 CORE 4mm
EXTENDER CABLE

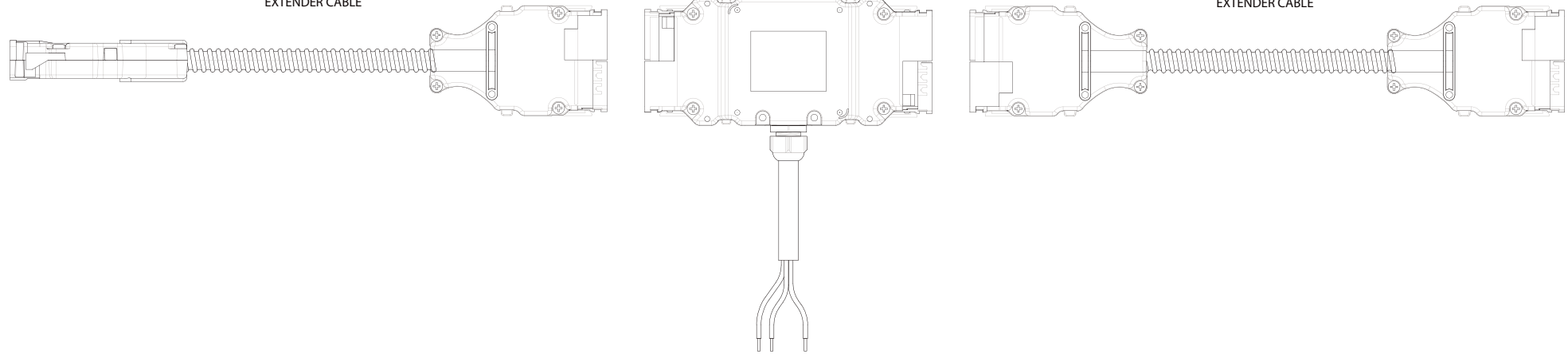
FEMALE
(OUT)

6 POLE 3 CORE 4mm + DATA
SWITCHED FUSED TEE 1.5m

MALE
(IN)

6 POLE 4 CORE 4mm
EXTENDER CABLE

FEMALE
(OUT)



MALE
(IN)

6 POLE 4 CORE 4mm + 2 CORE DATA
EXTENDER CABLE

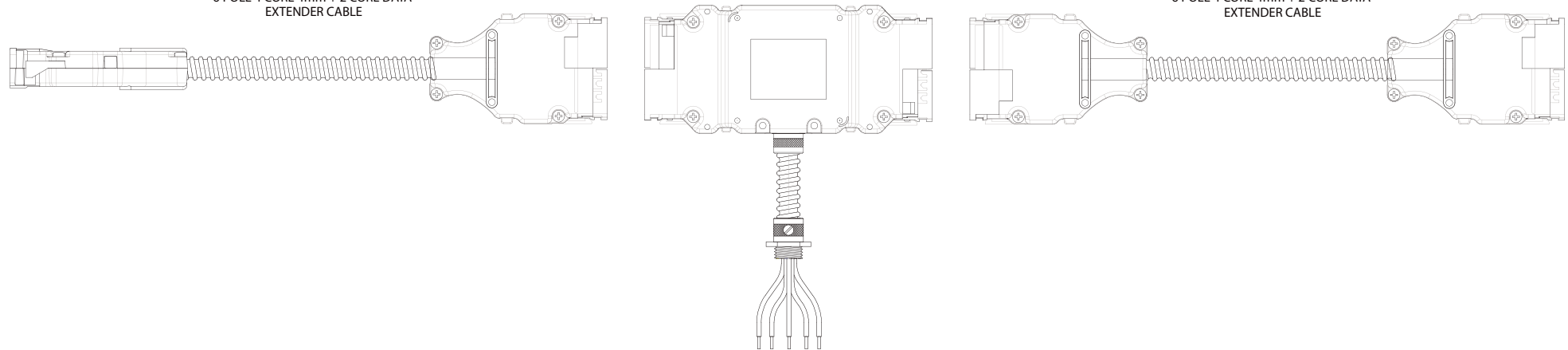
FEMALE
(OUT)

6 POLE 3 CORE 4mm + 2 CORE DATA
WHIP-END TEE

MALE
(IN)

6 POLE 4 CORE 4mm + 2 CORE DATA
EXTENDER CABLE

FEMALE
(OUT)



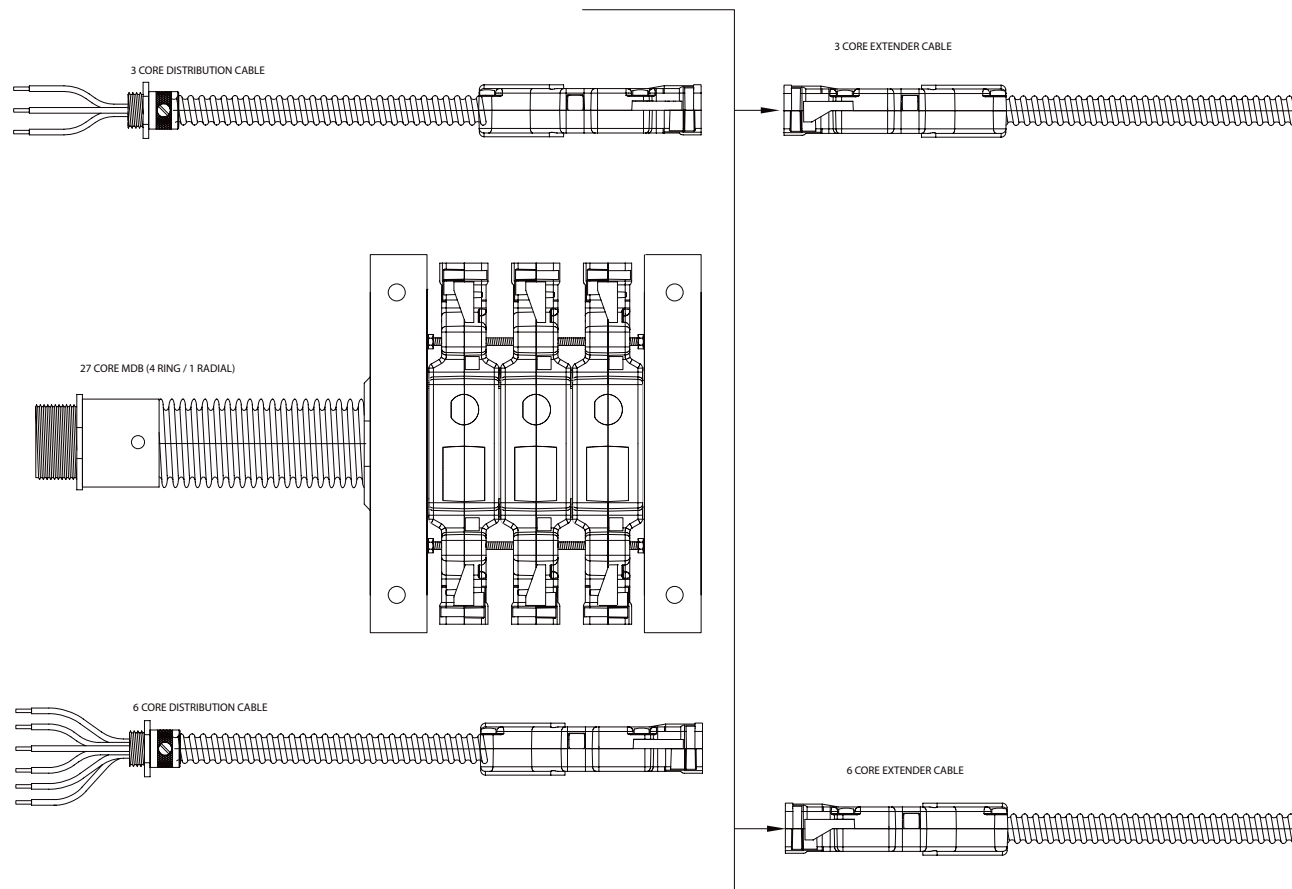
SCHEME

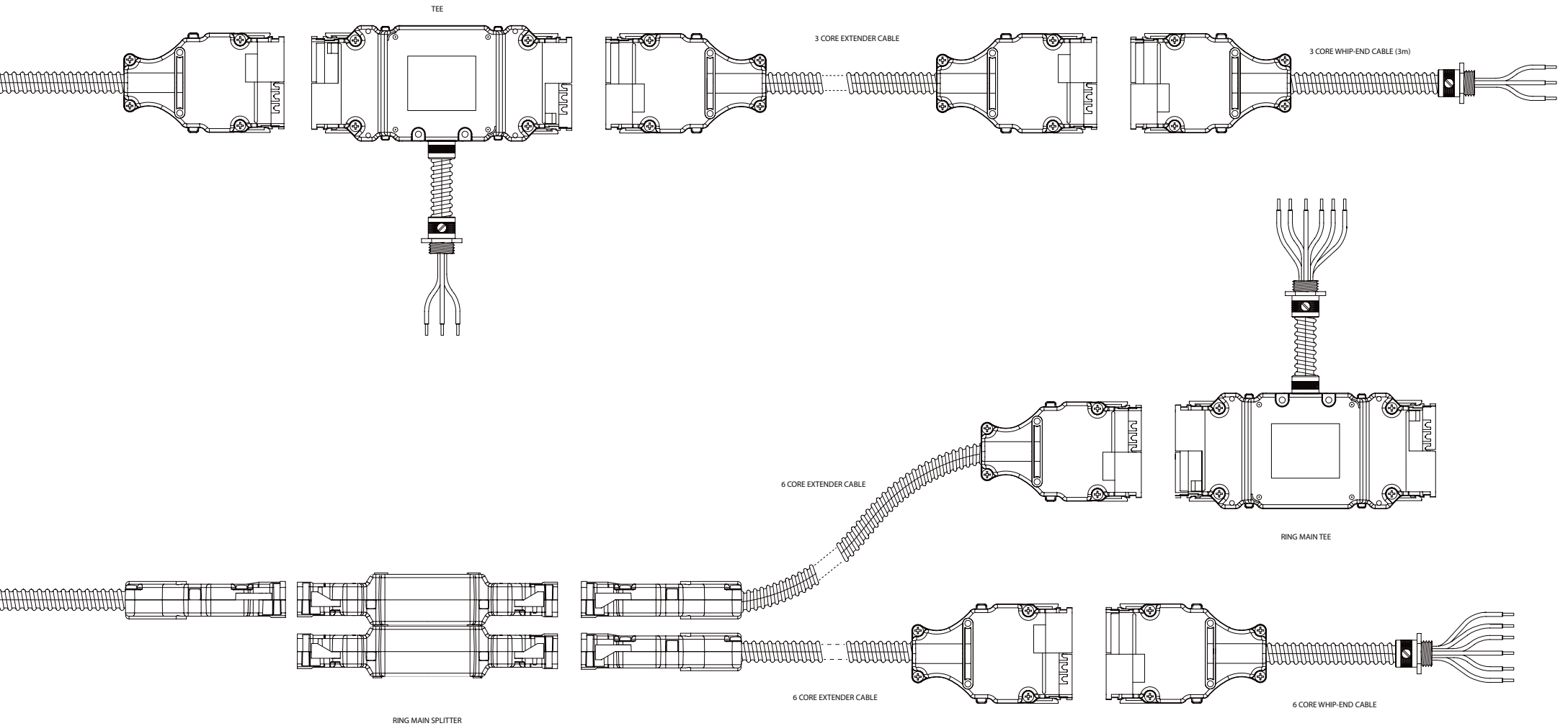
MWS RADIAL CIRCUIT & RING CIRCUIT

This scheme shows a 27 core 6 port MDB compromising of 4 ring circuits and 1 radial circuit.

The top line of products show an armoured power system, power extenders feeding a T with an armoured drop. This is a radial systems, feed low level power drops or high level systems. This systems is 3 core available in 4mm and 6mm

The bottom line of products show how the same can be done incorporating a ring circuit so each extender has 6 cores with a CSA of 4mm. The extenders out of the MDB's can then distribute power via splitters, which spread the load on the ring. Then extending on to various low level power points feeding equipment such as socket outlets, dado trunking.



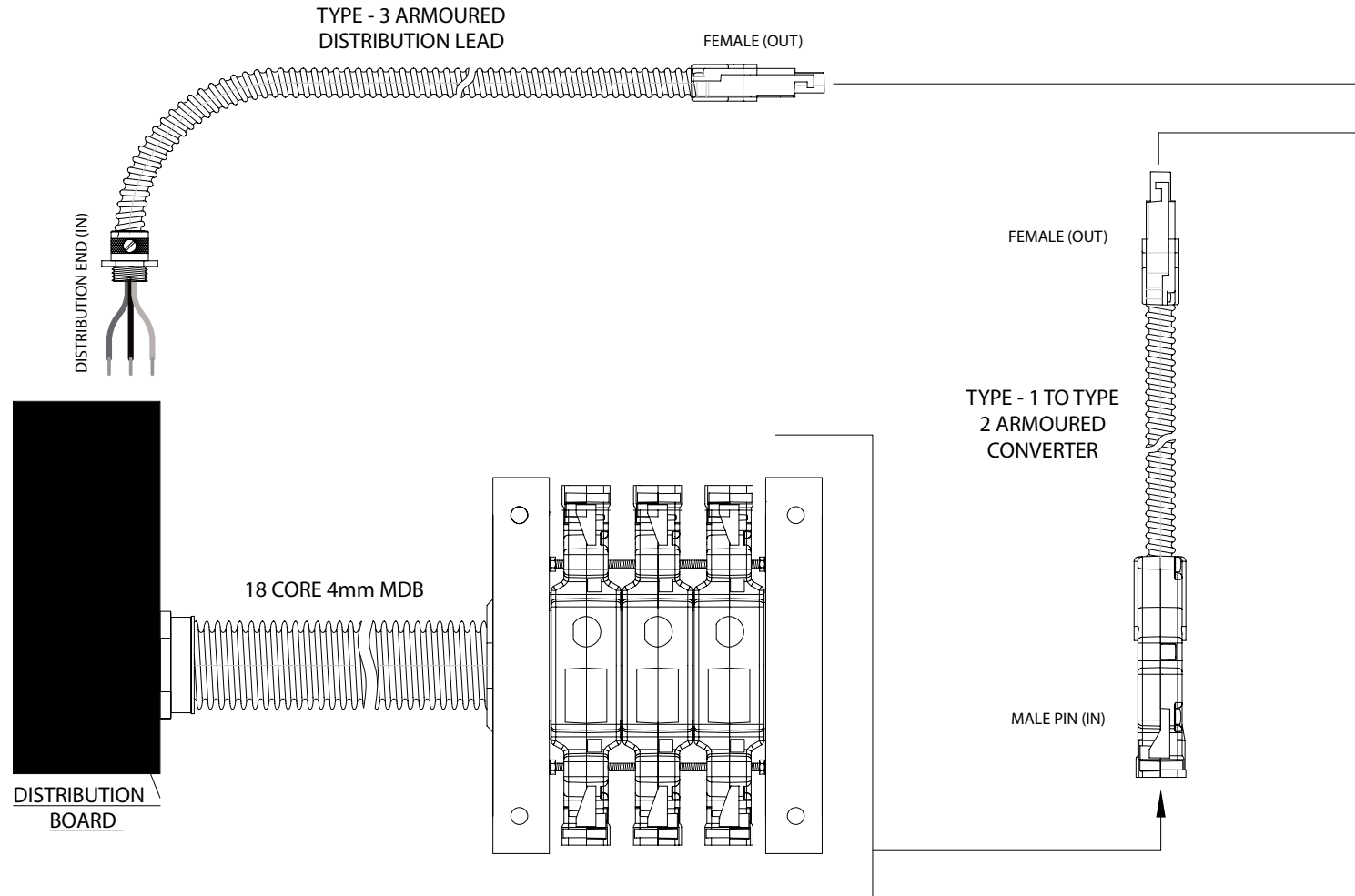


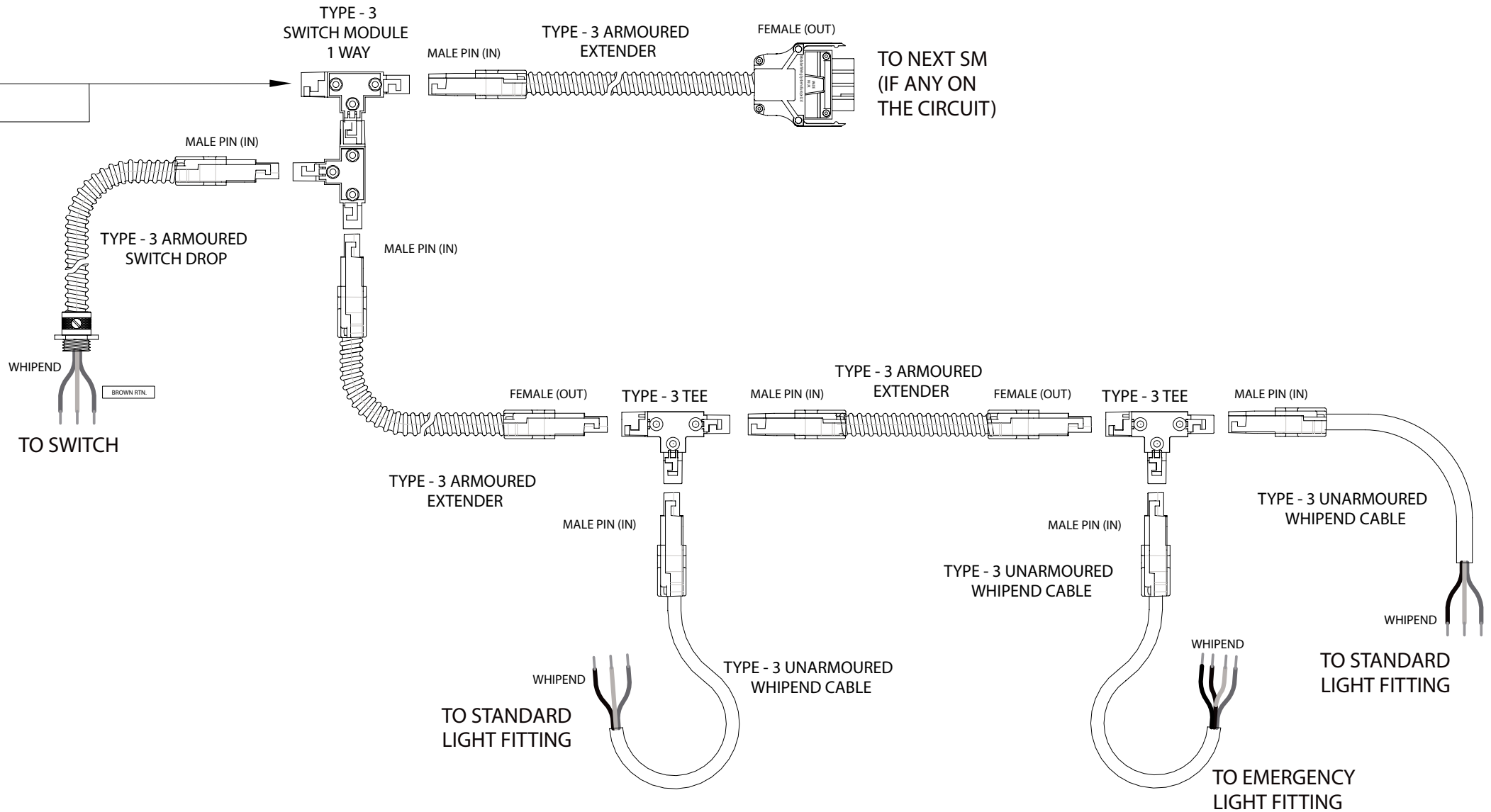
SCHEME

MWS MDB LIGHTING

This scheme shows an 18 core 6 port MDB or the optional distribution cable.

The products show an armoured lighting system feeding standard 1-way switches via the switch module. The outgoing supply from the switch module then feeds the lighting circuits with a three core whip-end to standard light fittings and a 4 core supply to include a maintained live circuit for emergency lightings. The circuit can be continued to other switches if required with an additional extender. This system is available in a number of cable sizes and types.



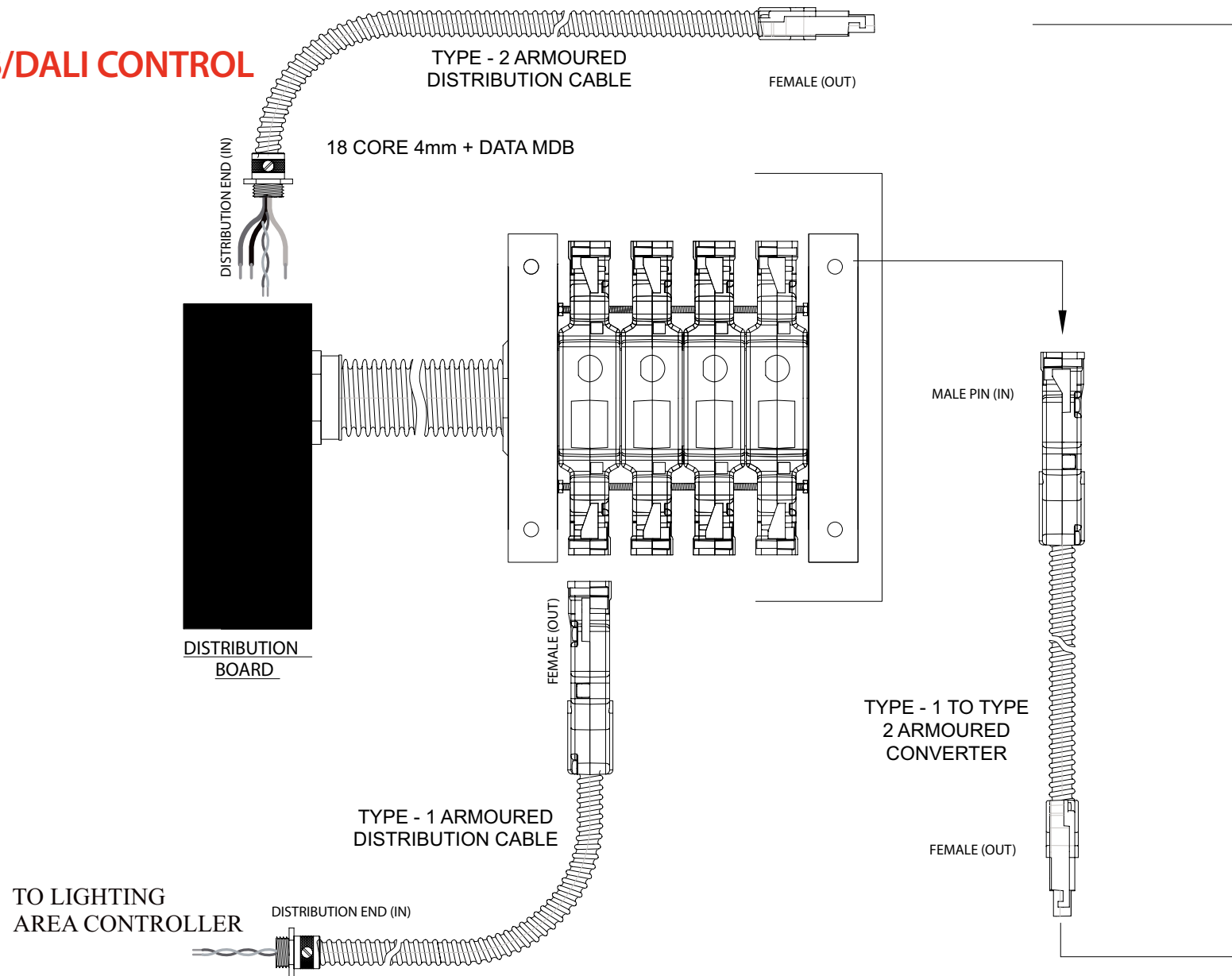


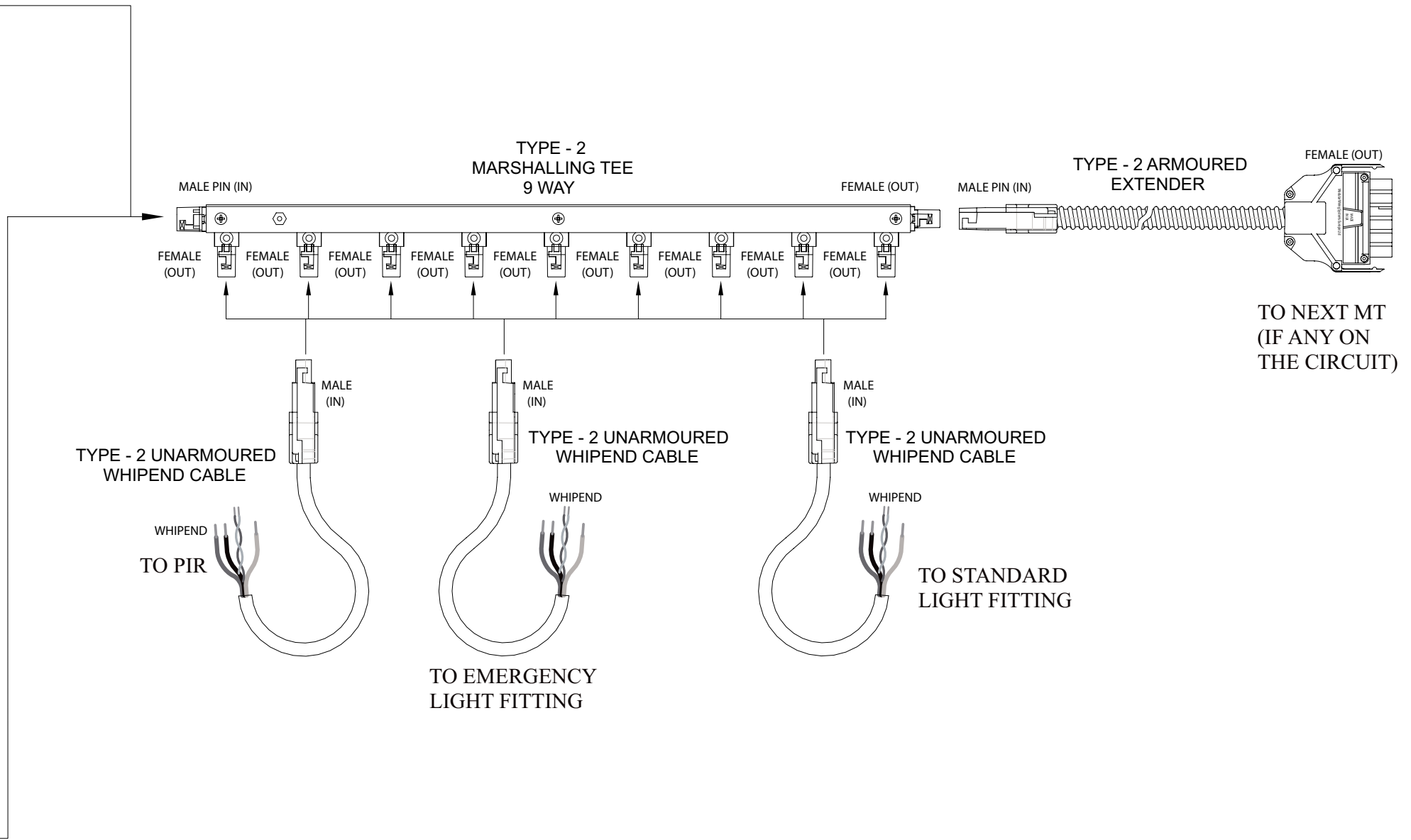
SCHEME

MWS MDB LIGHTING FOR MLS/DALI CONTROL

This scheme shows an 18 core 6 port MDB with a separate unscreened twisted pair distribution lead.

The products show an armoured lighting system supplying our 9-way marshalling T. From the marshalling T whip-end cables are used to supply a feed where required in addition to an unscreened twisted pair for the MLS / DALI system. The last port on the marshalling tee can be used to continue the circuit, or act as a tenth port. This system is available in a number of cable sizes and types.





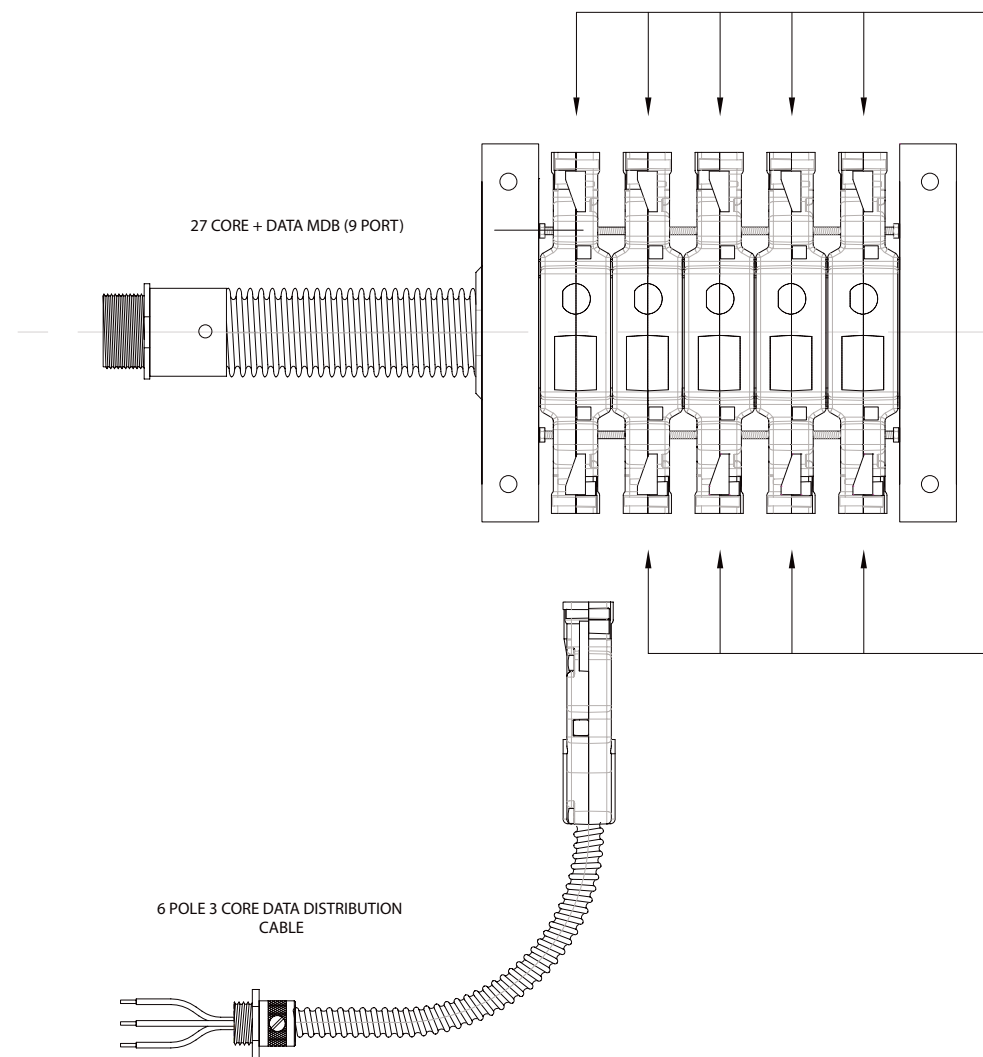
SCHEME

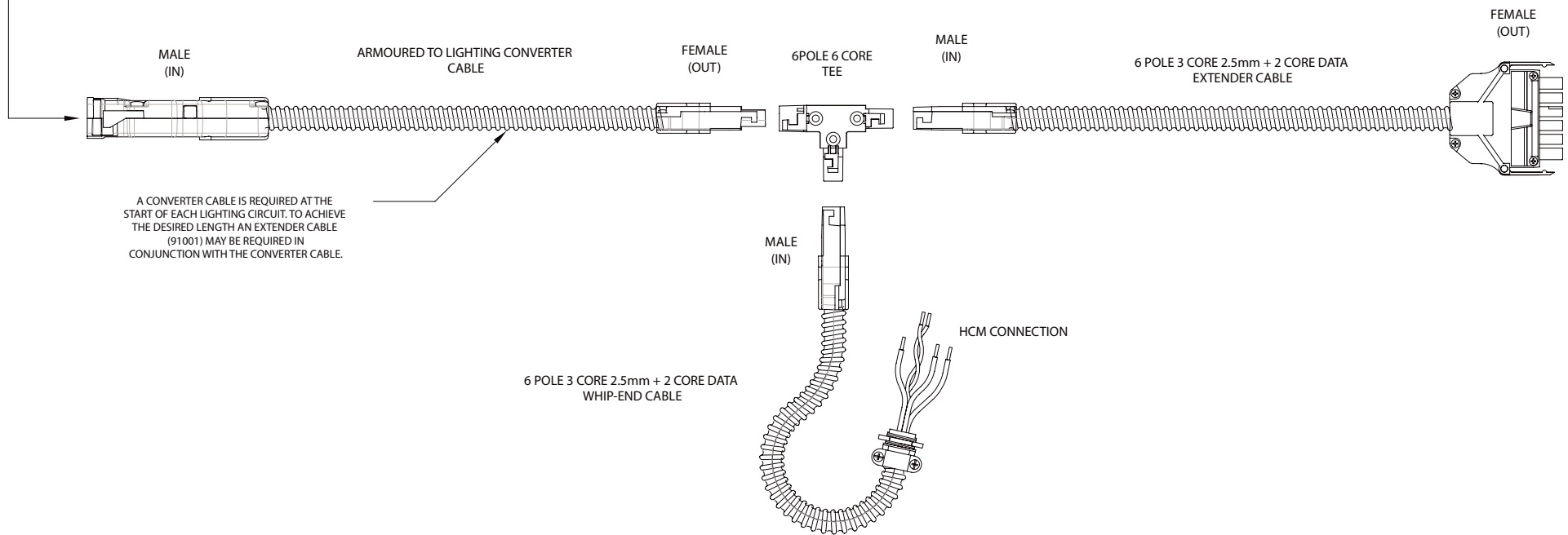
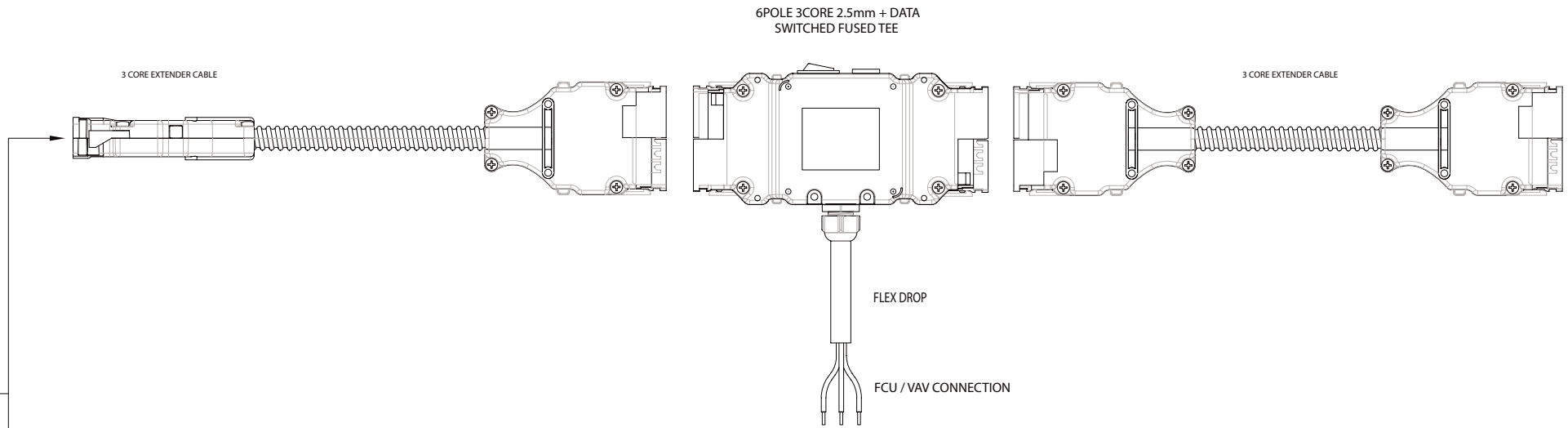
MWS COMBINED LIGHTING & POWER SYSTEM

This scheme shows a 27 core + data with 9 ports, also available in 18 core 6 port.

The top line of products show an armoured power system, power extenders feeding a switch fused T with an unarmoured drop. This is a radial systems, feed low level power drops or high level systems. This systems is 3 core available in 4mm and 6mm

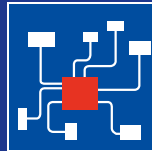
The bottom line of products show how the same can be done incorporating a lighting system, so each extender has 3 cores with a data pair. The data pair is wired around internal in the MDB, with the data pair fed from the data distribution cable which plugs into the data port of the MDB.





www.modularwiring.com

"Connections to Energise Your Ideas"



MODULAR WIRING SYSTEMS

Park Road - Holmewood Industrial Park

Holmewood - Chesterfield - S42 5UW

United Kingdom

tel: +44 (0)845 413 9777

fax: +44 (0)124 685 8001

e-mail: info@modwire.com

January 2013