Dicam Installation Standard Dec1997

Dicam components are warranted on an Equipment Only basis for a period of one year from date of taking into service provided they are selected and installed according to the applicable statutory requirements and the following additional conditions.

(Matters already adequately and clearly covered in statutory standards are omitted from following list.)

1 Location and protection

A All enclosures and junction boxes to be rated IP55 or better with additional protection so as to prevent ingress of water vapour, moisture, other damaging corrosive gases or dust from entering.

B Dicam processor units to be additionally protected unless situated in a clean and dry environment. Moisture absorbant pack must be used and renewed annually.

C Enclosures and equipment to be protected from sources of heat including direct sunlight so as to operate in a max environmental temperature of 40ºC.

D Enclosures must be suitably sized to avoid excessive internal temperatures.

2 Cables and Wiring Methods

A All cable entries must be from below enclosures, fully sealed and glanded to prevent ingress of moisture, corrosive gases and dust.

B All signal and low voltage control cables to be segregated and routed no less than 300mm from mains or other cables except for minimum length of proximity as required for termination. Note : Greater separation distances may be required.

Where crossing of mains or other cables is unavoidable, must be at right angles.

C All signal and low voltage control cables must be screened, with screens earthed at one end only. Cables must be multi stranded minimum 0.22mm^2. Recommended cable is 0.5mm^2, braided screen. (Network cable must be as separately specified.)

D Inputs and outputs each require a pair of conductors. Multicore cables can be used, but inputs and outputs must not be wired within the same multicore cable.

E Only one core per PCB terminal.

F Cables must be suitably protected from attack by vermin or other mechanical damage and located so as to minimise risk of attack. Trunking or large diameter conduit which may allow entry of vermin should not be used except for minimum lengths where freedom from attack can be assured.

G Cabling within roof or other voids should be minimised and additional protection must be provided where unavoidable. Cables should always be run to maximise visibility, and minimise attack - for example on the underside of beams.

3 Ratings and Protection

A All components must be operated within their specified load rating.

B Each supply circuits (to drivers) must be fitted with an appropriate overcurrent device, with the lowest practical trip rating being chosen. MCBs or similar are preferred. (See (D) below.)

C Where RCDs are used, they should be installed so as to maximise remaining ventilation function in the event of a trip.

D Each individual mains load device must be fitted with an appropriate overcurrent and isolation device, clearly labelled. Where practical, drivers should be wired electrically close to the load, such that a single overcurrent device for supply and load may be used.

E All overcurrent and isolation devices must be clearly labelled with function unless such function is obvious from position.

F Systems must be installed with spike and overvoltage protection as appropriate to circumstances to minimise risk of damage by lightning or other hazardous voltages. Installations should not rely on protection provided by driver modules alone.

G Systems must be installed with suppression chokes or other components as appropriate for the purposes or EMC.

4 Commissioning and Aftercare

A All Dicam units must be registered at or within 30 days of installation or taking into service.

B All systems must be commissioned by a sufficiently trained and experienced Dicam installer. Commissioning includes configuring software to the equipment and user requirements, carrying out full functional checks on all hardware circuits and electrical safety checks as appropriate.

C Installers must make sufficient records by way of plans and other details (including configuration) as to permit adequate servicing by himself or others, and provide copies to the customer.

D Installers must explain and demonstrate basic operation of the system, including any particular features of the configuration of the system which may affect function.

E Users must be provided with full documentation relevant to their system, including, but not exclusively, the Dicam operating manuals, and such additional details of electrical safety as necessary to operate the system safely.

The appropriate operating menu, and a sign indicating who to call or contact in the event of breakdown must be fixed next to the Dicam unit.

F The requirement to disconnect batteries in the event of prolonged mains failure or disconnection must be explained, and documented where appropriate, and a safe means of battery disconnection provided and explained.

G Within the first 3 to 6 months of operation, system configuration, components, junctions and enclosures must be checked and examined to ensure that operation is functionally correct, and that steps taken to prevent water ingress or other damage have been sufficient.

H Unless otherwise specifically agreed with the customer, the installer is responsible for service call outs to during the first year of operation, without recourse to customer or Farmex, other than for provision of replacements or repair or components.