DCD pole mounted single phase disconnector

The ABB DCD is a pole mounted, hook stick-operated disconnector. It is used to isolate circuits in power distribution systems up to 24kV. The DCD provides, in the open position, a visible isolating distance for maintenance personnel.

Safety attentions
- The personnel responsible for installation, maintenance and operation of the disconnector shall carefully read and understand this manual.
- Safety procedures of your company must be followed.
- It is required to carefully read the operating manual before installation, maintenance and operation of the disconnector, thus preventing faulty operations that may cause unnecessary casualties.
- It is required to operate and maintain the disconnector by the professionals familiar with safety procedures. This manual is only taken as the reference material for operation and maintenance personnel and cannot serve as alternative materials for safety procedure training and practice of such equipment.

Acceptance inspection
After receiving disconnectors, please carefully check whether there are obvious signs of damage on the packing cases and products and whether the specifications meet the requirements, and confirm parameters on the nameplate. If a damage or lack of parts is identified, keep the packing case and packing materials, immediately submit a statement to the carrier and take initiative to notify nearby ABB offices.

Product structure
DCD is a double-column disconnector. Insulators are fixed on a hotdip galvanizing preservative treatment base with bolts and the pull-ring can be pulled to operate the disconnector. The limit default is 160° for opening the isolating switch (it can be changed to 90° at site or there is no limit). When the DCD disconnector is installed, the rear panel is optional. It can be clamped on the cross arm to fix the disconnector.

Operation
DCD disconnector is a HV equipment. It shall be operated with standard electrical insulation tools and by correct and safe methods. Operating personnel shall pull (push) the DCD pull-ring by using an insulated hook stick. Switching operations of DCD disconnector must be under no load.

Precautions
DCD is not a load switch. Its switching operations must not be under loads. Switching under loads may generate electric arcs to cause injury to personnel or damage to equipment.
Installation precaution

In the case of unpacking and installation, the DCD disconnector shall be protected from damage and a correct operation method shall be used.

Prior to installation of the DCD disconnector, again confirm whether the product has an apparent defect, such as part bending deformation and other damages in the transportation.

The insulators shall be protected from collision or friction with other workpieces (conductors, iron plates, tools, etc.) and hard items, to avoid tearing of umbrella skirt or jacket damage which may cause unreliable electrical performance.

Installation

DCS disconnector can be installed by single column or double columns. Its installing methods include suspended installation and vertical installation. It can be installed by the single cross arm clamping the hold hoop or double cross arms (specific installation diagram is shown in product catalogue).

M12 bolts on the connecting terminals shall be tightened by installation personnel with torque of about 80N.m. Specific installation method is shown in Figure (3) and (4). Bolt direction shall be paid attention.

Recycling of materials (recommended)

DCD disconnector contains some useful materials for recycling, such as copper, steel, aluminum and silicone rubber.

With rapid development of industrial production and consumption for organosilicone, waste silicon rubber materials to be recycled have substantially increased; rational and effective treatment of waste silicon rubber materials can reduce costs of organosilicone products and play a positive role in the environmental protection.

A decomposition method for BY-H catalyst is recommended here (the catalyst can be recycled by professional manufacturers). The catalyst can effectively improve recovery rate and quality of DMC (depolymerize the Si-O-Si links into dimethyl cyclosiloxane mixture). Recovered DMC is used for production of 107 silicon rubber after refining. It can reach the viscosity of 500 Pa.S with good stability and is free of crosslinking. The reaction is moderate and free of equipment corrosion and pipeline blockage, so the production is safe. This method is applicable to splitting decomposition of waste silicon rubber.