

REPUBLIC OF YEMEN

Ministry of Telecommunication & Information Technology

Public Telecommunication Corporation

Technical Specifications for
DISTRIBUTION POINTS (DP) Boxes
With Schedule of Quantities
Issued January 2013



CONTENTS

- 1) General
- 2) External Distribution Points
- 3) Electrical Characteristics
- 4) Temperature
- 5) Compliance
- 6) Inspection
- 7) Supply experience
- 8) Samples
- 9) Packing and marking
- 10) Technical data sheet
- 11) Schedule of quantities



1. GENERAL:

This specification covers the requirement for distribution points which are designed to provide a flexibility point between secondary cables and terminating subscribers' service lines.

2. EXTERNAL DISTRIBUTION POINTS CONSTRUCTION:

External distribution points shall consist of the box and terminal Points as:

2.1 The Box:

- 2.1.1 The box shall be designed for external (overhead) installation and suitable for outdoor conditions in different environments.
- 2.1.2 The box shall be designed for termination of 10 pairs, 20 pairs or as ordered.
- 2.1.3 Boxes are required with a capacity of 10 pairs, 20 pairs and the dimensions (small dimensions are an advantage):-
 - 10 pairs (L X W X D)
 - 20 pairs (L X W X D)
- 2.1.4 The box shall be made of a weatherproof, corrosion, impact resistant. The box should be properly treated to protect from rust and corrosion and fully water-tight. The material shall be aluminum, fiber glass reinforced plastic or polycarbonate.
- 2.1.5 The box shall have no sharp edges.
- 2.1.6 The box should be locked with any suitable method.
- 2.1.7 The box shall be consisting of rear section, which is fixed to the wall by means of screws and a cover which shall be removable. The cover shall be attached to the rear section by chain or by other means.
- 2.1.8 The box shall be ventilated and the ventilation holes provided with screens to prevent entry of insects.
- 2.1.9 The box shall be suitable for attachment to wall and steel poles by means of a fixing bracket made of corrosion-proof material.
- 2.1.10 The box shall be designed for connection to plastic-insulated cables.
- 2.1.11 The box should have three holes - protected by grommets - at the bottom of it. The middle hole used for the feeder cable with diameter (18mm for 10 Pairs cable and 20mm for 20 Pairs cable) and the other holes for the outgoing subscriber drop wires. These grommets shall be capable of re-insertion to seal any remaining space after drop wire installation.
- 2.1.12 The box should have fixed part to hold the feeder cable to prevent the cable from pulling out and to keep the conductors constant.
- 2.1.13 The box shall be allowing the subscribers' service lines to be inserted from below.
- 2.1.14 The boxes shall be designed so that the connecting Point can be installed and removed easily.
- 2.1.15 The box should be able withstand maximum tensile load and the pressure.
- 2.1.16 The box should be offered with all requirement materials for installation.
- 2.1.17 The box should be designed for a life expectancy of at least 20 years.

2.2 Connecting Points:

- 2.2.1 The body of the connecting (terminal) Points shall be made of plastic material with high insulation properties.
- 2.2.2 The terminal Point shall be provided with the terminal for connecting the feeder cable with conductor diameter (from 0.4mm to 0.65mm) at the rear of the terminal point and screw terminals for the outgoing subscriber drop wires with conductor diameter (from 0.65mm to 1mm).

- 2.2.3 The terminal blocks shall be designed for two-sided terminals.
- 2.2.4 If screw terminals are used not fully extractable screws shall be used for the subscribers' service lines and soldering tags or other method, approved by the P.T.C, for the cable conductors.
- 2.2.5 It shall be possible to seal-off the cable side, once the conductors are terminated, to attain a fully moisture proof construction.
- 2.2.6 Under the connecting screws there shall be slots permitting the wire end to be inserted straight without being looped.
- 2.2.7 An earth bar shall be electrically connected to the frame of the box.
- 2.2.8 The earth bar shall be allowing connection of at least one earth wire of 3mm diameter.

3. ELECTRICAL CHARACTERISTICS:

3.1 Connecting Points:

3.1.1 The contact resistance between contact point shall be less than 5mohm

3.1.2 Insulation resistance:

The insulation resistance between adjacent terminals shall not be less than 10,000megaohms when tested at 500V DC.

3.1.3 Dielectric strength:

When tested at the same condition as above, the terminal block shall withstand 3000V AC for one minute without any adverse effect on it.

4. TEMPERATURE:

The boxes and terminal blocks shall be without detriments maintain the mechanical, physical and electrical characteristics detailed in this specification throughout the temperature range of -20°C to +80°C

5. COMPLIANCE

The tenderer should be state their compliance with this specification. Any deviation suggested by manufacture should be fully documented and presented in the form of an alternative offer.

6. INSPECTION:

6.1 Inspection shall be performed as per specification. The manufacturer shall keep suitable summary records of all data according to P.T.C. standards and MAT 061.

6.2 PTC should have a right to depute a reprehensive to inspect at factory during the manufacture of the distribution boxes on the cost of the tenderer.

6.3 The approval to attend two PTC engineers to test the distribution boxes during the manufacture on the cost of the tenderer

7. SUPPLY EXPERIENCE

7.1The tenderer should be submitting the documents of supply experience.

7.2The tenderer should offer catalogs which clear the construction details, dimension, drawing of the product offered and the installation construction. And should be in English language.

8. SAMPLES

8.1 The tenderer should supply sample of distribution points along with the tender. Tenders submitted without samples are liable for rejection.

8.2 The sample must be stamp by Manufacture Company.

9. PACKING AND MARKING:

Packing and marking shall be performed according to P.T.C. standards and MAT 062.

10. TECHNICAL DATA SHEETS (ENCLOSED):

Includes data sheet should be filled in and stamped by the concerned tenderer.

Any changes in the stamped data sheet submitted to PTC which might affect the technical figures in your offer will be neglected and will lead to the total rejection of your offer.

S/N	Requirement of PTC	Offered by the tenderer		Notes
		10P	20P	
1	Physical & mechanical characteristics			
1.1	Types of boxes material			
1.2	Dimensions(mm): - 10P - 20P			
1.3	Conductor diameter: - At feeder cable terminals - At subscribers' terminal			
1.4	Mainly used in pole & wall			
1.5	Terminals nuts are bright nickel brass or (S. steel) which resist corrosion			
1.6	Connecting cable on terminal strap at the back.			
1.7	Cable entry holes diameter: - 10P - 20P			
1.8	Type of lock			
1.9	Wire guide inside the box hinges			
1.10	Type of cover (hinged)			
1.11	Water & insect proof by complete rubber inside the cover			
1.12	Easy to assemble			
1.13	Simple to operate & maintain			
1.14	Earthing slide: - conductor diameter - wire's length			
1.15	Drop wire's entry holes			
1.16	Temperature and humidity			
1.17	Impact			
2	Electrical characteristics			
2.1	Insulation resistance(10000MΩ)			
2.2	Contact resistance (3mΩ)			
2.3	Dielectric strength			
3	Samples must be found			
4	Catalogues & documents			

** Any suggestion by manufacturer shall be fully in the table above.

NOTES:

The tenderes must be reply to the following points:-

1. Statement of complete form manufacturing company regarding the compliance with PTC specifications.
2. Respond to and comply with PTC Technical schedules.
3. Attach the Catalogs and documents containing instructions on how to install the distribution points.
4. Manufacturer must submit company profile and experience.
5. Manufacturer's brand name must be printed on sample(s), which must be bringing with offer.
6. The approval to attend two PTC engineers to test the cables during the manufacturing process.

ملاحظات:

على مقدم العرض الالتزام بالآتي:

- ١- الإجابة العملية من الشركة المصنعة على كل مواصفات المؤسسة (عروض الاستجابة).
- ٢- الإجابة على المواصفات الفنية الموضحة في الجداول الفنية.
- ٣- إرفاق الكتالوجات والوثائق التي توضح تركيب المقسمات المطلوبة.
- ٤- إرفاق الخبرة التزويدية للمصنع.
- ٥- إحضار عينة (عينات) مع العرض على أن يكون مطبوعاً عليها اسم الشركة المصنعة بشكل واضح.
- ٦- الموافقة على استضافة عدد (١) مهندس لحضور عملية الفحص المصنعي **المصنعة** عند التصنيع.