

Project No: -	ABB Design No: TOA-160-24XDSQ-02
Project Name: -	Refer. Quotation No:
Customer:	Customer Spec.: -

Rev.	Issued	Approved	Date	Description
0	Ahmed El-Gawad	Ashraf Mobarak	8/22/2022	Issue

General Specification			
Transformer Type		Oil Immersed Transformer-	Distribution
Standard		IEC60076	
Installation		Outdoor	
Expansion Method		Hermetically Sealed	
Oil type		Oil - Mineral - General	
Phase		3	
Frequency	[Hz]	50	
Vector group		Dyn11	
Type of cooling		ONAN	
Altitude (below -)	[m]	1000	
Insulation class		A	
Ambient Temperature (Max)	[ °C ]	40	
Average Oil Temperature rise	[K]	60	
Average Winding Temperature rise	[K]	65	
Winding		Primary	Secondary
Rated Power	[kVA]	160	160
Rated Voltage @ No load	[V]	15000	410
Maximum system Voltage	[kV]	17.5	1.1
BIL (Basic Impulse Withstand Level)	[kV]	95	-
Power Frequency withstand Level	[kV]	38	3
Tapping (Off circuit tap changer)		+2x2.5%-2x2.5%	-
Connections		DELTA	WYE
Conductor Material		AL	AL
<b>Guaranteed Performance Data</b>	at Nominal Tap, 75@°C		
No load loss	[W]	540	(+15% Tolerance)
Load loss	[W]	2830	(+15% Tolerance)
Total loss	[W]	3370	(+10% Tolerance)
Impedance	[%]	4	(±10% Tolerance)
<b>Preliminarily Dimensions, approximately</b>			
Length	[mm]	1010	(±10% allowance)
Width	[mm]	530	(±10% allowance)
Height	[mm]	1530	(±10% allowance)
Oil Weight	[kg]	160	(±10% allowance)
Total Weight	[kg]	710	(±10% allowance)
<b>Accessories:</b>		<b>Tank:</b> Carbon Steel	
- Rating plate , Lifting Lug , Drain Plug , Tanking Earth , Off-Load Tap Changer		<b>Painting:</b> Electrostatic painting	
- Bi-directional roller-(Diameter,C-C) : 0/520		<b>Color:</b> RAL7033,80-120µm , C4	
- High Voltage Bushing : Porcelain Bushing DT20NF250		<b>Customer termination:</b>	
- Low Voltage Bushing : Porcelain Bushing DT1/250		Primary	Secondary
- Dial Type Thermometer without contact		Terminals IP	IP00
- Pressure Relief Valve without contact , T10		Type	via Cable
- Vertical OIL Level Indicator without contact , KSSD		Position	Top

Notes
- Other accessories which are not mentioned in the above statements are not included.
- Cable connection and termination materials are not included. (e.g. cable lug, flexible bus bar)
- Tests: Routine tests according IEC standard.
- The tolerances for all guaranteed values are subject to IEC standard.
- If no other standards or rules are specified, transformers are manufactured according to IEC standard.