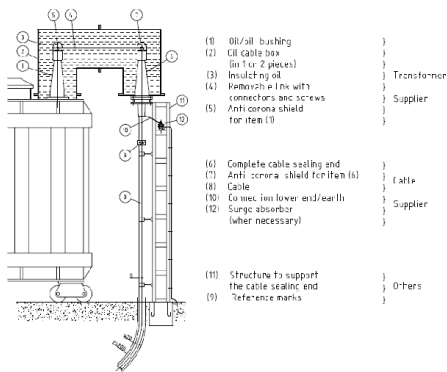


Connections

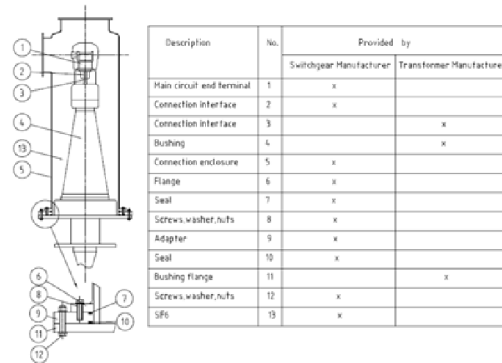


INTERFACES: POWER TRANSFORMERS

CONNECTION THROUGH OIL CABLE BOX - TRV043

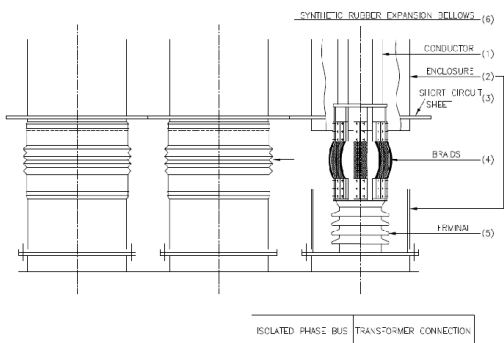


TRANSFORMER HV CONNECTION (SF6) - TRV045-046



TRANSFORMER LV CONNECTION - TRV049

The transformer manufacturer will supply the part (5),
Part: (1),(2),(3),(4) and (6) shall be from others.



When transformer connections are through oil/air bushings, the limit of supply is at the pin of the bushing.

When transformer HV connections are through oil/SF6 bushings, the limit of supply is defined in diagram TRV 045-046.

When transformer connections are through oil/oil bushings (oil cable boxes), the limit of supply is defined in diagram TRV 043.

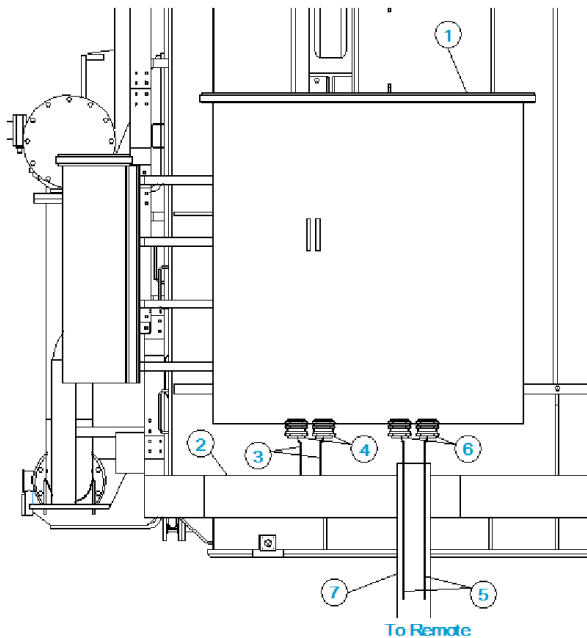
When transformer LV connections are through oil/air bushings and Insulated Phase Bus, the limit of supply is defined in diagram TRV 049.

Terminal Cabinet



INTERFACES : POWER TRANSFORMERS

Terminal Cabinet



Item	Scope		
1 Terminal Cabinet	M		
2 Cable duct--cable protection from Terminal Cabinet to components(@Notes.1).	M		
3 Cable and flexible conduit from Terminal Cabinet to components(@Notes.1).	M		
4 Cable glands for cables from Terminal Cabinet to components(@Notes.1).	M		
5 Cables from Terminal Cabinet to remote (or marshalling phase control cabinet or RTCC)	C		
6 Cable glands(if necessary) for item 5	C		
7 Cable duct between Terminal Cabinet and control room (or marshalling phase control cabinet or RTCC)	C		

Notes:

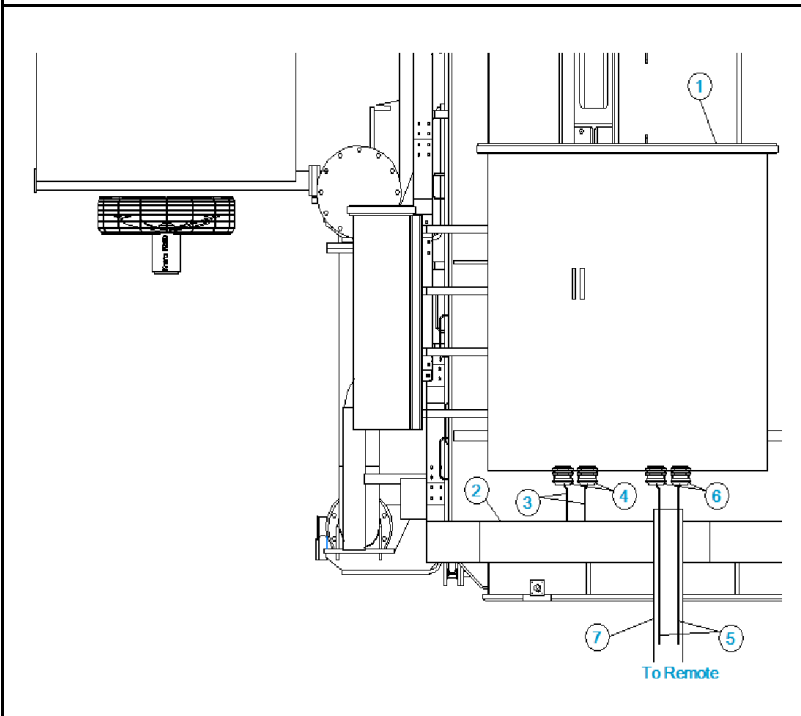
- 1. Components: Buchholz, Thermostat, PRD, etc
- 2. The location and size of above device shown in the drawing are just for reference, pls. find factual details on outline drawings.
- 3. Supply or Scope of M = Manufacturer ; C = Contractor ; O = Others
- 1 : Turn-key contract with civil works
- 2 : Turn-key contract without civil works
- 3 : Loose supply contract (Grouped equipment)

Control Cabinet



INTERFACES : POWER TRANSFORMERS

Control Cabinet



Item	Scope		
1 Control cabinet	M		
2 Cable duct--cable protection between control cabinet and components(@Notes.1)	M		
3 Cable and flexible conduit between control cabinet and components(@Notes.1)	M		
4 Cable glands for cables between control cabinet and components(@Notes.1)	M		
5 Cables from control cabinet to remote (or marshalling phase control cabinet or RTCC)	C		
6 Cable glands(if necessary) for item 5	C		
7 Cable duct between control cabinet and control room (or marshalling phase control cabinet or RTCC)	C		

Notes:

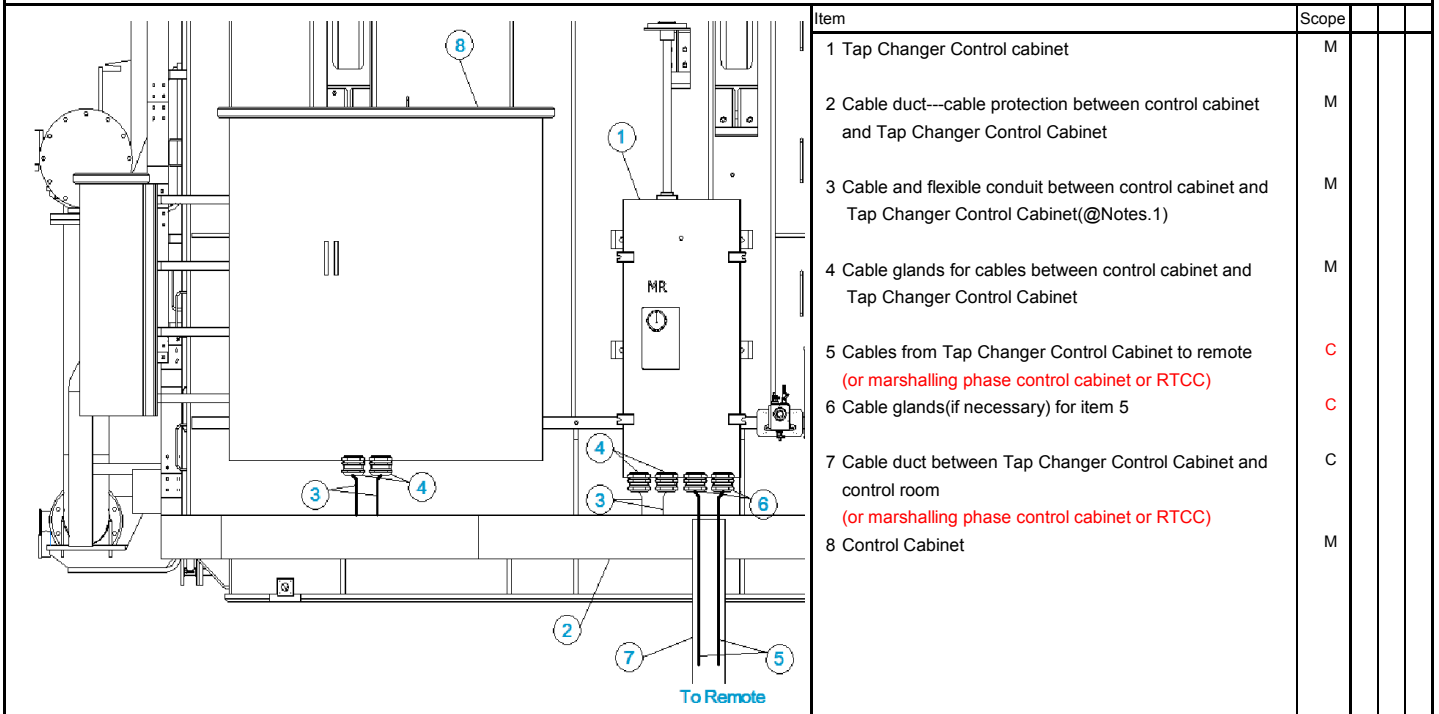
1. Components: Buchholz, Thermostat, PRD, etc
2. The location and size of above device shown in the drawing are just for reference, pls. find factual details on outline drawings.
3. Supply or Scope of M = Manufacturer ; C = Contractor ; O = Others
- 1 : Turn-key contract with civil works
- 2 : Turn-key contract without civil works
- 3 : Loose supply contract (Grouped equipment)

Tap Changer Control Cabinet



INTERFACES : POWER TRANSFORMERS

Tap Changer Control Cabinet



Item	Scope
1 Tap Changer Control cabinet	M
2 Cable duct--cable protection between control cabinet and Tap Changer Control Cabinet	M
3 Cable and flexible conduit between control cabinet and Tap Changer Control Cabinet(@Notes.1)	M
4 Cable glands for cables between control cabinet and Tap Changer Control Cabinet	M
5 Cables from Tap Changer Control Cabinet to remote (or marshalling phase control cabinet or RTCC)	C
6 Cable glands(if necessary) for item 5	C
7 Cable duct between Tap Changer Control Cabinet and control room (or marshalling phase control cabinet or RTCC)	C
8 Control Cabinet	M

Notes:

1. Cables between control cabinet and Tap Changer Control Cabinet only including OLTC Motor Driving Power Cable and OLTC control circuit power cable. All other signal cables of OLTC will go directly to control room or marshalling phase control cabinet by cables of item 5.
 2. The location and size of above device shown in the drawing are just for reference, pls. find factual details on outline drawings.
 3. Supply or Scope of M = Manufacturer ; C = Contractor ; O = Others
- 1 : Turn-key contract with civil works
 2 : Turn-key contract without civil works
 3 : Loose supply contract (Grouped equipment)

Marshalling Phase Control Cabinet



INTERFACES : POWER TRANSFORMERS

Marshalling Phase Control Cabinet

	Item	Scope		
	1 Marshalling Phase Control cabinet	M		
	2 Cable duct from item 1 to control cabinet and to Tap Changer Control Cabinet	C		
	3 Cables from item 1 to control cabinet and to Tap Changer Control Cabinet	M		
	4 Cable duct from item 1 to control room or RTCC	C		
	5 Cables from item 1 to control room or RTCC	C		

Notes:

1. The location and size of above device shown in the drawing are just for reference, pls. find factual details on outline drawings.

2. Supply or Scope of M = Manufacturer ; C = Contractor ; O = Others

1 : Turn-key contract with civil works

2 : Turn-key contract without civil works

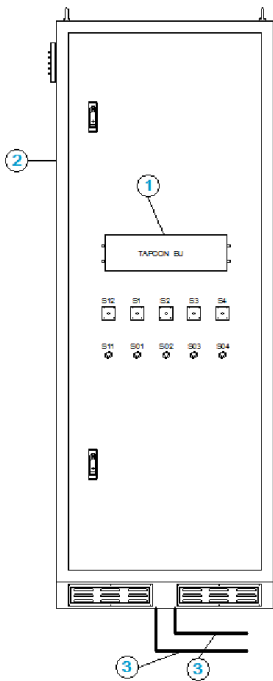
3 : Loose supply contract (Grouped equipment)

Auto Voltage Regulator



INTERFACES : POWER TRANSFORMERS

Auto Voltage Regulator or RTCC



Item	Scope		
1. Auto Voltage Regulator without communication protocol (installed on the control room / on the RTCC)	M		
2. Auto Voltage Regulator Panel or RTCC	C		
3. Cables between Auto Voltage Regulator Panel or RTCC and Tap Changer Control Cabinet and / or Control Cabinet	C		

Notes:

1. The location and size of above device shown in the drawing are just for reference, pls. find factual details on outline drawings.

2. Supply or Scope of M = Manufacturer ; C = Contractor ; O = Others

1 : Turn-key contract with civil works

2 : Turn-key contract without civil works

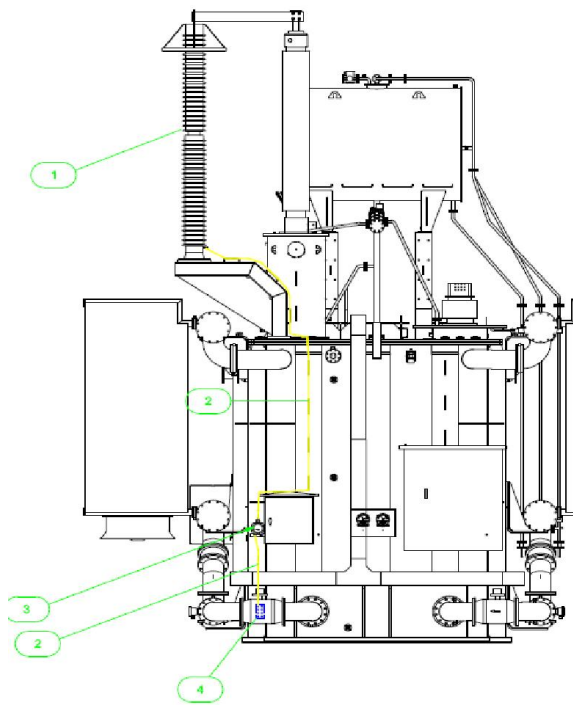
3 : Loose supply contract (Grouped equipment)

Surge Arrestor



INTERFACES : POWER TRANSFORMERS

Surge Arrestor



Item	Scope		
1. Surge Arrestor	M		
2. Cables for earth	M		
3. Surge Counter	M		
4. Earth Bar	M		

Notes:

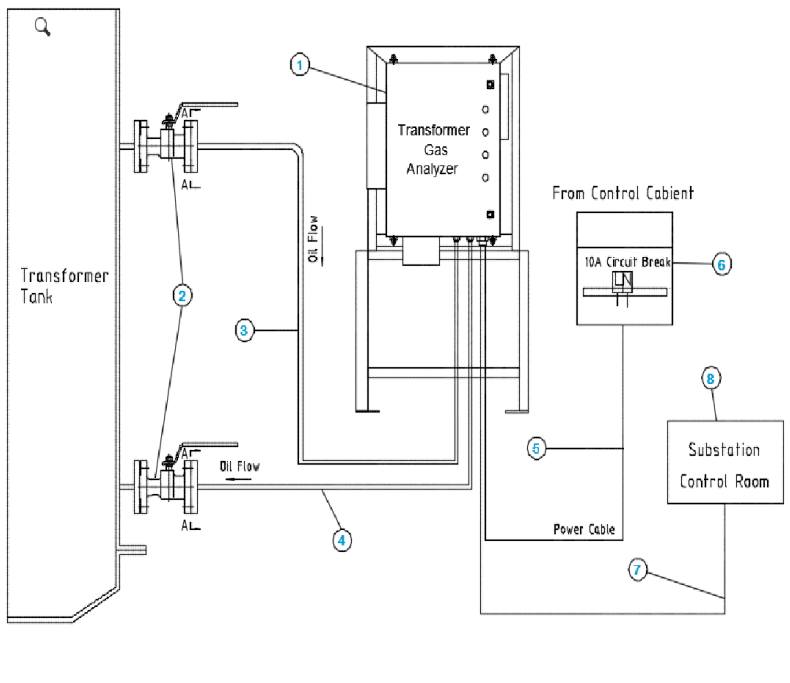
- 1. The location and size of above device shown in the drawing are just for reference, pls. find factual details on outline drawings.
- 2. Supply or Scope of M = Manufacturer ; C = Contractor ; O = Others
- 1 : Turn-key contract with civil works
- 2 : Turn-key contract without civil works
- 3 : Loose supply contract (Grouped equipment)

On-line Gas Monitor



INTERFACES : POWER TRANSFORMERS

On-line Gas Monitor



Item	Scope		
1. On-line Gas Monitor	M		
2. Ball valve for oil input and outgoing of On-line Gas Monitor	M		
3. Oil input tube	M		
4. Oil outgoing tube	M		
5. Power cable between item 1 and item 6	M		
6. Power from control cabinet	M		
7. RS-485 Communication Cables(if necessary) between item 1 and item 8.	C		
8. Communication device or Background Server Computer on the control room. (if necessary)	C		

Notes:

1. The location and size of above device shown in the drawing are just for reference, pls. find factual details on outline drawings.

2. Supply or Scope of M = Manufacturer ; C = Contractor ; O = Others

1 : Turn-key contract with civil works

2 : Turn-key contract without civil works

3 : Loose supply contract (Grouped equipment)