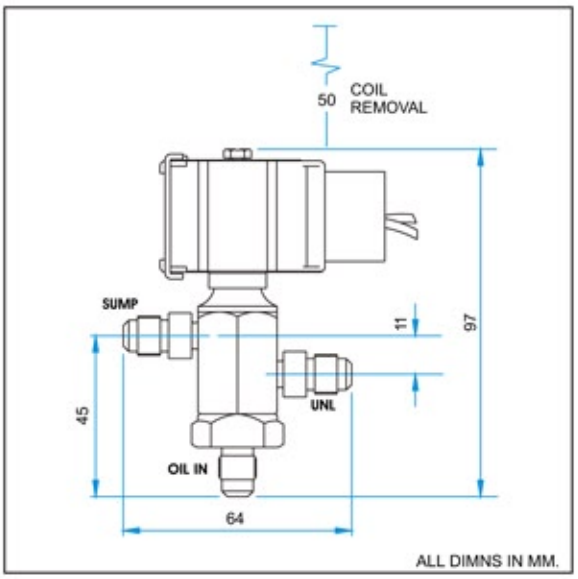
Capacity Control Solenoid Valve Type APS-1



TOTAL VALVE ASSEMBLY APS-1

INTRODUCTION

'SANLAN' Solenoid Valve Type APS-1 is a specially designed 3-way capacity control solenoid valve for compressor. It is applicable for working media of refrigerant oil and fluorinated refrigerants.

TECHNICAL INFORMATION

The valve has three ports, with ¼" SAE external threading connections. These ports are marked as **OIL IN, UNL and SUMP** respectively.

1. OIL IN - Oil Inlet port, which should be connected to the compressor oil pump discharge, is at the bottom of the valve. This is normally closed port.

2. UNL - UNL is the common & middle port. Unloader power element is connected to this port. When the valve gets energized, oil pressure coming through the OIL IN port, is given to the power element through this port, which in turn loads the cylinder.

3. SUMP - Sump port should be connected to the oil sump. This is normally open port. When the valve gets de-energized, remaining oil from the unloader power element will be pushed back into the oil sump through this port.

SPECIFICATIONS

Standard Coil Ratings :- 10W molded coil type **TKC-1** with cable connection. Coil can be supplied with a wide choice for a.c. or d.c.

Maximum Opening PressureDifferential MOPD :- 6bar/90psig.

Safe Working PressureSWP :- 28bar/400psig.

Connections :- ¼"SAE Flare External

Net Weight :- 400 gm.

PRINCIPLES OF OPERATION

In addition to supplying oil pressure to the compressor lubrication system, the compressor oil pump also provides oil pressure to operate the compressor capacity control system, which is controlled automatically. Externally mounted solenoid valves, controlled by a signal from a remote device provide reliable response to system load.

Loading the cylinders one by one as required, increase compressor capacity. Similarly, unloading one or more cylinders, as and when required, can reduce the compressor capacity.

During energized condition of the solenoid valve APS-1, oil flows to unloader power element to load the compressor. During the de-energized state, due to release of this oil pressure, compressor gets unloaded and the oil backed up in unloader power element flows back to oil sump.

Thus, solenoid valve type APS-1 is energized to load the compressor and de-energized to unload the compressor.

IMPORTANT - As it is recommended to start the compressor in unloaded condition, the solenoid valve type APS-1 should be energized only after compressor motor is switched from star to delta connection, and should be wired accordingly.

SANLAN CONTROLS

475 - B, Shukrawar Peth, Subhash Nagar, Lane No. 1, Pune - 411 002 (Maharashtra) India.
Ph. : 91-020-24421400, 24493671, 24475851 **Email** : contact@sanlancontrols.com
Web : www.sanlancontrols.com