

Dry All[®]

Full Range of HVAC&R Line Products



MOISTURE LIQUID INDICATOR

Introduction

Dry All Moisture Liquid Indicator in HVAC&R (Heating, Ventilation, Air Conditioning & Refrigeration) systems are crucial components for observing potential issues and ensuring the proper functioning of the system. These indicators help to monitor and manage the moisture content and presence of moisture in various parts of the HVAC&R system. The Dry All Moisture & Liquid Indicator serves a crucial role by providing a transparent window through which technicians can visually inspect the refrigerant. Its primary purposes include indicating the refrigerant state (liquid or vapour), assessing refrigerant charge and sub-cooling levels, detecting the presence of air or moisture, and troubleshooting system issues.

Advantages

Dry All Moisture Liquid Indicator provides a clear vision for direct visual inspection of the refrigerant, the wide glass design allows for real-time assessment of its condition with ease and clarity. This transparency aids in diagnosing issues such as insufficient refrigerant charge, moisture, contamination, or improper sub-cooling. Dry All Moisture Liquid Indicator is invaluable for preventive maintenance, as it enables technicians to identify and address problems early, preventing potential damage to the system. Additionally, the simplicity of Moisture Liquid Indicator inspection makes it a user-friendly tool for routine checks, contributing to overall system reliability and efficiency. Integrating a sight glass into the system enhances diagnostic capabilities, making it a cost-effective and practical choice for those seeking a straight forward and visual method. to monitor and troubleshoot HVAC&R or refrigeration systems.

Construction

The Dry All Moisture Liquid Indicator is constructed with a durable and reliable design, featuring a body made of corrosion-resistant forged brass, with a flare nut placed at the end, are also made of corrosion-resistant brass per standard. The solid copper end fittings are done as per the ASTM Standard for connections. The assembled lens is made of highly visible and clear imported tempered glass, and the indicating element is safeguarded by a filter screen. Moisture indication colour changes when it exceeds 30 ppm, and the brazing of connections is carried out with a 20% silver alloy.

Working

The Moisture Indicator paper is treated with a chemical salt sensitive to moisture. The salt changes colors based on the refrigerant's moisture concentration. A dark green indicator colors signifies a dry refrigerant, while a yellow colors indicates a wet condition. The design of the moisture indicator ensures a colors shift within moisture levels widely recognized as safe for operational purposes.

Features

1. Applicable for all types of refrigerants (CFC/HCFC/HFC/HFO/HC) and all mineral and POE Oils.
2. Indicates lack of subcooling & refrigerant deficiency.
3. Bigger window to provide Good readability & visualize wetness or dryness for the refrigerant.
4. High abrasion resistance to prevent erosion of the sight glass surface.
5. High thermal shock resistance.
6. High precision colour indicator.
7. Changes colour as per moisture level in refrigerant.
8. Single-piece forged brass body with a sturdy build & corrosion resistant.
9. Indicates moisture level and End Point Dryness (EPD) in accordance with ARI standards
10. The indicative element is protected by a filter screen.

Technical Specifications

1. Maximum working pressure of 752 psig (52 Bar).
2. Temperature range : -50°C to +80°C.
3. Indication Sensitive Up to 3% Relative Humidity.
4. Selection as per connection size.
5. Connection option available to Flare & Solder.

Applications


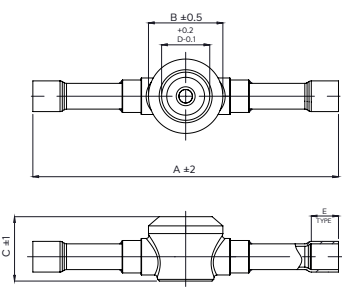
Moisture Liquid Indicator is commonly installed in the liquid line of refrigeration systems to monitor the state of the refrigerant. This helps technicians ensure proper refrigerant flow, identify potential issues such as liquid slugging, and assess sub-cooling levels. In air conditioning systems, Moisture Liquid Indicator is utilized to visually inspect the refrigerant as it circulates through the system. This aids in diagnosing problems related to refrigerant charge, system efficiency, and potential air or moisture infiltration.

System Installation

Traditional refrigeration systems.
Heat pump systems.
Air conditioning units.
Liquid coolers/Chillers.
Transport refrigeration.


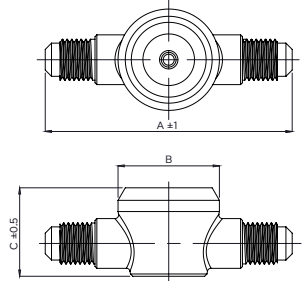
MOISTURE LIQUID INDICATOR

Dimensional Data & Drawing

SOLDER CONNECTION	DIMENSIONAL DATA
	

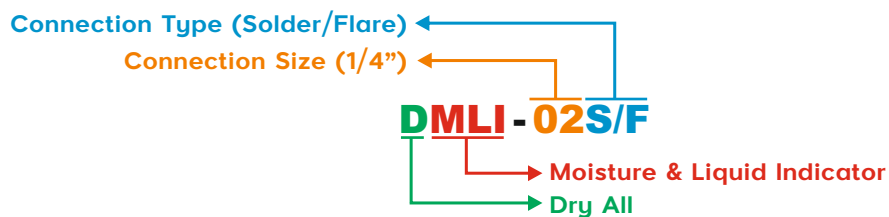
Sr. No.	Model No.	End Connection	Overall Length (A)		Width (B)		Height (C)		Glass Opening (D)		Swaging Length (E) mm
			mm	inch	mm	inch	mm	inch	mm	inch	
1	DMLI-02S	1/4" ODF	93.6	3.69	27.5	1.08	24.00	0.95	20.3	0.80	8
2	DMLI-03S	3/8" ODF	113	4.45	27.5	1.08	23.80	0.94	17.8	0.80	10
3	DMLI-04S	1/2" ODF	130	5.12	32.5	1.28	30.80	1.21	21.8	0.86	13
4	DMLI-05S	5/8" ODF	147	5.79	32.5	1.28	30.80	1.21	21.8	0.86	15

Dimensional Data & Drawing

FLARE CONNECTION	DIMENSIONAL DATA
	

Sr. No.	Model No.	End Connection	Overall Length A		Width B		Height C	
			mm	Inch	mm	Inch	mm	Inch
1	DMLI-02F	1/4" SAE	67	2.64	27.5	1.08	24.0	0.95
2	DMLI-03F	3/8" SAE	82	3.23	32.5	1.28	30.9	1.22
3	DMLI-04F	1/2" SAE	84	3.31	32.5	1.28	30.9	1.22

Nomenclature



Quality Inspection

Sr. No.	Parameters	Specifications
1	Leak test	On 100 % production at minimum 680 psig with dry high purity N2.
2	Leak rate (MLI assembly)	Should not exceed 0.5 ounces in 5 years
3	Burst Test	Should withstand 3450 psig for 1 minute
4	Cleaning for ODF type connection	Should be free from soldering flux.
5	Impulse test	1000000 cycles
6	Colour change test	Yellow to Green & vice versa.

Selection Criteria

- Consider the specific application, such as refrigeration, air conditioning, chillers, or heat pumps.
- Ensure the MLI has a suitable pressure rating for the system's maximum pressure.
- Check that the MLI can withstand both ambient and refrigerant temperatures.
- Choose the right size and connection type for seamless integration.

Manufactured by:



Full Range of HVAC&R Line Products

SAFE A&T Technology Private Limited

D-4, MIDC, Phase II, Dombivali (E),

Dist. Thane-421 201.

T : +91-(0)-251-2870680/81/82

M : +91-9619933838

Customer Care : +91 8181 994 994

E : info@dryall.net

W : www.dryall.net

REV23-06-02-00