

SASO GSO IEC 60529

Degrees of protection provided by enclosures (IP Code)

Report Number.	SD- 100696
Date of issue	25-04-2024
Tested by (name, function, signature)	Ahmad Al Safwani (Technician)
Approved by (name, function, signature)	Basem Alhamss (EPTL-D Technical Manager)

Test specification:	
Standard	SASO GSO IEC 60529
Test procedure	Type test
Test item description	Enclosure
Trade Mark	-
Manufacturer	Meamar Gulf Industrial Co.
Manufacturer (Address, origin)	Riyadh, Saudi Arabia
Model/Type reference	-
Ratings	-
Date of receipt of test item	23-04-2024
Date (s) of performance of tests	From 25-04-2024 to 25-04-2024
Applicant	Meamar Gulf Industrial Co.
Address	Riyadh, Saudi Arabia
Overall test results	Pass



- Test Result are found on the succeeding pages. According to SAAC scope.
- Test Report relates only to the item(s) tested on specified Standard Test Method(s) and specific clause(s).
- Test Report shall not be reproduced, except in full, without written approval of EPTL, MOTABAQAH.
- Unless requested for return, Test Item(s) are destroyed and discarded 30 days after Test Report Date.
- Test conducted may form into unusable and dangerous item(s). Motabaqah, EPTL do not assume liability resulting from the use of the returned item(s).
- The judgment of passing the test and the extent to which it conforms to the acceptance and rejection criteria depends only on the extent to which the test result complies with the acceptance criteria stipulated in the relevant standard.

Clause	Requirement / Test	Results obtained	Verdict
--------	--------------------	------------------	---------

SASO GSO IEC 60529

	IP first characteristic numerals 1, 2, 3, 4		P																																
13.2	Test conditions for first characteristic numerals 1, 2, 3, 4	IP41	P																																
	The object probe is pushed against any openings of the enclosure with the force specified in table 7.		P																																
	Table 7 – Test means for the tests for protection against solid foreign objects <table> <tr> <th>First characteristic numeral</th><th>Test means (object probes and dust chamber)</th><th>Test force</th><th>Test conditions, see</th></tr> <tr> <td>0</td><td>No test required</td><td>–</td><td>–</td></tr> <tr> <td>1</td><td>Rigid sphere without handle or guard 50^{+0.05}₀ mm diameter</td><td>50 N ± 10 %</td><td>13.2</td></tr> <tr> <td>2</td><td>Rigid sphere without handle or guard 12,5^{+0.2}₀ mm diameter</td><td>30 N ± 10 %</td><td>13.2</td></tr> <tr> <td>3</td><td>Rigid steel rod 2,5^{+0.05}₀ mm diameter with edges free from burrs</td><td>3 N ± 10 %</td><td>13.2</td></tr> <tr> <td>4</td><td>Rigid steel rod 1,0^{+0.05}₀ mm diameter with edges free from burrs</td><td>1 N ± 10 %</td><td>13.2</td></tr> <tr> <td>5</td><td>Dust chamber figure 2, with or without underpressure</td><td>–</td><td>13.4 + 13.5</td></tr> <tr> <td>6</td><td>Dust chamber figure 2, with under-pressure</td><td>–</td><td>13.4 + 13.6</td></tr> </table>	First characteristic numeral	Test means (object probes and dust chamber)	Test force	Test conditions, see	0	No test required	–	–	1	Rigid sphere without handle or guard 50 ^{+0.05} ₀ mm diameter	50 N ± 10 %	13.2	2	Rigid sphere without handle or guard 12,5 ^{+0.2} ₀ mm diameter	30 N ± 10 %	13.2	3	Rigid steel rod 2,5 ^{+0.05} ₀ mm diameter with edges free from burrs	3 N ± 10 %	13.2	4	Rigid steel rod 1,0 ^{+0.05} ₀ mm diameter with edges free from burrs	1 N ± 10 %	13.2	5	Dust chamber figure 2, with or without underpressure	–	13.4 + 13.5	6	Dust chamber figure 2, with under-pressure	–	13.4 + 13.6	IP4X /1N	P
First characteristic numeral	Test means (object probes and dust chamber)	Test force	Test conditions, see																																
0	No test required	–	–																																
1	Rigid sphere without handle or guard 50 ^{+0.05} ₀ mm diameter	50 N ± 10 %	13.2																																
2	Rigid sphere without handle or guard 12,5 ^{+0.2} ₀ mm diameter	30 N ± 10 %	13.2																																
3	Rigid steel rod 2,5 ^{+0.05} ₀ mm diameter with edges free from burrs	3 N ± 10 %	13.2																																
4	Rigid steel rod 1,0 ^{+0.05} ₀ mm diameter with edges free from burrs	1 N ± 10 %	13.2																																
5	Dust chamber figure 2, with or without underpressure	–	13.4 + 13.5																																
6	Dust chamber figure 2, with under-pressure	–	13.4 + 13.6																																
13.3	Acceptance conditions for first characteristic numerals 1, 2, 3, 4	IP41	P																																
	The protection is satisfactory if the full diameter of the probe specified in table 7 does not pass through any opening.		P																																
	NOTE: For first characteristic numerals 3 and 4 the probes specified in table 7 are intended to simulate foreign objects which may be spherical. Where an enclosure has an indirect or tortuous entry path and there is any doubt about ingress of a spherical object capable of motion, it may be necessary to examine drawings or to provide special access for the object probe to be applied with the specified force to the opening(s) where ingress has to be checked.	Test probe easily pass through opening but the probe is not directly go through inside of the enclosure	P																																
	IP second numerical degree (1 : Protected against vertically falling water drops)		P																																
14.2.1	Test for second characteristic numeral 1 with the drip box		P																																
	The test is made with a device which produces a uniform flow of water drops over the whole area of the enclosure.		P																																
	The turntable on which the enclosure is placed has a rotation speed of 1 r/min and the eccentricity (distance between turntable axis and specimen axis) is approximately 100 mm.	Performed	P																																
	The enclosure under test is placed in its normal operating position under the drip box, the base of which is larger than that of the enclosure. Except for enclosures designed for wall or ceiling mounting, the support for the enclosure under test should be smaller than the base of the enclosure.	Performed	P																																

TEST REPORT

	An enclosure normally fixed to a wall or ceiling is fixed in its normal position of use to a wooden board having dimensions which are equal to those of that surface of the enclosure which is in contact with the wall or ceiling when the enclosure is mounted as in normal use.	Normally used	P
	The duration of the test is 10 min.	10 minutes	P
14.3	Acceptance condition		P
	In general, if any water has entered, it shall not:		P
	Be sufficient to interfere with the correct operation of the equipment or impair safety		P
	Deposit on insulation parts where it could lead to tracking along the creepage distances;	No wiring	P
	Reach live parts or windings not designed to operate when wet;		P
	Accumulate near the cable end or enter the cable if any.	No cable assemble	P

Sample Images:

Marking Pic.	Overview Pic.
No Marking	
IP4X	IPX1
	

- END OF TEST REPORT -