DNV·GL

Certificate No:
TAE00000CW

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Cable Gland

with type designation(s)
E1WF, E1XF, OSNJ-A2F, OSAE, OSAJ, OSRA and OSSP

Issued to
OSCG Co., Ltd.
Busan, Republic of Korea

is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Mobile Offshore Units

Application :

Hazardous areas cable glands & cable gland's accessories.
The manufacturer's installation description to be followed.

This Certificate is valid until **2019-08-31**.

Issued at **Busan** on **2015-09-01**

for **DNV GL**

DNV GL local station: **Pusan**

Approval Engineer: **Dong Ho Park**

Baeg Soon Choi
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Product description

Cable glands and accessories for hazardous area as follows;

Type designation	Hazardous area cable gland type E1WF
Gland material	Nickel plated brass, brass or stainless steel
Seal material	Silicone rubber (SH5160U)
Classification	II2G Ex d IIC/ Ex e II, II2D Ex tD A21
Certification	IECEx KOS 09.0018X, Nemko 02ATEX500X
Construction and test standards	IEC 60079-0: 2004, IEC 60079-1: 2003, IEC 60079-7: 2006, IEC61241-0: 2004, IEC61241-1: 2004
Ingress Protection	IP66/67
Gland size [mm]/NPT”	Metric sizes: 16, 20, 25, 32, 40, 50, 63, 75, 90, 100 NPT sizes: 1/2”, 3/4”, 1”, 1-1/4”, 1-1/2”, 2”, 2-1/2”, 3”, 3-1/2”, 4”
Continuous operating temp.	-20℃ to +120℃
Application	For use with steel wire armoured cable. Double compression for outer/inner jacket of cable.

Type designation	Hazardous area cable gland type E1XF
Gland material	Nickel plated brass, brass or stainless steel
Seal material	Silicone rubber (SH5160U)
Classification	II2G Ex d IIC/ Ex e II, II2D Ex tD A21
Certification	IECEx KOS 09.0016X, Nemko 02ATEX501X
Construction and test standards	IEC 60079-0: 2004, IEC 60079-1: 2003, IEC 60079-7: 2006, IEC61241-0: 2004, IEC61241-1: 2004
Ingress Protection	IP66/67
Gland size [mm]/NPT”	Metric sizes: 16, 20, 25, 32, 40, 50, 63, 75, 90, 100 NPT sizes: 1/2”, 3/4”, 1”, 1-1/4”, 1-1/2”, 2”, 2-1/2”, 3”, 3-1/2”, 4”
Continuous operating temp.	-20℃ to +120℃
Application	For use with steel braid armoured/steel tape armoured cable. Double compression for outer/inner jacket of cable.

Type designation	Hazardous area cable gland type OSNJ-A2F
Gland material	Nickel plated brass, brass or stainless steel
Seal material	Silicone rubber (SH5160U)
Classification	II2G Ex d IIC/ Ex e II, II2D Ex tD A21
Certification	IECEx KOS 09.0017X, Nemko 03ATEX1460X
Construction and test standards	IEC 60079-0: 2004, IEC 60079-1: 2003, IEC 60079-7: 2006, IEC61241-0: 2004, IEC61241-1: 2004
Ingress Protection	IP66/67
Gland size [mm]/NPT”	Metric sizes: 16, 20, 25, 32, 40, 50, 63, 75, 90, 100 NPT sizes: 1/2”, 3/4”, 1”, 1-1/4”, 1-1/2”, 2”, 2-1/2”, 3”, 3-1/2”, 4”
Continuous operating temp.	-20℃ to +120℃
Application	For use with unarmoured and braided cable. Single compression for jacket of cable.

Type designation	Hazardous area elbow type OSAE
Gland material	Nickel plated brass, brass or stainless steel
Seal material	NA
Classification	II2G Ex d IIC/ Ex e II, II2D Ex tD A21
Certification	IECEx KOS 09.0004X, Nemko 10ATEX1177U
Construction and test standards	IEC 60079-0: 2004, IEC 60079-1: 2003, IEC 60079-7: 2006, IEC61241-0: 2004, IEC61241-1: 2004
Ingress Protection	IP66/67
Gland size [mm]/NPT"	Metric sizes: 16, 20, 25, 32, 40, 50, 63, 75 NPT sizes: 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2"
Continuous operating temp.	-20℃ to +110℃
Application	For application in installation areas with small amount of space due to construction dimensions.

Type designation	Hazardous area adapter type OSAJ
Gland material	Nickel plated brass, brass or stainless steel
Seal material	NA
Classification	II2G Ex d IIC/ Ex e II, II2D Ex tD A21
Certification	IECEx KOS 09.0002X, Nemko 03ATEX1459X
Construction and test standards	IEC 60079-0: 2004, IEC 60079-1: 2003, IEC 60079-7: 2006, IEC61241-0: 2004, IEC61241-1: 2004
Ingress Protection	IP66/67
Gland size [mm]/NPT"	Metric sizes: 16, 20, 25, 32, 40, 50, 63, 75, 90, 100 NPT/PF sizes: 3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3", 3-1/2" PG sizes: PG7, PG9, PG11, PG13,5, PG16, PG21, PG29, PG36, PG42, PG48
Continuous operating temp.	-20℃ to +110℃
Application	To provides a means of connection between cable entry devices and equipment having dissimilar threads.

Type designation	Hazardous area reducer type OSRA
Gland material	Nickel plated brass, brass or stainless steel
Seal material	NA
Classification	II2G Ex d IIC/ Ex e II, II2D Ex tD A21
Certification	IECEx KOS 09.0003X, Nemko 03ATEX1458X
Construction and test standards	IEC 60079-0: 2004, IEC 60079-1: 2003, IEC 60079-7: 2006, IEC61241-0: 2004, IEC61241-1: 2004
Ingress Protection	IP66/67
Gland size [mm]/NPT"	Metric sizes: 16, 20, 25, 32, 40, 50, 63, 75, 90, 100 NPT/PF sizes: 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3", 3-1/2" PG sizes: PG7, PG9, PG11, PG13,5, PG16, PG21, PG29, PG36, PG42, PG48
Continuous operating temp.	-20℃ to +110℃
Application	Provides a means of connection between cable entry devices and equipment having dissimilar threads.

Type designation	Hazardous area reducer type OSSP
Gland material	Nickel plated brass, brass or stainless steel
Seal material	NA
Classification	II2G Ex d IIC/ Ex e II, II2D Ex tD A21
Certification	IECEx KOS 09.0005X, Nemko 02ATEX50X
Construction and test standards	IEC 60079-0: 2004, IEC 60079-1: 2003, IEC 60079-7: 2006, IEC61241-0: 2004, IEC61241-1: 2004
Ingress Protection	IP66/67
Gland size [mm]/NPT"	Metric sizes: 16, 20, 25, 32, 40, 50, 63, 75, 90, 100 NPT/PF sizes: 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3", 3-1/2"
Continuous operating temp.	-20℃ to +110℃
Application	To close unused cable gland entries and maintain the flameproof and increased safety integrity of the equipment.

Application/Limitation

Manufacturer's application instructions to be followed.
Manufacturer's assembly instructions to be followed.

The information related to Ex certification from recognised test institution is given as information only and cannot replace an ex certificate case by case.

Type Approval documentation

Tests carried out

Type tests in accordance with IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0 and IEC 61241-1.

Marking of product

Manufacturer's name – Type designation – Ex rating.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the survey are:
- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Production Sample Tests (PST) and Routines (RT) checked (if not available tests according to PST and RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Survey to be performed at least every second year.

END OF CERTIFICATE