

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Termination and Joint for Cable**

with type designation(s)

**InstrumEx,
ControlEx,
PowerEx,**

Issued to

**HAWKE International, A member of the Hubbell Group
Lancashire, United Kingdom**

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Hazardous Area Connectors.****For use with braid armoured and non-armoured elastomer or plastic insulated cables.****Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.**Issued at **Høvik** on **2019-10-10**This Certificate is valid until **2024-09-17**.DNV GL local station: **Manchester**for **DNV GL**Approval Engineer: **Ivar Bull**

**Trond Sjøvåg
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.



Product description

Hazardous Area Connector				
Type	InstrumEx			
Connector characteristics	(CP) In line Connector Plug, (CR) In line Connector Receptable, (BR) Bulkhead Connector, Live demateable			
Material	Brass, Steel, Stainless Steel or Bronze and may be plated or coated			
Seal Material	Silicone			
Connector insert option ⁽¹⁾	(1)4-way	(2) 0.5 - 2.5 mm ²	(3)10A ac - 2.5A dc	(4)250V ac - 60V dc
Conductor size admissible ⁽²⁾	(1)8 Way	(2) 0.14 - 0.37 mm ²	(3)1A ac - 0.5A dc	(4)60 V ac - 60V dc
Max Current Rating ⁽³⁾	(1)9 way	(2) 0.5 - 2.5 mm ²	(3)10A ac - 2.5A dc	(4)250V ac - 60V dc
Max Voltage Rating ⁽⁴⁾				
Ambient Temperature	-40°C to +60°C			
Temperature Class T6	85°C Maximum Surface Temperature			
Ingress Protection	IP66 or IP67			
Application	For use with braid armoured and non-armoured elastomer or plastic insulated cables			
Classification	Intended use in explosive gas and dust atmosphere, high level protection, dust ignition and flameproof protection enclosure, increased safety protection. See Marking as reference.			
Certification	ATEX, IECEx			
Marking	Hawke Instrum Ex,  II 2GD, Ex db e, IIC Gb, Ex tb IIIC Db T85°C (Tamb: - 40°C to +60°C) IP66/67, Cert, No, Ser. No, Rating, Warning.			

Hazardous Area Connector							
Type	ControlEx						
Connector characteristics	(CP) In line Connector Plug, (CR) In line Connector Receptable, (BR) Bulkhead Receptable						
Material	Brass, Steel, Stainless Steel or Bronze and may be plated or coated						
Seal Material	Silicone						
Pin configuration:	16(2)(3x1,5; 4x1,5)						
Connector size(No. insert type) (No.of pins x pins size [mm ²] + Grd)	25(7)(4x1,5; 9x1,5; 12x1,5; 4x2; 7x2,5; 4x6;)						
	32(12)(12x1,5; 19x1,5; 10x2,5; 12x2,5; 4x6; 4x4; 6x6; 3x10; 4x10; 3x16; 4x16)						
	40(9)(24x1,5; 30x1,5; 19x2,5; 4x25; 4x35; 8x6; 5x10; 5x16)						
	50(5)(37x1,5; 27x2,5; 37x2,5; 13x6)						
	63(3)(37x2,5; 49x1,5; 60x1,5)						
Maximum permissible dissipated wattage with regard to max ambient temperature, to temperature classification and to connectors size.	Size	Max ambient T=40°C		Max ambient T=50°C		Max ambient T=60°C	
		T6	T5	T6	T5	T6	T5
	16	5W	7W	4W	6W	2,6W	4,6W
	25	8W	11W	6W	10W	4W	7W
	32	10,5W	14,5W	8W	12W	5,4W	9W
	40	12W	17W	9W	14W	5,5W	10,5W
	50	13W	20W	10W	17W	6,5W	12,5W
	63	17W	29W	13W	24W	8,5W	17W
Max Voltage Rating	750V ac/dc or 1000ac/dc						
Ambient Temperature	-40°C to +60°C						
T*:Temperature Class T5 or T6	100°C or 85°C Maximum Surface Temperature						
Ingress Protection	IP66 or IP67						
Application	For use with braid armoured and non-armoured elastomer or plastic insulated cables						

Job Id: **262.1-032070-1**
Certificate No: **TAE00003RX**

Classification	Intended use in explosive gas and dust atmosphere, high level protection, dust ignition and flameproof protection enclosure, See Marking as reference.
Certification	ATEX, IECEX
Marking	Hawke ControlEx, Ex II 2GD, Ex db, IIC Gb T*°C, Ex tb IIIC Db T*°C (Tamb: - 40°C to+40/50/60°C) or Ex II 2GD, Ex db, IIB+H₂ Gb T*°C Ex tb IIIC Db T*°C (Tamb: - 40°C to+40/50/60°C) Maximum Dissipated Wattage, IP66/67, Cert, No, Ser.No./Year, Warning.

Hazardous Area Connector							
Type	PowerEx						
Connector characteristics	(CP) In line Connector Plug, (CR) In line Connector Receptable						
Material	Brass, Steel, Stainless Steel or Bronze and may be plated or coated						
Seal Material	Silicone						
Pin configuration: Connector size(No. insert type) (No.of pins x pins size [mm ²] + Grd)	M32(5)(1x50; 1x70;1x95; 1x120; 1x150) M40(2)(1x185; 1x240) M50(6)(3x50; 3x70; 4x50; 4x70; 1x185; 1x240) M63(8)(3x95; 3x120; 3x150; 4x95; 4x120; 4x150; 1x300; 1x400) M75(6)(3x185; 3x240; 4x185; 4x240; 1x500; 1x630)						
Maximum permissible dissipated wattage with regard to max ambient temperature, to temperature classification and to connectors size.	Size	Max ambient T=40°C		Max ambient T=50°C		Max ambient T=60°C	
		T6	T5	T6	T5	T6	T5
	32	20,5W	27,5W	15,75W	26W	7,5W	15,75W
	40	22,5W	30,5W	17,5W	28W	8,7W	17,5W
	50	28,5W	35,3W	20W	32,25W	10W	20W
	63	30,2W	41,5W	23,5W	37,7W	11,7W	23,5W
	75	36,3W	49,5W	28,25W	45,25W	14W	28,25W
Max Voltage Rating	750V ac/dc						
Ambient Temperature	-40°C to +60°C						
T*:Temperature Class T5 or T6	100°C or 85°C Maximum Surface Temperature						
Ingress Protection	IP66 or IP67						
Application	For use with braid armoured and non-armoured elastomer or plastic insulated cables						
Classification	Intended use in explosive gas and dust atmosphere, high level protection, dust ignition and flameproof protection enclosure, See Marking as reference.						
Certification	ATEX, IECEX						
Marking	Hawke PowerEx, Ex II 2GD, Ex db, IIC Gb T*°C, Ex tb IIIC Db T*°C (Tamb: - 40°C to+40/50/60°C) or Ex II 2GD, Ex db, IIB+H₂ Gb T*°C, Ex tb IIIC Db T*°C (Tamb: - 40°C to+40/50/60°C) Maximum Dissipated Wattage, IP66/67, Cert, No, Ser.No./Year, Warning.						

Job Id: **262.1-032070-1**
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Application/Limitation

The manufacturer's application instructions to be followed.

The manufacturer's assembly installation to be followed.

The information related to gas dangerous areas is for information only. Please refer to corresponding ATEX and IEC EX certificates.

Type Approval documentation

Tests carried out

InstrumEx	IEC/EN 60079-0, IEC/EN 60079-1, IEC/ EN 60079-7 and IEC/EN60079-31 standards
ControlEx	IEC/EN 60079-0, IEC/EN 60079-1 and IEC/EN60079-31 standards.
PowerEx	

Marking of product

According to IECx Certificate of Conformity. See also product description

Periodical assessment

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

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT shall 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.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE