(1) EC-TYPE EXAMINATION CERTIFICATE

(2) Component intended for use on/in equipment or protective system intended for use in Potentially explosive atmospheres. Directive 94/9/EC

(3) EC-Type Examination Certificate nr. **LOM 08ATEX3047U**

(4) Component: Cable entries Types H...Ex

(5) Applicant: HAWKE TRANSIT SYSTEM, S.L.

(6) Address: Paseo del Niño, 4, nave B2
39300 TORRELAVEGA (Cantabria)
SPAIN

(7) This component and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) Laboratorio Oficial J.M. Madariaga (LOM), notified body number 0163 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament of 23 March 1994, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of components intended for use in potentially explosive atmospheres, given in Annex II to the Directive.
The examination and test results are recorded in confidential report nr. **LOM 07.456 UP**

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

- Standards: **EN 60079-0:2006**, **EN 60079-7:2007**, **EN 61241-0:2006**, **EN 61241-1:2004**

(10) The sign "U" placed after the certificate number indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.

(11) This EC-Type Examination Certificate relates only to the design and construction of this specified component in accordance with the Directive 94/9/EC. Further requirements of the Directive apply to the manufacture and supply of this component. These are not covered by this certificate.

(12) The marking of the componet shall include the following:

Ex e II
Ex II 2 GD Ex tD A21 IP66
-20 ºC ≤ Ta ≤ +80ºC

Madrid, 22th September 2008

OFICIAL LABORATORIO J.M. MADARIAGA

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

Angel Vega Remesal
Head of the ATEX

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UNIVERSIDAD POLITÉCNICA DE MADRID
ENSAYOS E INVESTIGACIONES DE MATERIALES Y EQUIPOS PARA ATMÓSFERAS EXPLOSIVAS Y MINERÍA
(Real Decreto 334/1992 de 3 de Abril - BOE 1992-04-29)

Alenza, 1 - 28003 MADRID • (34) 91 4421366 / 91 3367009 • (34) 91 4419933 • lom@lom.upm.es

(A1) SCHEDULE

(A2) EC-Type Examination Certificate: **LOM 08ATEX3047U**

(A3) Description of the certified component

The cable entries consist of a frame, rubber modules of prismatic shape and a compression system. The rubber modules are available in different sizes and each can accept a range of cable diameters. The modules are also available without holes that allow the filling of spaces in the frames. The range of diameters of cables is between 3 and 100 mm. Each module is distinguished by colour coding.

The frames are indicated to be placed welded in walls of enclosures for electrical equipment.

The frames can be combined in multiple arrays.

Rubber modules types:

Dimensions mm	Reference	Cable diameter (mm)
15x15	HF150	0 (*)
	HF153	3 to 5
	HF155	5 to 7
	HF157	7 to 9
20x20	HF200	0 (*)
	HF203	3 to 6
	HF206	6 to 9
	HF209	9 to 12
	HF2011	11 to 14
	HF2013	13 to 16
30x30	HF300	0 (*)
	HF3012	12 to 15
	HF3015	15 to 18
	HF3018	18 to 21
	HF3021	21 to 24
40x40	HF400	0 (*)
	HF4022	22 to 25
	HF4025	25 to 28
	HF4028	28 to 31
	HF4031	31 to 34

(*) modules without hole

Dimensions mm	Reference	Cable diameter (mm)
60x60	HF600	0 (*)
	HF6031	31 to 34
	HF6034	34 to 37
	HF6037	37 to 40
	HF6040	40 to 43
	HF6043	43 to 46
	HF6046	46 to 49
	HF6049	49 to 52
	HF6052	52 to 54
90x90	HF900	0 (*)
	HF9053	53 to 56
	HF9056	56 to 59
	HF9059	59 to 62
	HF9062	62 to 65
	HF9065	65 to 68
	HF9068	68 to 71
120x120	HF1200	0 (*)
	HF12072	72 to 75
	HF12075	75 to 78
	HF12078	78 to 81
	HF12081	81 to 84
	HF12084	84 to 87
	HF12087	87 to 90
	HF12090	90 to 93
	HF12093	93 to 96
	HF12096	96 to 100

(A1) SCHEDULE

(A2) EC-Type Examination Certificate: **LOM 08ATEX3047U**

(A3) Description of equipment or protective system (continue)

Types of frames

HC** Rectangular frames with flange for rubber modules of 60 mm in dept

Variants: HCX standard
HCOX opened frame on one side

Type	Internal area size mm	External dimensions mm
HCX2	100x120	220x240
HCX4	160x120	280x240
HCX6	220x120	340x240
HCX8	280x120	400x240

HM** Rectangular frames for rubber modules of 30 mm in depth

Variants: HMX without flange
HMFX with flange
HMXO without flange, opened frame on one side
HMEX without flange, with a protective collar on one side
HMBX without flange, with two protective collars on both sides

Type	Internal area size mm	External dimensions mm				
		HMX	HMXF	HMXO	HMEX	HMBX
HM*2	100x120	120x140	220x240	120x140	140x160	140x160
HM*4	160x120	180x140	280x240	180x140	200x160	200x160
HM*6	220x120	240x140	340x240	240x140	280x160	280x160
HM*8	280x120	300x140	400x240	300x140	320x160	320x160

HRT Cylindrical rubber frame foreseen to be installed inside entry tubes of enclosures with flange (CB) and without flange (C)

Type	Internal area size mm	External diameter mm	Depth mm
HRT30	15x15	32	66
HRT40	20x20	40	66
HRT50	30x30	50	66
HRT70	40x40	70	69
HRT100	60x60	100	69
HRT150	90x90	150	69
HRT200	120x120	200	69

(A4) Test report nr **LOM 07.456 UP**

OFICIAL LABORATORIO J.M. MADARIAGA LOM

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(A1) SCHEDULE

(A2) EC-Type Examination Certificate: **LOM 08ATEX3047U**

(A5) Special conditions for safe use

- They may be used in fixed cable installations
- A cylindrical hole in the enclosure is needed for the installation of the types HRT. This hole should be of an appropriate size, both in diameter and length.

(A6) Individual tests

None

(A7) Essential Health and Safety Requirements

Explosion safe requirements are covered by application of the standards indicated in page 1/4 of this certificate.

(A8) Descriptive Documents

		Rev.	Date
- Technical description		-	2008-06-10
- Drawings nr.:	ATEX 1	A	2008-06-10
	ATEX 2	A	2008-06-10
	ATEX 3	A	2008-06-10
	ATEX 4	A	2008-06-10
	ATEX 5	A	2008-06-10
	ATEX 6	A	2008-06-10
	ATEX 7	A	2008-06-10
	ATEX 9.1	A	2008-06-10
	ATEX 9.2	A	2008-06-10
	ATEX 10	A	2008-06-10
	ATEX 11	A	2008-06-10