

INDICE – INDEX – INHALTSVERZEICHNIS – ÍNDICE

LUCI ROTANTI ANTIDEFLAGRANTI
EXPLOSION-PROOF ROTATING BEACONS
FEUX TOURNANTS ANTIDEFLAGRANTS
EXPLOSIONSGESCHÜTZTE RUNDUMLEUCHTEN
LUCES ROTATIVAS ANTIDEFLAGRANTES

EX 080 BABY R	13
EX 080 RA	13
EX 080 RA H	13

LUCI LAMPEGGIANTI ANTIDEFLAGRANTI
EXPLOSION-PROOF FLASHING BEACONS
FEUX CLIGNOTANTS ANTIDEFLAGRANTS
EXPLOSIONSGESCHÜTZTE BLINKLEUCHTEN
LUCES INTERMITENTES ANTIDEFLAGRANTES

EX 050 OVO L	14
EX 070 MF L	15
EX 070 MAF L	16
EX 080 BABY L	17
EX 080 LA L	18
EX 080 LA L H	18
EX 0100 STL L	19
EX 0100 STL L H	19

LUCI LAMPEGGIANTI (FISSE) A LED INTEGRATI ANTIDEFLAGRANTI
EXPLOSION-PROOF LED INTEGRATED FLASHING (CONTINUOUS LIGHT) BEACONS
FEUX CLIGNOTANTS (A LUMIERE FIXE) A LEDS INTEGREGES ANTIDEFLAGRANTS
EXPLOSIONSGESCHÜTZTE BLINK- (DAUERLICHT-) LEUCHTEN MIT INTEGRIERTEN LED
LUCES INTERMITENTES (FIJAS) DE LED'S INTEGRADOS ANTIDEFLAGRANTES

EX 050 LD 125 OVO	14
EX 070 LD 365 MN	15
EX 070 LD 455 MX	16
EX 080 LD 365 BABY	17
EX 080 LD 455 LA	18
EX 0100 LD 865 STB	19

LUCI FISSE ANTIDEFLAGRANTI
EXPLOSION-PROOF CONTINUOUS LIGHT BEACONS
FEUX A LUMIERE FIXE ANTIDEFLAGRANTS
EXPLOSIONSGESCHÜTZTE DAUERLEUCHTEN
LUCES FIJAS ANTIDEFLAGRANTES

EX 050 OVO F	20
EX 070 MF F	20
EX 070 MAF F	21
EX 080 BABY F	21
EX 080 LA F	22
EX 0100 STL F	22

LAMPADE ANTIDEFLAGRANTI
EXPLOSION-PROOF LAMPS
LAMPES ANTIDEFLAGRANTES
EXPLOSIONSGESCHÜTZTE LAMPEN
LÁMPARAS ANTIDEFLAGRANTES

EX 070 LF 100	23
EX 080 LF 200	23

LAMPADE A LED ANTIDEFLAGRANTI
EXPLOSION-PROOF LED BULBS
AMPOULES A LEDS ANTIDEFLAGRANTES
EXPLOSIONSGESCHÜTZTE LED LEUCHTMITTEL
LÁMPARAS DE LED'S ANTIDEFLAGRANTES

EX 050 LD SA 835	24
EX 050 LD SO 545	24
EX 070 LD SA 1195	24
EX 070 LD SO 905	25
EX 070 LD SA 1395	25
EX 080 LD SA 1995	26
EX 080 LD SO 1505	26
EX 080 LD SA 3185	27
EX 080 LD SO 2105	27

LUCI XENO ANTIDEFLAGRANTI
EXPLOSION-PROOF XENON FLASHING BEACONS
FEUX A ECLATS ANTIDEFLAGRANTS
EXPLOSIONSGESCHÜTZTE BLITZLEUCHTEN
LUCES DE DESTELLOS ANTIDEFLAGRANTES

EX 050 OVO X	28
EX 070 XF	28
EX 070 MXF	29
EX 070 MXF ELEV	29
EX 080 BABY X	29
EX 080 LA X	30
EX 0100 STF	30

INTERRUTTORI DI EMERGENZA ANTIDEFLAGRANTI
EXPLOSION-PROOF EMERGENCY SWITCHES
BOUTONS-POUSSOIRS ANTIDEFLAGRANTS
EXPLOSIONSGESCHÜTZTE SICHERHEITSKÄSTEN
INTERRUPTORES DE EMERGENCIA ANTIDEFLAGRANTES

EX 025 PAG	31
EX 035 PAG PCS	31

SPIA LUMINOSA ANTIDEFLAGRANTE
EXPLOSION-PROOF WARNING LIGHT
VOYANT LUMINEUX ANTIDEFLAGRANT
EXPLOSIONSGESCHÜTZTER LEUCHTMELDER
LÁMPARA PILOTO ANTIDEFLAGRANTE

EX 045 LD PAG SP	31
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RICAMBI
SPARE PARTS
PIECES DE RECHANGE
ERSATZTEILE
REPUESTOS

VETRO + GRIGLIA + GHIERA	32
GLASS + GRID + RING	
VERRE + GRILLE + COLLIER	
GLAS + GITTER + RING	
VIDRIO + REJILLA + COLLAR	
EX 015 VETRO PAG	32
LAMPADE	32
BULBS / AMPOULES / LEUCHTMITTEL / LÁMPARAS	



Our explosion proof products are approved according to:

“ATEX” Directive 94/9/Ec

The new ATEX directive, Appendices 4 & 7, states that manufacturers of electrical equipment to be used in explosive atmospheres where flammable gases, vapours, fumes or dusts are present, must have a certified quality system according to ISO 9000 with clearly defined quality plans for the design, production, inspection and assis-



tance of such equipment that can be constantly verified by an advisory body. SIRENA has been awarded an ISO certificate by Istituto Masini, notified body no. 0068.

The certificate that proves conformity to the ATEX Directive regulations is: 0068/QPR-AT/031-2005.

CLASSIFICATION OF THE HAZARDOUS AREAS IN EUROPE WHERE GAS IS PRESENT

In Europe the EN 60079-10 standard is applicable and all dangerous areas where gas or vapours are present must be classified according to one of the following categories:

ZONE 0	An area where the mixture of explosive gas is constantly present (e.g. the inside of a fuel tank).
ZONE 1	An area where the mixture of explosive gas can be present during the normal operation of the plant.
ZONE 2	An area where the mixture of explosive gas is not normally present, but if it is, only for brief periods of time.

All other areas of the site are considered
SAFE AREAS

At the moment, in Italy, the dangerous areas are divided according to the substances present:

CLASS 0	Explosive Materials (Dynamite)
CLASS 1	Gas or Vapours (Fuels)
CLASS 2	Inflammable Powders (Magnesium)

METHODS OF PROTECTION

BASIC PRINCIPLES

Once the various hazardous areas have been identified within a plant, it is essential to study the choice of electrical equipment to be installed in that zone to protect against the danger of explosions caused by accidental sparks or surface overheating.

Primarily, the different types of protection are based on the following principles:

A – Potential explosions are contained within an appropriate explosion-proof housing (Ex-d).

B – An increase in the reliability of the electrical components that do not spark under normal use, and therefore the risk that they may cause an explosion is reduced to a very low level (Ex-e; Ex-n)

C – The energy at stake even in case of breakdown is low enough to avoid igniting the explosive atmosphere (Ex-i).

D – Contact is prevented between the electrical component that could act as a trigger and the explosive atmosphere (Ex-m; Ex-o; Ex-q; Ex-p).

CLASSIFICATION OF THE HAZARDOUS AREAS IN EUROPE WHERE POWDER IS PRESENT

Europe follows the EN 50281-1-1 standard and all dangerous areas where powder is present must be classified according to one of the following categories:

ZONE 20	An area where the mixture of explosive powder is constantly present.
ZONE 21	An area where the mixture of explosive powder can be present during the normal operation of the plant.
ZONE 22	An area where the mixture of explosive powder is not normally present, but if it is, only for brief periods of time.

All other areas of the site are considered
SAFE AREAS

Classification of the equipment

















Danger Category	EUROPE	Ignition energy
Methane	Group I (mines)	-
Ethyl Acetate	Group IIC	> 20μ joules
Hydrogen	Group IIC	> 20μ joules
Ethylene	Group IIB	> 60μ joules
Propane	Group IIA	> 180μ joules
Bushing metal powders	Standard should be issued	With harder ignition
Coal powders		
Grain powders		
Fibre		



EUROPEAN COMMUNITY RULES		
GENERAL RULES		EN 50014
Ex"o"	Oil immersed	EN 50015
Ex"p"	Inside pressure	EN 50016
Ex"q"	Construction under sand	EN 50017
Ex"d"	Explosion-proof housing	EN 50018
Ex"e"	Increased safety	EN 50019
Ex"i"	Intrinsic safety	EN 50020
Ex"m"	Encapsulation	EN 50028

CLASSIFICATION OF MAXIMUM SURFACE TEMPERATURE						
Max. surface temperature (°C)	450	300	200	135	100	85
EUROPE	T1	T2	T3	T4	T5	T6

DEGREE OF PROTECTION (EN 60529)

First digit: protection against accidental contact and penetration by solid foreign bodies			Second digit: protection against penetration of liquids		
IP			IP		
0		No particular protection	0		No particular protection
1		Protection against solid bodies over 50 mm and against contacts by large surfaces of the human body (e.g. the hands)	1		Protection against the vertical fall of drops of water (e.g. condensation)
2		Protection against solid bodies over 12,5 mm and against finger contact	2		Protection against the vertical fall of drops of water with a maximum incline of 15°
3		Protection against solid bodies over 2,5 mm (e.g. tools, wires)	3		Protection against the vertical fall of drops of water with a maximum incline of 60°
4		Protection against penetration of solid bodies with a diameter or thickness over 1 mm (e.g. wires)	4		Protection against splashes of water from all directions
5		Dust penetration is not fully excluded, but the quantity that penetrates causes no damaging effects	5		Protection against jets of water from all directions
6		No dust penetration is permitted	6		Protection against waves of water or powerful jets
			7		Protection against the effects of immersion
			8		Protection against the effects of prolonged immersion under pressure

GROUPS OF ENCLOSURES SUITABLE FOR A PARTICULAR FLAMMABLE GAS OR VAPOUR		
GROUP	MESG (mm)	Gas or vapour
I		Methane (Firedamp)
IIA	0,9 < MESG	Amyl acetate Ethyl acetate Methyl acetate N-Butyl acetate N-Propyl acetate Acetone Amyl alcohol Butyl alcohol Ethanol Ammonia Benzene Butane Ciclohexane Cloroethylene Decane Eptane Esane Ethanol Ethyl-methyl-ketone Blas furnace gas Iso-Butanol Iso-Octane Industrial Methane Methanol Carbon monoxide Ethyl nitrite N-Butanol Carbon monoxide Pentane Propane Xilene
IIB	0,5 < MESG 0,9	Buta 1:3-diene Diethyl ether Ethylen Town gas Coke oven gas Ethylene oxide
IIC	<0,5 MESG	Acetylene Hydrogen Ethyl nitrate Carbon sulphide

TECHNICAL CHARACTERISTICS OF OUR EXPLOSION-PROOF RANGE OF PRODUCTS
Copper-free aluminium alloy body
Borosilicate glass external dome – PC internal dome
Stainless steel INOX protective grid
RAL 3020 polyester painted
Directive – Norms: 94/9/EC – EN50014 – EN50018
Installation (according to EN60079-10 and EN 50281-1-1) : Zone 1 – Zone 2 – Zone 21- Zone 22

LEGENDA - LEGEND - LÉGENDE - LEGENDE - LEYENDA

V 12÷24-110-230/240 (±10%)

IP 66

°C -20 +40

On ∞

J2 **2F**

Flash/min. 65±10

1 2 3 4 5 6 **PC** **M25x1.5***

VOLTAGGIO
VOLTAGE
TENSION
SPANNUNG
VOLTAJE

CORRENTE
CURRENT
COURANT
STROM
CORRIENTE

FREQUENZA
FREQUENCY
FREQUENCE
FREQUENZ
FRECUENCIA

ENERGIA
ENERGY
ENERGIE
ENERGIE
ENERGÍA

1F= MONOLAMPO-SINGLE
FLASH-SIMPLE ECLAT-
EINZELBLITZ-DESTELLO SIMPLE

2F= BILAMPO-DOUBLE FLASH-
DOUBLE ECLAT-DOPPELBLITZ-
DESTELLO DOBLE

LAMPI O GIRI PER MINUTO Flash/min o r.p.m.
FLASHES OR ROTATIONS PER MINUTE
Flash/min or r.p.m.
ECLATS OU TOURS PAR MINUTE Flash/min ou r.p.m.
BLITZE ODER UMDREHUNGEN PRO MINUTE
Flash/min oder r.p.m.
DESTELLOS O ROTACIONES POR MINUTO
Flash/min o r.p.m.

GRADO IP: CORPI SOLIDI E ACQUA
IP RATING: SOLID BODIES AND WATER
DEGRE IP: CORPS SOLIDES ET EAU
IP-SCHUTZART: FESTE FREMDKÖRPER-WASSER
GRADO DE IP: CUERPOS SÓLIDOS Y AGUA

SERVIZIO CONTINUO
CONTINUOUS OPERATION
SERVICE CONTINU
DAUERBETRIEB
SERVICIO CONTINUO

MATERIALE CUPOLA
DOME MATERIAL
MATERIEL DU DOME
HAUBENMATERIAL
MATERIAL DE LA CÚPULA

TIPO FILETTATURA
TYPE OF THREAD
TYPE DE FILETAGE
GEWINDE
TIPO DE ROSCA

TEMPERATURA DI FUNZIONAMENTO
OPERATING TEMPERATURE RANGE
TEMPERATURE DE FONCTIONNEMENT
BETRIEBSTEMPERATUR
TEMPERATURA OPERATIVA

PROPAGAZIONE LUCE
LIGHT DIFFUSION
DIFFUSION DE LA LUMIERE
LICHTSTRAHLUNG
PROPAGACIÓN DE LA LUZ

COLORI DELLA CUPOLA
DOME COLOURS
COULEURS DU DOME
HAUBENFARBEN
COLORES DE LA CÚPULA:

1 = BLU - BLUE - BLEU - BLAU - AZUL
2 = ARANCIO - AMBER - ORANGE - GELB - ÁMBAR
3 = ROSSO - RED - ROUGE - ROT - ROJO
4 = VERDE - GREEN - VERT - GRÜN - VERDE
5 = GIALLO - YELLOW - JAUNE - HELLGELB - AMARILLO
6 = NEUTRO - CLEAR - TRANSPARENT - FARBLOS - CLARO

PC: POLICARBONATO
POLYCARBONATE
POLYCARBONATE
POLYCARBONAT
POLICARBONATO

*** Filetti, adattatori e pressacavi disponibili a richiesta**
Threads, adapters and pressure glands available on request
Filets, adaptateurs et presse-étoupe disponibles sur demande
Gewinde, Passtücke und Kabeldurchführungen lieferbar auf Anfrage
Roscas, adaptadores y prensaestopas disponibles bajo demanda

INFORMAZIONI TECNICHE RELATIVE ALLE PIÙ IMPORTANTI CARATTERISTICHE ELETTRICHE E PRESTAZIONI FUNZIONALI

TECHNICAL INFORMATION REGARDING THE MOST IMPORTANT FUNCTIONAL AND ELECTRICAL CHARACTERISTICS

INFORMATIONS TECHNIQUES CONCERNANT LES CARACTERISTIQUES ELECTRIQUES ET FONCTIONNELLES LES PLUS IMPORTANTES

TECHNISCHE INFORMATIONEN ÜBER DIE WICHTIGSTEN ELEKTRISCHEN UND FUNKTIONSMERKMALE

INFORMACIONES TÉCNICAS SOBRE LAS CARACTERÍSTICAS ELÉCTRICAS Y PRESTACIONES FUNCIONALES MÁS IMPORTANTES

TIPO DI SORGENTE LUMINOSA:
TYPE OF LUMINOUS SOURCE:
TYPE DE SOURCE LUMINEUSE:
LICHTQUELLENTYP:
TIPO DE FUENTE LUMINOSA:

LAMPADA A FILAMENTO
FILAMENT BULB
AMPOULE A FILAMENT
GLÜHLAMPE
LÁMPARA INCANDESCENTE

LAMPADA ALOGENA
HALOGEN BULB
AMPOULE HALOGENE
HALOGENLAMPE
LÁMPARA HALÓGENA

TUBO A SCARICA ALLO XENON 1J
XENON TUBE 1J
TUBE AU XENON 1J
XENON-BLITZRÖHRE 1J
TUBO DE DESCARGA DE XENÓN 1J

TUBO A SCARICA ALLO XENON 2J
XENON TUBE 2J
TUBE AU XENON 2J
XENON-BLITZRÖHRE 2J
TUBO DE DESCARGA DE XENÓN 2J

TUBO A SCARICA ALLO XENON 6J
XENON TUBE 6J
TUBE AU XENON 6J
XENON-BLITZRÖHRE 6J
TUBO DE DESCARGA DE XENÓN 6J

TUBO A SCARICA ALLO XENON 3-9J
XENON TUBE 3-9J
TUBE AU XENON 3-9J
XENON-BLITZRÖHRE 3-9J
TUBO DE DESCARGA DE XENÓN 3-9J

TUBO A SCARICA ALLO XENON 15J
XENON TUBE 15J
TUBE AU XENON 15J
XENON-BLITZRÖHRE 15J
TUBO DE DESCARGA DE XENÓN 15J

VOLTAGGIO CORRENTE ALTERNATA
ALTERNATING CURRENT VOLTAGE
TENSION COURANT ALTERNATIF
SPANNUNG WECHSELSTROM
VOLTAJE CORRIENTE ALTERNA

VOLTAGGIO CORRENTE CONTINUA
DIRECT CURRENT VOLTAGE
TENSION COURANT CONTINU
SPANNUNG GLEICHSTROM
VOLTAJE CORRIENTE CONTINUA

OMOLOGAZIONE
APPROVAL
HOMOLOGATION
GENEHMIGUNG
HOMOLOGACIÓN

TEMPERATURA MASSIMA SUPERFICIALE
MAXIMUM SURFACE TEMPERATURE
TEMPERATURE MAXIMALE DE SURFACE
MAX. OBERFLÄCHENTEMPERATUR
TEMPERATURA MÁXIMA DE SUPERFICIE

		CESI 05 ATEX 043				T6	
V	12	24	48	—	—	—	
V	12	24	48	110	230 / 240		
A	3,8	1,9	0,9	0,36	0,17		
Cd (p)	540	405	270	225	225		

ASSORBIMENTO DI CORRENTE
CURRENT CONSUMPTION
CONSUMMATION DE COURANT
STROMVERBRAUCH
CONSUMO DE CORRIENTE

CANDELE DI PICCO misurate con cupola neutra
PEAK CANDELAS with clear dome
CANDELAS DE PIC avec dôme incolore
SPITZENWERT-CANDELAS mit farbloser Haube
CANDELAS/PICO con cúpula incolora

TUTTI I PRODOTTI SONO IMBALLATI IN CASSE DI LEGNO
ALL PRODUCTS ARE PACKED IN WOODEN BOXES
TOUS LES PRODUITS SONT EMBALLÉS DANS DES BOITES EN BOIS
ALLE PRODUKTE SIND IN HOLZKASTEN VERPACKT
TODOS LOS PRODUCTOS SON EMBALADOS EN CAJAS DE MADERA

CODIFICA: es. / CODIFICATION: ex. / CODIFICATION: ex. / CODIERUNG: Beispiel / CODIFICACIÓN: ej.

EX	070	XF	110	AC	1	→
Antidiffrangente Explosion-proof Antidiffragant Explosionsgeschützt Antidiffragante	Codice armatura Housing code Code enveloppe Kapselung Code Código carcasa	Descrizione Description Description Bezeichnung Descripción	Voltaggio Voltage Tension Spannung Voltaje	Corrente Current Courant Stromart Corriente	Colore Colour Couleur Farbe Color	
L = luce lampeggiante flashing light lumière clignotante Blinklicht luz intermitente		D = corrente continua direct current courant continu Gleichstrom corriente continua y alterna				
F = luce fissa continuous light lumière fixe Dauerlicht luz fija		A = corrente alternata alternating current courant alternatif Wechselstrom corriente alterna				
X = luce xeno xenon flashing light lumière à éclats Blitzlicht luz de xenón		DA = corrente continua e alternata direct and alternating current courant continu et			LD = LED integrati/lampada a LED LED integrated/LED bulb LED intégrées/Ampoule à LED Integrierte LED/LED Leuchtmittel LED'S integrados / lámpara de LED'S	