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# LED Lighting



## FELED Series – LED Luminaire (Zones 1 & 2 – 21 & 22)

| LED | Standard version                                | Catalogue Number                        |                              |
|-----|-------------------------------------------------|-----------------------------------------|------------------------------|
|     | Ex eb mb op is IIC with diffused lens – 5000K ① | Unarmoured cable + 1x M25 cable gland ② | Armoured cable M20 entries ③ |
|     | 3050 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc   | FELED3CBUSND                            | FELED3CBUSAD                 |
|     | 4200 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc   | FELED4CBUSND                            | FELED4CBUSAD                 |
|     | 5300 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc   | FELED5CBUSND                            | FELED5CBUSAD                 |
|     | 7200 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc   | FELED7CBUSND                            | FELED7CBUSAD                 |
|     | Emergency version – 180 minutes battery backup  | Catalogue Number                        |                              |
|     | Ex db eb mb IIC with diffused lens – 5000K ①    | Unarmoured cable + 1x M25 cable gland ② | Armoured cable M20 entries ③ |
|     | 3050 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc   | FELED3CBUSNDE                           | FELED3CBUSADE                |
|     | 5300 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc   | FELED5CBUSNDE                           | FELED5CBUSADE                |

## FNLED Series – LED Luminaire (Zones 2 – 21 & 22)

| LED | Standard version                               | Catalogue Number                        |                              |
|-----|------------------------------------------------|-----------------------------------------|------------------------------|
|     | Ex ec IIC with diffused lens – 5000K ①         | Unarmoured cable + 1x M25 cable gland ② | Armoured cable M20 entries ③ |
|     | 3300 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc  | FNLED3CBUSND                            | FNLED3CBUSAD                 |
|     | 4300 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc  | FNLED4CBUSND                            | FNLED4CBUSAD                 |
|     | 5100 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc  | FNLED5CBUSND                            | FNLED5CBUSAD                 |
|     | 7000 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc  | FNLED7CBUSND                            | FNLED7CBUSAD                 |
|     | Emergency version – 180 minutes battery backup | Catalogue Number                        |                              |
|     | Ex ec IIC with diffused lens – 5000K ①         | Unarmoured cable + 1x M25 cable gland ② | Armoured cable M20 entries ③ |
|     | 3300 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc  | FNLED3CBUSNDE                           | FNLED3CBUSADE                |
|     | 5100 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc  | FNLED5CBUSNDE                           | FNLED5CBUSADE                |

## FDLED Series – LED Luminaire (Zones 1 & 2 – 21 & 22)

| LED | Standard version                                 | Catalogue Number ④ |
|-----|--------------------------------------------------|--------------------|
|     | Ex db IIC with diffused lens – 5650K             |                    |
|     | 2400 lm – 110-254 Vac, 50/60 Hz – 2x M20 entries | FDLED25BU2D        |
|     | 4725 lm – 110-254 Vac, 50/60 Hz – 2x M20 entries | FDLED50BU2D        |
|     | Emergency version – 180 minutes battery backup   | Catalogue Number ④ |
|     | Ex db IIC with diffused lens - 5650K             |                    |
|     | 2400 lm – 110-254 Vca, 50/60 Hz – 2x M20 entries |                    |
|     | 4725 lm – 110-254 Vca, 50/60 Hz – 2x M20 entries | FDLED50BU2DE       |

① Also available in 4000K.

② Cable glands provided in luminaires with unarmoured hub entries.

③ Must order armoured cable glands separately. Two M20 entries are with brass earth continuity plate for armoured cable.

④ Must order armoured cable glands separately.

## AMLZ Areamaster™ Series – LED Floodlight (Zones 1 & 2 – 21 & 22)

| LED | Ex eb mb op is IIC – 5000K ①                   | Catalogue Number ③ |              |
|-----|------------------------------------------------|--------------------|--------------|
|     | 1x M20 adaptor supplied                        | Clear Lens         | Frosted Lens |
|     | 9000 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc  | AMLZL6CG6BUM       | AMLZL6CF6BUM |
|     | 14000 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc | AMLZL7CG6BUM       | AMLZL7CF6BUM |
|     | 18500 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc | AMLZL8CG6BUM       | AMLZL8CF6BUM |



## AMHZ Areamaster Series – High Lumen LED Floodlight (Zones 1 & 2 – 21 & 22)

| LED | Ex eb mb op is IIC – 5000K ①                   | Catalogue Number ③ |              |
|-----|------------------------------------------------|--------------------|--------------|
|     | 1x M20 adaptor supplied                        | Clear Lens         | Frosted Lens |
|     | 23000 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc | AMHZL1CG6BUM       | AMHZL1CF6BUM |
|     | 28500 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc | AMHZL2CG6BUM       | AMHZL2CF6BUM |
|     | 36000 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc | AMHZL3CG6BUM       | AMHZL3CF6BUM |



## AMLG Areamaster Series – LED Floodlight (Zones 2 – 21 & 22)

| LED | Ex ec IIC – 5000K ②                            | Catalogue Number ③ |              |
|-----|------------------------------------------------|--------------------|--------------|
|     | 1x M20 adaptor supplied                        | Clear Lens         | Frosted Lens |
|     | 9500 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc  | AMLGL6CG6BUM       | AMLGL6CF6BUM |
|     | 15000 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc | AMLGL7CG6BUM       | AMLGL7CF6BUM |
|     | 19500 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc | AMLGL8CG6BUM       | AMLGL8CF6BUM |



## AMLH Areamaster Series – High Lumen LED Floodlight (Zones 2 – 21 & 22)

| LED | Ex ec IIC – 5000K ②                            | Catalogue Number ③ |              |
|-----|------------------------------------------------|--------------------|--------------|
|     | 1x M20 adaptor supplied                        | Clear Lens         | Frosted Lens |
|     | 24000 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc | AMLHL1CG6BUM       | AMLHL1CF6BUM |
|     | 30000 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc | AMLHL2CG6BUM       | AMLHL2CF6BUM |



① Also available in 3000K and 4000K.

② Also available in 3000K.

③ Must order armoured cable glands separately.

## MGZ Mercmaster™ Series LED Luminaire (Zones 1 & 2 – 21 & 22)

2 Catalogue numbers to order: luminaire + mounting hood

| LED                                                                               | Ex eb mb op is IIC – 5000K ①<br>Type V Wide light distribution pattern | Catalogue Number ②                            |              |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------------|--------------|
|                                                                                   | (polycarbonate globe)                                                  | Clear lens                                    | Frosted Lens |
|                                                                                   | 3800 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc                          | MGZL3CPWBU                                    | MGZL3CDWBU   |
|                                                                                   | 5600 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc                          | MGZL5CPWBU                                    | MGZL5CDWBU   |
|  |                                                                        | 7900 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc | MGZL7CPWBU   |
|                                                                                   |                                                                        | MGZL7CDWBU                                    |              |

## MLG Mercmaster Series LED Luminaire (Zones 2 – 21 & 22)

2 Catalogue numbers to order: luminaire + mounting hood

| LED                                                                               | Ex ec op is IIC – 5000K ①<br>Type V light distribution pattern | Catalogue Number ②                            |              |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------|--------------|
|                                                                                   | (polycarbonate globe)                                          | Clear lens                                    | Frosted Lens |
|                                                                                   | 3500 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc                  | MLGL3CP5BU                                    | MLGL3CD5BU   |
|                                                                                   | 5500 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc                  | MLGL5CP5BU                                    | MLGL5CD5BU   |
|  |                                                                | 7500 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc | MLGL7CP5BU   |
|                                                                                   |                                                                | MLGL7CD5BU                                    |              |
|                                                                                   |                                                                | 9500 lm – 120-277 Vac, 50/60 Hz – 170-300 Vdc | MLGH9CP5BU   |
|                                                                                   |                                                                | MLGH9CD5BU                                    |              |

## Mounting Hoods for MGZ and MLG Series LED Luminaires

| LED | Mounting Hood                       | Catalogue Number |
|-----|-------------------------------------|------------------|
|     | Ceiling – 5x entries M20 ②③         | KPCM20           |
|     | Wall – 5x entries M20 ②③            | KPWBM20          |
|     | 25° Stanchion – 1x 1-1/2" NPT entry | KPS150           |
|     | 90° Stanchion – 1x 1-1/2" NPT entry | KPST150          |
|     | Suspension ring for use with KPCM20 | Z00927           |

## FDBAESLED Series – LED Luminaire (Zones 1 & 2 – 21 & 22)

| LED | Ex db IIC – Self-contained emergency LED lighting system<br>(60 minutes)                                   | Catalogue Number ② |
|-----|------------------------------------------------------------------------------------------------------------|--------------------|
|     | 55 lm – 230 Vac, 50/60 Hz – M20 – Escape route lighting                                                    | FDBAESLEDEM        |
|     | 540 lm – 230 Vac, 50/60 Hz – M20 – Space lighting                                                          | FDBAESLEDSLM       |
|     | Label – emergency exit  | BAESLABEL200       |

① Also available in 3000K and 4000K.

② Must order armoured cable glands separately.

③ Supplied with 2 nickel plated brass adaptors and four polyamide plugs.

# Fluorescent Lighting



## FE Series – Fluorescent Luminaire (Zones 1 & 2 – 21 & 22)

|  | Ex de IIC – Standard version<br>(fluorescent lamps not supplied) | Catalogue Number ①                         |                                 |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------|---------------------------------|
|                                                                                   |                                                                  | Unarmoured cable +<br>1x M25 cable gland ② | Armoured cable<br>M20 entries ③ |
|                                                                                   | 2 x 18 W – 110-254 Vac, 50/60 Hz – 110-254 Vdc                   | FEB218BUSN                                 | FEB218BUSA                      |
|                                                                                   | 2 x 36 W – 110-254 Vac, 50/60 Hz – 110-254 Vdc                   | FEB236BUSN                                 | FEB236BUSA                      |
|                                                                                   | 2 x 58 W – 110-254 Vac, 50/60 Hz – 110-254 Vdc                   | FEB258BUSN                                 | FEB258BUSA                      |

## FN Series – Fluorescent Luminaire (Zones 2 – 21 & 22)

|  | Ex nR nA IIC – Standard version<br>(fluorescent lamps not supplied) | Catalogue Number ①                         |                                 |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------|---------------------------------|
|                                                                                   |                                                                     | Unarmoured cable +<br>1x M25 cable gland ② | Armoured cable<br>M20 entries ③ |
|                                                                                   | 2 x 18 W – 220-240 Vac, 50/60 Hz – 220-240 Vdc                      | FNB218BKSNN                                | FNB218BKSAN                     |
|                                                                                   | 2 x 36 W – 220-240 Vac, 50/60 Hz – 220-240 Vdc                      | FNB236BKSNN                                | FNB236BKSAN                     |
|                                                                                   | 2 x 58 W – 220-240 Vac, 50/60 Hz – 220-240 Vdc                      | FNB258BKSNN                                | FNB258BKSAN                     |

## FD Series – Fluorescent Luminaire (Zones 1 & 2 – 21 & 22)

|  | Ex d IIC – 2x M20 entries (fluorescent lamps not supplied) |  | Catalogue Number ③ |
|------------------------------------------------------------------------------------|------------------------------------------------------------|--|--------------------|
|                                                                                    | 2 x 18 W – 110-254 Vac, 50/60 Hz – 110-254 Vdc             |  | FDB218BUM          |
|                                                                                    | 2 x 36 W – 110-254 Vac, 50/60 Hz – 110-254 Vdc             |  | FDB236BUM          |
|                                                                                    | 2 x 58 W – 110-254 Vac, 50/60 Hz – 110-254 Vdc             |  | FDB258BUM          |

① Emergency battery back-up version is available, please see the Appleton Lighting catalogue or visit our website at [www.appletonelec.com](http://www.appletonelec.com).

② Cable glands provided in luminaires with unarmoured hub entries.

③ Must order armoured cable glands separately.

# Plugs and Sockets and Switches

## UPRD Series – Plugs and Sockets (Zones 1 & 2 - 21 & 22) ATEX/IECEX, UKEX

|  | Ex db IIC Gb – 16A<br>Plug/Socket: Aluminium<br>Socket : 2 x cable glands M20, plug supplied<br>Plug: 1 x M25 cable gland supplied | Catalogue Number |             |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------|
|                                                                                   |                                                                                                                                    | Socket           | Plug        |
|                                                                                   | 2P+E – 16A – 20-25 Vac, 50/60 Hz, Purple                                                                                           | UPRD316RP        | UPRD316PP ① |
|                                                                                   | 2P+E – 16A – 100-130 Vac, 50/60 Hz, Yellow                                                                                         | UPRD316RY        | UPRD316PY ① |
|                                                                                   | 2P+E – 16A – 200-250 Vac, 50/60 Hz, Blue                                                                                           | UPRD316RB        | UPRD316PB ① |
|                                                                                   | 3P+E – 16A – 380-415 Vac, 50/60 Hz, Red                                                                                            | UPRD416RR        | UPRD416PR ② |
|                                                                                   | 3P+N+E – 16A – 380-415 Vac, 50/60 Hz, Red                                                                                          | UPRD516RR        | UPRD516PR ③ |

## PRE Series – Plugs and Sockets (Zones 1 & 2 - 21 & 22)

|   | Ex de IIC – 16A<br>Socket : Polycarbonate / polyester<br>Plug: Polyamide 1x M20 cable gland supplied | Catalogue Number            |          |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------------------------|----------|
|                                                                                     |                                                                                                      | Socket                      | Plug     |
|                                                                                     | 2P+E – 16A – 200-250 Vac, 50/60 Hz                                                                   | PRE316RB                    | PRE316PB |
|                                                                                     | 2P+E – 16A – 200-250 Vac, 50/60 Hz                                                                   | PRE316MB<br>(mobile socket) | PRE316PB |
|                                                                                     | 3P+E – 16A – 380-415 Vac, 50/60 Hz                                                                   | PRE416RR                    | PRE416PR |
|                                                                                     | 3P+N+E – 16A – 380-415 Vac, 50/60 Hz                                                                 | PRE516RR                    | PRE516PR |
|  | Ex de IIC – 32A<br>Socket: Polyester – Plug: Polyamide<br>1x M25 cable gland supplied                | Catalogue Number            |          |
|                                                                                     |                                                                                                      | Socket                      | Plug     |
|                                                                                     | 3P+E – 32A – 380-415 Vac, 50/60 Hz                                                                   | PRE432RR                    | PRE432PR |
|                                                                                     | 3P+N+E – 32A – 380-415 Vac, 50/60 Hz                                                                 | PRE532RR                    | PRE532PR |

## SWE Series – Disconnect Switches (Zones 1 & 2 – 21 & 22)

|  | Ex de IIC – 16A – Polyamide 2x M20 cable glands supplied | Catalogue Number |
|-------------------------------------------------------------------------------------|----------------------------------------------------------|------------------|
|                                                                                     | 2 pole, 2x M20 entries                                   | SWE016S201AG     |
|                                                                                     | Changeover switch, 2x M20 entries                        | SWE016C101AG     |
|  | Ex de IIC – 20A – Polyester 2x M20 cable glands supplied | Catalogue Number |
|                                                                                     | 2 pole 20A, 2x M20 entries                               | SWE020S202AG     |
|                                                                                     | 3 pole 20A, 2x M20 entries                               | SWE020S301AG     |
|                                                                                     | 4 Pole 20A, 2x M20 entries                               | SWE020S401AG     |

## SWD Series – Disconnect Switches (Zones 1 & 2 – 21 & 22)

|  | Ex d IIC – 16A – Aluminium        | Catalogue Number ④ |
|-------------------------------------------------------------------------------------|-----------------------------------|--------------------|
|                                                                                     | 2 Pole 20A, 2x M20 entries        | SWD016S200A        |
|                                                                                     | 3 Pole 20A, 2x M20 entries        | SWD016S300A        |
|                                                                                     | 4 Pole 20A, 2x M20 entries        | SWD016S400A        |
|                                                                                     | Changeover switch, 2x M20 entries | SWD016C100A        |

① PE M25 - clamping capacities : 7-11 mm.

② PE M25 - clamping capacities : 11-15.5 mm.

③ PE M25 - clamping capacities: 13-20 mm.

④ Cable glands are not supplied and must be ordered separately.

## JBEL Series – Polycarbonate junction boxes (Zones 1 & 2 – 21 & 22)

|  | Ex eb IIC – 4 terminals 2.5/4 mm <sup>2</sup> – 660 V                         |                                                                                     | Catalogue Number |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------|
|                                                                                   | 4 x M20 entries with cable glands                                             |  | JBEL1N4M20G      |
|                                                                                   | 4 x M20 entries with earth brass continuity – 2x M20 plugs – armoured cable ① |  | JBEL1A4M20       |
|  | Ex eb IIC – 4 terminals 6/10 mm <sup>2</sup> – 690 V                          |                                                                                     | Catalogue Number |
|                                                                                   | 3x M20 entries – 3 cable glands – unarmoured cable                            |  | JBEL2N3M20G      |
|                                                                                   | 4x M20 entries – 4 cable glands– unarmoured cable                             |  | JBEL2N4M20G      |
|                                                                                   | 3x M25 entries – 3 cable glands– unarmoured cable                             |  | JBEL2N3M25G      |
|                                                                                   | 4x M25 entries for unarmoured cable, with 4 cable glands                      |  | JBEL2N4M25G      |
|                                                                                   | 4x M20 entries with earth brass continuity – 2x M20 plugs – armoured cable ①  |  | JBEL2A4M20       |
|                                                                                   | 4x M25 entries with earth brass continuity – 2x M25 plugs – armoured cable ①  |  | JBEL2A4M25       |

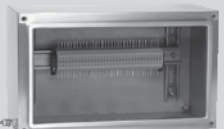
## JBEP Series– Polyester junction boxes (Zones 1 & 2 – 21 & 22)

|    | Ex eb IIC – 6 terminals 4 mm <sup>2</sup> (4 + 2 earth terminals)<br>Configuration : Single phase (1PE + 2L + 2N + 1PE) – Dim. ext. 85x85x61 mm     |                                                                                       | Catalogue Number<br>② |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------|
|                                                                                     | 3x M20 with earth continuity device ①                                                                                                               |    | JBEP080806AE03        |
|                                                                                     | 3x M20 with cable glands for unarmoured cable (diam. 6.5 to 14.5mm)                                                                                 |    | JBEP080806NE03        |
|                                                                                     | 4x M20 with earth continuity device ①                                                                                                               |    | JBEP080806AE05        |
|  | Ex eb IIC – 8 terminals 4 mm <sup>2</sup> (6 + 2 earth terminals)<br>Configuration: 3 Phase (1PE + 2L1 + 2L2 + 2L3 + 1PE) – Dim. ext. 120x120x91 mm |                                                                                       | Catalogue Number<br>② |
|                                                                                     | 4x M20 with earth continuity device ①                                                                                                               |  | JBEP121209AE25        |
|                                                                                     | 4x M25 with cable glands for unarmoured cable (diam 8 to 17mm)                                                                                      |  | JBEP121209NE26        |
|                                                                                     | 4x M20 with earth continuity device ①                                                                                                               |  | JBEP121209AE27        |
|                                                                                     | 4x M25 with cable glands for unarmoured cable (diam 8 to 17mm)                                                                                      |  | JBEP121209NE28        |

## JBDR Series – Aluminum junction boxes (Zones 1 & 2 – 21 & 22)

|  | Ex d IIC                                                                                        | Catalogue Number                                                                            |                                                                                              |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
|                                                                                     |                                                                                                 | Unarmoured cable +<br>1x M25 cable gland                                                    | Armoured cable<br>M20 entries ①                                                              |
|                                                                                     | 2x entries                                                                                      |  JBDR25G |  JBDR20 |
|                                                                                     | 3x entries                                                                                      |  JBDR35G |  JBDR30 |
|  | 4x entries                                                                                      |  JBDR45G |  JBDR40 |
|                                                                                     | Pillar terminal block<br>(4 terminals capacity 4 x 4 mm <sup>2</sup> or 2 x 6 mm <sup>2</sup> ) | TBP44                                                                                       | TBP44                                                                                        |

## JBES Series – Pre-drilled 316L stainless steel junction boxes (Zones 1 & 2 – 21 & 22)

|  | Ex e IIC – equipped with 2.5mm <sup>2</sup> terminals,<br>continuity shields and M8 external earth crossing terminal | Catalogue Number<br>① ② |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------|
|                                                                                     | JBes36 - 14 terminals (7 pairs) + 7 continuity shields<br>220 x 260 x 150 mm - 1x M25 + 7x M20 on the bottom         | JBES2226150F5           |
|                                                                                     | JBes36 - 24 terminals (12 pairs) + 12 continuity shields<br>220 x 260 x 150 mm - 1x M32 + 12x M20 on the bottom      | JBES2226150F6           |
|                                                                                     | JBes46 - 38 terminals (19 pairs) + 19 continuity shields<br>220 x 370 x 200 mm - 1x M32 + 19x M20 on the bottom      | JBES2237200F7           |
|                                                                                     | JBes46 - 54 terminals (27 pairs) + 27 continuity shields<br>220 x 370 x 200 mm - 1x M40 + 27x M20 on the bottom      | JBES2237200F8           |

① Cable glands are not supplied and must be ordered separately.

② For additional configurations, please refer to the Appleton catalogue, [www.appletonelec.com](http://www.appletonelec.com).

## Unicode™ 2 Series – Polyamide control stations (Zones 1 & 2 – 21 & 22)

|                                                                                     | Ex de IIC                                                                                                                                    | Catalogue Number ①② |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
|    | Momentary push button with green "I" or red "O" insert (NO+NC) – 2x M20 entries                                                              | U41W2A3             |
|    | Emergency stop mushroom head push-pull button (NO+NC) – 2x M20 entries                                                                       | U41W2D3             |
|    | Emergency stop mushroom head with key release (NO+NC) – 2x M20 entries                                                                       | U41W2C3             |
|    | Key push button, key removable in both positions (NO+NC) – 2x M20 entries                                                                    | U41W2E3             |
|    | 2 fixed position selector switch (NO+NC) – 2x M20 entries                                                                                    | U41W2H3             |
|                                                                                     | 3 fixed position selector switch "I-O-II" (2 NO) – 2x M20 entries                                                                            | U41W2J1             |
|    | Green pilot light 12 to 254 Vac, 12 to 60 VDC – 2x M20 entries                                                                               | U41W2PR             |
|    | Red pilot light 12 to 254 Vac, 12 to 60 VDC – 2x M20 entries                                                                                 | U41W2PG             |
|    | Green push button "I" (NO+NC) and red push button "O" (NO+NC) – 2x M20 entries                                                               | U42W2A3A3           |
|  | Green push button "I" (NO+NC) and red emergency stop mushroom head (NO+NC) – 2x M20 entries                                                  | U42W2A3D3           |
|  | Green pilot light and green push button "I" (NO+NC) – 2x M20 entries                                                                         | U42W2PGA3           |
|  | Red pilot light and red push button "O" (NO+NC) – 2x M20 entries                                                                             | U42W2PRA3           |
|  | Ammeter 48x48 mm, 1A current transformer, with 0-1-3 scale – 2x M20 entries                                                                  | U42W2VA13           |
|  | Green push button "I" (NO+NC), red push button "O" (NO+NC) and red emergency stop mushroom head (NO+NC) – 2x M20 entries                     | U43W2A3A3D3         |
|  | Green indicator light and green push button "I" (NO+NC) and red push button "O" (NO+NC) – 2x M20 entries                                     | U43W2PGA3A3         |
|  | Red indicator light and green push button "I" (NO+NC) and red push button "O" (NO+NC) – 2x M20 entries                                       | U43W2PRA3A3         |
|  | Ammeter 48x48 mm, 1A current transformer, with 0-1-3 scale, green push button "I" (NO) and red push button "O" (NC) – 2x M20 entries         | U43W2VA13A5A9       |
|  | Ammeter 48x48 mm, 1A current transformer, with 0-1-3 scale and 3 position selector switch with spring return "II-O" (NO+NC) – 2x M20 entries | U43W2VA13M3         |

Note: Unicode 2 Series exists also in inox 316L version. Please refer to the Appleton catalogue, [www.appletonelec.com](http://www.appletonelec.com)

① For additional configurations, please refer to the Appleton catalogue, [www.appletonelec.com](http://www.appletonelec.com).

② Two entries diameter 20 mm, blanking plug, cable gland for unarmoured cables and two locknuts.

## Unicode 2 Series – Polyester control stations (Zones 1 & 2 – 21 & 22)

|                                                                                     | Ex de IIC                                                                                                                                    | Catalogue Number ① ② |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
|    | Momentary push button with green "I" or red "O" insert (NO+NC) – 2x M20 entries                                                              | U21W2A3              |
|                                                                                     | Green momentary push button "I" (NO) – 2x M20 entries                                                                                        | U21W2A5              |
|    | Green push button "I" (NO+NC) and red push button "O" (NO+NC) – 2x M20 entries                                                               | U21W2A3A3            |
|    | Emergency stop mushroom head push-pull button (NO+NC) – 2x M20 entries                                                                       | U21W2D3              |
|    | Emergency stop mushroom head with key release (NC) – 2x M20 entries                                                                          | U21W2C3              |
|    | Key push button, key removable in both positions (NO+NC) – 2x M20 entries                                                                    | U21W2E3              |
|    | Green pilot light and red pilot light – 2x M20 entries                                                                                       | U21W2PGPR            |
|   | 2 fixed position selector switch (NO+NC) – 2x M20 entries                                                                                    | U21W2H3              |
|                                                                                     | 3 fixed position selector switch "I-0-II" (2 NO) – 2x M20 entries                                                                            | U21W2J1              |
|  | Green push button "I" (NO) and red push button "O" (NC) – 2x M20 entries                                                                     | U22W2A5A9            |
|                                                                                     | Green push button "I" (NO+NC) and red push button "O" (NO+NC) – 2x M20 entries                                                               | U22W2A3A3            |
|  | Green push button "I" (NO) and red emergency stop mushroom head (NC) – 2x M20 entries                                                        | U22W2A5D9            |
|                                                                                     | Green push button "I" (NO+NC) and red emergency stop mushroom head (NO+NC) – 2x M20 entries                                                  | U22W2A3D3            |
|  | Green pilot light and green push button "I" (NO+NC) – 2x M20 entries                                                                         | U22W2PGA3            |
|                                                                                     | Red pilot light and red push button "O" (NO+NC) – 2x M20 entries                                                                             | U22W2PRA3            |
|  | Green indicator light, red indicator light "I" (NO) green push button and red push button "O" (NC) – 2x M20 entries                          | U22W2PGPRA5A9        |
|  | Ammeter 48x48 mm, 1A current transformer, with 0-1-3 scale and 3 position selector switch with spring return "II-0" (NO+NC) – 2x M20 entries | U22W2VA13M3          |
|  | Green push button "I" (NO), red push button "O" (NC) and red emergency stop mushroom head (NC) – 2x M20 entries                              | U23W2A5A9D3          |
|  | Green indicator light and green push button "I" (NO+NC) and red push button "O" (NO+NC) – 2x M20 entries                                     | U23W2PGA3A3          |
|                                                                                     | Red indicator light and red push button "I" (NO+NC) and green push button "O" (NO+NC) – 2x M20 entries                                       | U23W2PRA3A3          |

Note: Unicode 2 Series exists also in inox 316L version. Please refer to the Appleton catalogue, [www.appletonelec.com](http://www.appletonelec.com)

① For additional configurations, please refer to the Appleton catalogue, [www.appletonelec.com](http://www.appletonelec.com).

② Two entries M20 with threaded earth brass plate, blanking plug, cable gland for unarmoured cables.

# Cable glands

## TSPe Series – Polyamide cable glands (Zones 1 & 2 – 21 & 22)

|  | Ex eb cable gland with seal – ATEX / IECEx | Catalogue Number |               |
|-----------------------------------------------------------------------------------|--------------------------------------------|------------------|---------------|
|                                                                                   |                                            | Black RAL 9011   | Blue RAL 5015 |
|                                                                                   | M16                                        | 16DTSPE1TAL      | 16DTSPE1TA4L  |
|                                                                                   | M20                                        | 20DTSPE1TAL      | 20DTSPE1TA4L  |
|                                                                                   | M25                                        | 25DTSPE1TAL      | 25DTSPE1TA4L  |
|                                                                                   | M32                                        | 32DTSPE1TAL      | 32DTSPE1TA4L  |
|                                                                                   | M40                                        | 40DTSPE1TAL      | 40DTSPE1TA4L  |

## A2F Series – Cable glands for unarmoured cable (Zones 1 & 2 – 21 & 22)

|  | Cable gland (nickel-plated brass) – ATEX / IECEx | Catalogue Number |
|-----------------------------------------------------------------------------------|--------------------------------------------------|------------------|
|                                                                                   | M20S                                             | 20SA2F5          |
|                                                                                   | M20                                              | 20A2F5           |
|                                                                                   | M25                                              | 25A2F5           |
|                                                                                   | M32                                              | 32A2F5           |
|                                                                                   | M40                                              | 40A2F5           |

## E1FX Series – Cable glands for armoured cable (braid, tape) (Zones 1 & 2 – 21 & 22)

|  | Cable gland (nickel-plated brass) – ATEX / IECEx | Catalogue Number |
|-------------------------------------------------------------------------------------|--------------------------------------------------|------------------|
|                                                                                     | M20S                                             | 20SE1FX5         |
|                                                                                     | M20                                              | 20E1FX5          |
|                                                                                     | M25                                              | 25E1FX5          |
|                                                                                     | M32                                              | 32E1FX5          |
|                                                                                     | M40                                              | 40E1FX5          |

## T3 Series – Cable glands for armoured cable (wire, braid, tape) (Zones 1 & 2 – 21 & 22)

|  | Cable gland (nickel-plated brass) – ATEX / IECEx | Catalogue Number |
|-------------------------------------------------------------------------------------|--------------------------------------------------|------------------|
|                                                                                     | M20S                                             | 20ST35           |
|                                                                                     | M20                                              | 20T35            |
|                                                                                     | M25                                              | 25T35            |
|                                                                                     | M32                                              | 32T35            |
|                                                                                     | M40                                              | 40T35            |

# Cable gland accessories

## Nickel-plated brass locknut

|  | Locknut | Catalogue Number |
|-----------------------------------------------------------------------------------|---------|------------------|
|                                                                                   | M20     | 095701           |
|                                                                                   | M25     | 095702           |
|                                                                                   | M32     | 095703           |
|                                                                                   | M40     | 095708           |

## 737 Series – Nickel plated brass adaptors (Zones 1 & 2 – 21 & 22)

|  | Adaptor – ATEX / IECEx |        | Catalogue Number |
|-----------------------------------------------------------------------------------|------------------------|--------|------------------|
|                                                                                   | Male                   | Female |                  |
|                                                                                   | M25                    | M20    | 737DM3M25        |
|                                                                                   | M32                    | M20    | 737DM4M25        |
|                                                                                   | M32                    | M25    | 737DM4M35        |
|                                                                                   | M40                    | M25    | 737DM5M35        |
|                                                                                   | M40                    | M32    | 737DM5M45        |

## BVE Series – Polyamide blanking plugs with seal (Zones 1 & 2 – 21 & 22)

|  | Blanking plug Ex e with seal – ATEX / IECEx | Catalogue Number |
|------------------------------------------------------------------------------------|---------------------------------------------|------------------|
|                                                                                    | M20                                         | 095714           |
|                                                                                    | M25                                         | 095715           |
|                                                                                    | M32                                         | 095486           |
|                                                                                    | M40                                         | 095487           |

## 757 Series – Nickel plated brass blanking plugs (Zones 1 & 2 – 21 & 22)

|  | Blanking plug – ATEX / IECEx | Catalogue Number |
|-------------------------------------------------------------------------------------|------------------------------|------------------|
|                                                                                     | M20                          | 757DM25          |
|                                                                                     | M25                          | 757DM35          |
|                                                                                     | M32                          | 757DM45          |
|                                                                                     | M40                          | 757DM55          |

## Nylon (white) entry thread seals

|  | Entry thread seals | Catalogue Number |
|-------------------------------------------------------------------------------------|--------------------|------------------|
|                                                                                     | M20                | 20ETS2           |
|                                                                                     | M25                | 25ETS2           |
|                                                                                     | M32                | 32ETS2           |
|                                                                                     | M40                | 40ETS2           |

# Cable gland selection guide



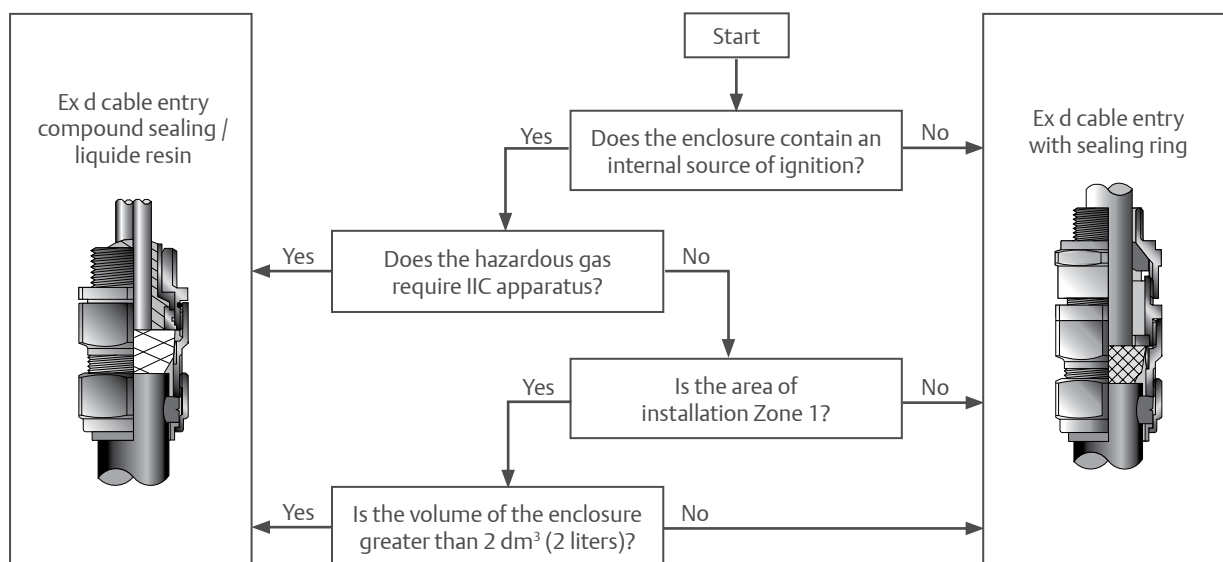
## Selection chart – Certifications

| Mode of protection | Series      | Material                                     | Unarmoured cables | Armoured cables |       |      | Type of seal   |
|--------------------|-------------|----------------------------------------------|-------------------|-----------------|-------|------|----------------|
|                    |             |                                              |                   | Wire            | Braid | Tape |                |
| "e"                | TSPe        | Polyamide                                    | Yes               |                 |       |      | Neoprene seal  |
| "d" and "e"        | A2F         | Brass, fully nickel plated / stainless steel | Yes               |                 |       |      | Elastomer seal |
|                    | E1FX        | Brass, fully nickel plated                   |                   |                 | Yes   | Yes  |                |
|                    | E1FW        | Brass, fully nickel plated                   |                   | Yes             |       |      |                |
|                    | E1FU        | Brass, fully nickel plated                   |                   | Yes             | Yes   | Yes  |                |
|                    | T3          | Brass, fully nickel plated                   |                   | Yes             | Yes   | Yes  |                |
|                    | TE1FU       | Stainless steel                              |                   | Yes             | Yes   | Yes  |                |
| "d" and "e"        | PX (PXSS2K) | Brass, fully nickel plated                   | Yes               |                 |       |      | Compound seal  |
|                    | PX2K        | Brass, fully nickel plated                   |                   | Yes             | Yes   | Yes  |                |
| "d" and "e"        | PX-REX      | Brass, fully nickel plated                   | Yes               |                 |       |      | Liquid resin   |
|                    | PX2K-REX    | Brass, fully nickel plated                   |                   | Yes             | Yes   | Yes  |                |

## Selection Guide

### Selection of cable entry for Ex d flameproof enclosure.

*Note: Cable must be substantially compact and circular with an extruded bedding, and if any fillers are used they are Non-Hygroscopic.*



## Customized electrical equipment manufactured in France

Emerson's manufacturing facility in Amiens, France is ATEX (QAN), IECEx (QAR) and ISO 9001: 2015 certified. The use of the latest technology machining centers results in a high quality, custom fabricated products for improved reliability and service life.

Utilising the latest innovations in automation, the site is equipped with:

- the latest generation computer numerical control (CNC) machine for high precision drilling, suitable for large enclosures
- two painting processes (liquid and epoxy powder)
- static overpressure test station, necessary for Ex d explosionproof enclosures
- 80 machining tools for custom fabrication
- detailed quality control
- knowledgeable, trained and certified employees

Designed for safety and performance and built to customer specifications, Emerson can provide 3 metres long, 5 tons custom switchracks comprised of electrical distribution panelboards, fully wired cabinets, all installed on a steel frame.

## Made to Order Products

(Zones 1 & 2 – 21 & 22)



10 kV Ex e Stainless Steel Junction Box



Ex ia Instrumentation Junction Box



Ex d Panelboard with 8 Branch Circuit Breakers Coupled with Ex e Polyester Junction Box



Ex d Control Panel



Distribution Panelboard Ex de - PlexPower™ in Glass Reinforced Polyester IIB+H<sub>2</sub> or IIC



Distribution Panelboard Ex de - PlexPower in Stainless Steel IIB+H<sub>2</sub> or IIC



Ex de Switchrack

## Polyester junction boxes

We have improved our offering of polyester instrumentation and junction boxes, the JBEP Series:

- equipment of our standardized boxes
- generic quotation approval plans
- order quantity limited to 25 pieces maximum, delivery in 12 working days to your site in France / Benelux and 15 working days to your site in other European countries

Please consult the Sales Representative in your region for more information about the JBEP Series:

| JBEP Catalogue Number | Size        |
|-----------------------|-------------|
| JBEP121209S0          | 120x120x91  |
| JBEP1717090           | 170x170x91  |
| JBEP2021100           | 200x215x95  |
| JBEP2021150           | 200x215x145 |
| JBEP2532150           | 250x320x150 |
| JBEP3250150           | 320x500x150 |
| JBEP327150            | 320x750x150 |
| JBEP5032150           | 500x320x150 |

Complete catalogue pages of JBEP Series available at [www.appletonelec.com](http://www.appletonelec.com).

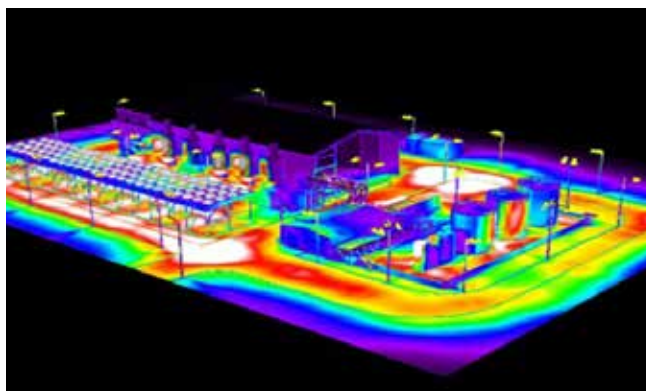


## Free lighting design services

In order to choose the best LED solutions, we suggest the using DIALux™ software to design, calculate and visualize your applications lighting design. The Appleton DIALux Plug-In can be used with the DIALux software platform or for exporting IES files for use in other programs. This plug-in is available in the Lighting Resources section at MasteringLED.com.

DIALux allows you to see what LED lighting is most suited to your needs and ATEX constraints, ranging from a simple room to a production unit including outdoor lighting.

It will highlight the advantages of LEDs in terms of reducing the number of luminaires (in the event of modernization of your installations), increasing brightness and reducing energy consumption on site.



For assistance, please send your requests to : [atxledservices@emerson.com](mailto:atxledservices@emerson.com)

## ATEX Training

The ATEX Standards are constantly evolving, we follow these changes closely in order to provide you with answers to your questions.

We offer tailor-made ISM-ATEX training for anyone who has to work in potentially explosive atmospheres, whether or not working on electrical ATEX equipment.

Depending on your needs, three training levels (levels 0, 1 and 2) are available. This training can be conducted on our premises or at your location or via a webinar session.

Please contact our authorized trainer  
ISM-ATEX level 3-Electric:  
[michel.havet@emerson.com](mailto:michel.havet@emerson.com)



**CONCEPTION, REALISATION ET MAINTENANCE EN  
ATMOSPHERES EXPLOSIBLES**  
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Validity date : 2021/09/20

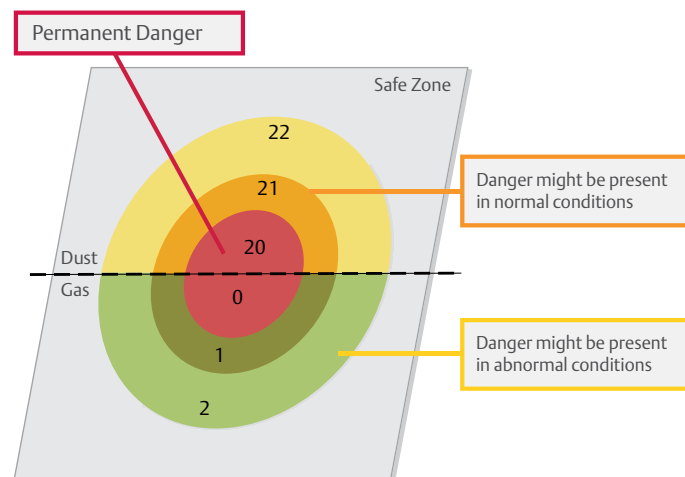



## Examples of gas and vapor environments

| ZONE 0                                                                                                                                                                                                                                                                          | ZONE 1                                                                                                                                                                                                                                                                    | ZONE 2                                                                                                                                                                                                                                            | SAFE ZONE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <p>④</p> <p>①</p> <p>②</p> <p>③</p> <p>①</p>                                                                                                                                                                                                                                    | <p>⑤</p> <p>⑥</p> <p>①</p> <p>②</p> <p>③</p> <p>④</p> <p>⑤</p> <p>⑦</p>                                                                                                                                                                                                   | <p>⑤</p> <p>②</p> <p>③</p> <p>④</p> <p>⑤</p> <p>Control Console</p>                                                                                                                                                                               |           |
| <p><b>Example 1   Conditions :</b></p> <ul style="list-style-type: none"><li>① Manual ventilation</li><li>② Zone 0</li><li>③ Zone 1</li><li>④ Safe area</li><li>• Open air mixing tank</li><li>• No mechanical ventilation</li><li>• Products stored in the work area</li></ul> | <p><b>Example 2   Conditions :</b></p> <ul style="list-style-type: none"><li>① Tank with extractor hood</li><li>② Zone 0</li><li>③ Zone 1</li><li>④ Zone 2</li><li>⑤ Safe area</li><li>⑥ Mechanical ventilation</li><li>⑦ Products stored outside the work area</li></ul> | <p><b>Example 3   Conditions :</b></p> <ul style="list-style-type: none"><li>① Closed Tank</li><li>② Mechanical ventilation</li><li>③ Zone 0</li><li>④ Zone 2</li><li>⑤ Safe area</li><li>• Control of operations outside the work area</li></ul> |           |

## Zone Classification

Zone classification is based on the presence frequency of the hazardous atmosphere:



### Zone 0 (gas) / 20 (dust)

A place in which an explosive atmosphere either [consisting of a mixture with air of dangerous substances in the form of gas, vapor or mist] or [in the form of a cloud of dust in air] is present continuously or for long periods or frequently.

### Zone 1 (gas) / 21 (dust)

A place in which an explosive atmosphere either [consisting of a mixture with air of dangerous substances in the form of gas, vapor or mist] or [in the form of a cloud of dust in air] is likely to occur in normal operation occasionally.

### Zone 2 (gas) / 22 (dust)

A place in which an explosive atmosphere either [consisting of a mixture with air of dangerous substances in the form of gas, vapor or mist] or [in the form of a cloud of dust in air] is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

# General information on ATEX Zones

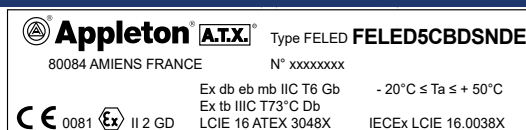


## Selection table – Certifications

| Gas and dust groups |                                                      | Temperature Class |                     |
|---------------------|------------------------------------------------------|-------------------|---------------------|
| Gas group           | Examples                                             | Marking           | Surface Temperature |
| IIA                 | Methane, Ethane, Propane, Butane...                  | T1                | 450 °C              |
| IIB                 | Ethylene, Carbon Monoxide, H2S, Ethanol...           | T2                | 300 °C              |
| IIC                 | Acetylene, Carbon Disulfide, Hydrogen, Ethyl nitrate | T3                | 200 °C              |
| Dust group          | Examples                                             | T4                | 135 °C              |
| IIIA                | Combustible flyings (ex: fibers)                     | T5                | 100 °C              |
| IIIB                | Non-conductive dust                                  | T6                | 85 °C               |
| IIIC                | Conductive dust                                      |                   |                     |

| Modes of protection gas (examples) |          |             |                       | Modes of protection dust (examples) |          |             |                         |
|------------------------------------|----------|-------------|-----------------------|-------------------------------------|----------|-------------|-------------------------|
| Cat / EPL                          | Symbol   | Normal      | Protection Mode       | Cat / EPL                           | Symbol   | Normal      | Protection Mode         |
| 1G / Ga                            | ia       | EN 60079-11 | Intrinsic safety      | 1D / Da                             | ia       | EN 60079-11 | Intrinsic safety        |
|                                    | ma       | EN 60079-18 | Encapsulation         |                                     | ma       | EN 60079-18 | Encapsulation           |
| 2G / Gb                            | db       | EN 60079-1  | Flameproof enclosure  | 2D / Db                             | ta       | EN 60079-31 | Flameproof enclosure    |
|                                    | eb       | EN 60079-7  | Increased safety      |                                     | ib       | EN 60079-11 | Intrinsic safety        |
|                                    | ib       | EN 60079-11 | Intrinsic safety      |                                     | mb       | EN 60079-18 | Encapsulation           |
|                                    | mb       | EN 60079-18 | Encapsulation         |                                     | tb       | EN 60079-31 | Protection by enclosure |
|                                    | pxb, pyb | EN 60079-2  | Pressurized enclosure |                                     | pxb, pyb | EN 60079-2  | Pressurized enclosure   |
| 3G / Gc                            | ec       | EN 60079-7  | Increased safety      | 3D / Dc                             | ic       | EN 60079-11 | Intrinsic safety        |
|                                    | nR       | EN 60079-15 | Restricted breathing  |                                     | mc       | EN 60079-18 | Encapsulation           |
|                                    | mc       | EN 60079-18 | Encapsulation         |                                     | tc       | EN 60079-31 | Protection by enclosure |
|                                    | pzc      | EN 60079-2  | Pressurized enclosure |                                     | pzc      | EN 60079-2  | Pressurized enclosure   |

## General information on ATEX Zones



### According ATEX Directive:

|            |                                                                                     |                                          |                                         |                                            |                                                      |
|------------|-------------------------------------------------------------------------------------|------------------------------------------|-----------------------------------------|--------------------------------------------|------------------------------------------------------|
| CE         | 0081                                                                                | Ex                                       | II                                      | 2                                          | GD                                                   |
| CE marking | Identification number of the Notified Body involved in the Production Control Phase | Specific Marking of Explosion Protection | Equipment group (II = surface industry) | Equipment category (2 = for zones 1 or 21) | Type of explosive atmosphere:<br>G = Gas<br>D = Dust |

### According EN 60079-0 standard (Explosive Atmospheres-Equipment-General Requirements) and EN 60079-1/2... standards (Modes of protection standards):

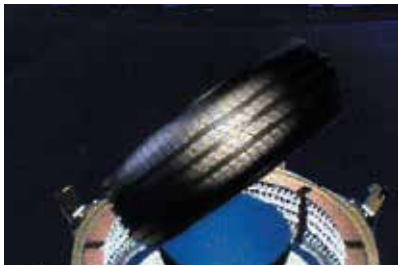
#### a) Gas :

|                                                                                                                                                       |                          |                 |                   |                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------|-------------------|-------------------------------------------------------------------------------------|
| Ex                                                                                                                                                    | db eb mb                 | IIC             | T6                | Gb                                                                                  |
| This symbol indicates that the electrical equipment corresponds to one or more of the types of protection which are the subject of specific standards | Modes of protection used | Gas subdivision | Temperature class | Equipment Protection Level (EPL)<br>Ga for zone 0<br>Gb for zone 1<br>Gc for zone 2 |

#### b) Dust :

|                                                                                                                                                       |                         |                  |                     |                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------|---------------------|----------------------------------------------------------------------------------------|
| Ex                                                                                                                                                    | tb                      | IIIC             | T73°C               | Db                                                                                     |
| This symbol indicates that the electrical equipment corresponds to one or more of the types of protection which are the subject of specific standards | Mode of protection used | Dust subdivision | Surface Temperature | Equipment Protection Level (EPL)<br>Da for zone 20<br>Db for zone 21<br>Dc for zone 22 |

## Explosive dust (D): Zones 20, 21 & 22 <sup>①</sup>

| Industries                                                                             | Type of dust                                                                                     | Applications                                                                             |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| <b>Food dust</b>                                                                       |                                                                                                  |                                                                                          |
|       |                |       |
| Silos, flour milling, baking, agri-foods, etc.                                         | Cereals, starch, sugar, flour, milk, chocolate, colorings, etc.                                  | Storage, transportation (mechanical, on road vehicles), milling, crushing, filling, etc. |
| <b>Plant dust</b>                                                                      |                                                                                                  |                                                                                          |
|      |               |      |
| Wood, manufacture of furniture and corks.<br>Wood silos, waste sorting, textiles, etc. | Wood, bark, cork, cotton, paper, etc.                                                            | Storage, transportation, processing                                                      |
| <b>Metal dust</b>                                                                      |                                                                                                  |                                                                                          |
|     |              |     |
| Surface treatment, shot blasting, sandblasting, etc.                                   | Aluminum, magnesium, ferro alloys, etc.                                                          | Processing                                                                               |
| <b>Dust from industrial processing</b>                                                 |                                                                                                  |                                                                                          |
|     |              |     |
| Processing of plastics, tires, paints, etc.                                            | Plastics, powder coatings, fertilizers, rubber, elastomers, resins and synthetic adhesives, etc. | Storage, transportation, processing                                                      |

<sup>①</sup> Non-exhaustive list

## Risks linked to gases (G): Zones 0, 1 & 2<sup>①</sup>

| Industries                                                                                    | Type of hazard / Presence of gas                                                     | Applications                                                                          |
|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Solvent vapors (Type IIB)</b>                                                              |                                                                                      |                                                                                       |
|              |    |    |
| Automotive, mechanical, boiler construction, plastic parts or parts with a plastic appearance | Liquid paint, varnish, bonding, stripping, etc.                                      | Paint booths, processing.                                                             |
| <b>Propellant gas</b>                                                                         |                                                                                      |                                                                                       |
|              |    |    |
| Processing of aerosol dispensers                                                              | Lubricants, perfumes, paint, surface treatment, etc.                                 | Filling processes                                                                     |
| <b>Emanation and gas leakage</b>                                                              |                                                                                      |                                                                                       |
|            |  |  |
| Automotive outsourcing, earthenware, glass, high-power heating (ovens), etc.                  | Heating processes, hydrogen furnaces                                                 | Oven proximity, control unit, processing, etc                                         |
| <b>Handling and storage of dangerous products</b>                                             |                                                                                      |                                                                                       |
|            |  |  |
| All-industry handling with forklift (warehouse storage)                                       | Butane, propane, etc.                                                                | Battery charging area for trucks, storage areas, etc.                                 |
| <b>Fossil fuels</b>                                                                           |                                                                                      |                                                                                       |
|            |  |  |
| Petrochemicals, oil exploration, production, refining and storage                             | Oil, petrol, methane, etc.                                                           | Processing, storage, transportation, etc.                                             |

<sup>①</sup> Non-exhaustive list

# Electrical equipment for potentially explosive atmospheres, delivered when you need it.



Appleton is the cornerstone brand of Emerson's Electrical and Lighting business; trusted worldwide to make electrical installations safer, more productive and more reliable.

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