

## Single relay - REL-MR-110DC/21HC/EX - 2908823

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Plug-in miniature power relay, RT III sealed with power contacts, 1 changeover contact, input voltage: 110 V DC, in connection with the corresponding PLC base approved in accordance with ATEX/IECEx (zone 2) and Ex zone class I, div. 2.

### Your advantages

- ✓ Switching current of up to 16 A
- ✓ RT III-proof (wash-proof)



### Key Commercial Data

|                        |                                                                                                         |
|------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit           | 10 pc                                                                                                   |
| Minimum order quantity | 10 pc                                                                                                   |
| GTIN                   | <br>4 055626 345178 |
| GTIN                   | 4055626345178                                                                                           |

### Technical data

#### Dimensions

|        |         |
|--------|---------|
| Width  | 12.7 mm |
| Height | 29 mm   |
| Depth  | 15.7 mm |

#### Ambient conditions

|                                         |                  |
|-----------------------------------------|------------------|
| Ambient temperature (operation)         | -40 °C ... 85 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Degree of protection                    | RT III           |

#### Coil side

|                                |          |
|--------------------------------|----------|
| Nominal input voltage $U_N$    | 110 V DC |
| Typical input current at $U_N$ | 4.1 mA   |
| Typical response time          | 7 ms     |
| Typical release time           | 3 ms     |

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## Technical data

### Coil side

|                                         |                                    |
|-----------------------------------------|------------------------------------|
| Coil resistance                         | 26600 $\Omega \pm 15\%$ (at 20 °C) |
| Power dissipation for nominal condition | 0.45 W                             |

### Contact side

|                                       |                        |
|---------------------------------------|------------------------|
| Contact type                          | 1 PDT                  |
| Type of switch contact                | Single contact         |
| Contact material                      | AgNi                   |
| Maximum switching voltage             | 250 V AC/DC            |
| Minimum switching voltage             | 12 V (at 10 mA)        |
| Min. switching current                | 10 mA (at 12 V)        |
| Maximum inrush current                | 50 A (20 ms)           |
| Limiting continuous current           | 16 A                   |
| Interrupting rating (ohmic load) max. | 384 W (at 24 V DC)     |
|                                       | 58 W (at 48 V DC)      |
|                                       | 48 W (at 60 V DC)      |
|                                       | 50 W (at 110 V DC)     |
|                                       | 80 W (at 220 V DC)     |
|                                       | 4000 VA (for 250 V AC) |
| Switching capacity                    | 2 A (at 24 V, DC13)    |
|                                       | 0.2 A (at 110 V, DC13) |
|                                       | 0.2 A (at 250 V, DC13) |
|                                       | 6 A (at 24 V, AC15)    |
|                                       | 6 A (at 120 V, AC15)   |
|                                       | 6 A (at 250 V, AC15)   |

### General

|                                          |                                                        |
|------------------------------------------|--------------------------------------------------------|
| Test voltage relay winding/relay contact | 5 kV AC (50 Hz, 1 min.)                                |
| Operating mode                           | 100% operating factor                                  |
| Mechanical service life                  | 3x 10 <sup>7</sup> cycles                              |
| Service life, electrical                 | see diagram                                            |
| Mounting position                        | any                                                    |
| Assembly instructions                    | Can be aligned without spacing (> 70 °C $\geq$ 2.5 mm) |

### Connection data

|                   |                   |
|-------------------|-------------------|
| Connection method | Solder connection |
|-------------------|-------------------|

### Standards and Regulations

|                       |            |
|-----------------------|------------|
| Standards/regulations | IEC 60664  |
|                       | EN 50178   |
|                       | EN 61810-1 |
| Pollution degree      | 3          |
| Overvoltage category  | III        |

## Single relay - REL-MR-110DC/21HC/EX - 2908823

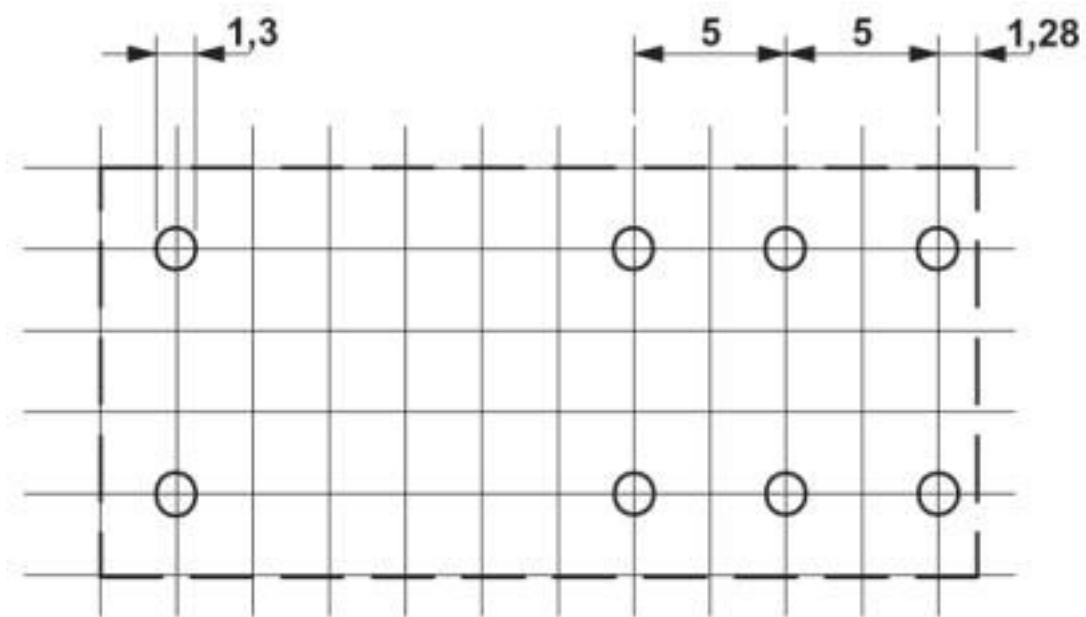
### Technical data

#### Environmental Product Compliance

|            |                                                         |
|------------|---------------------------------------------------------|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

### Drawings

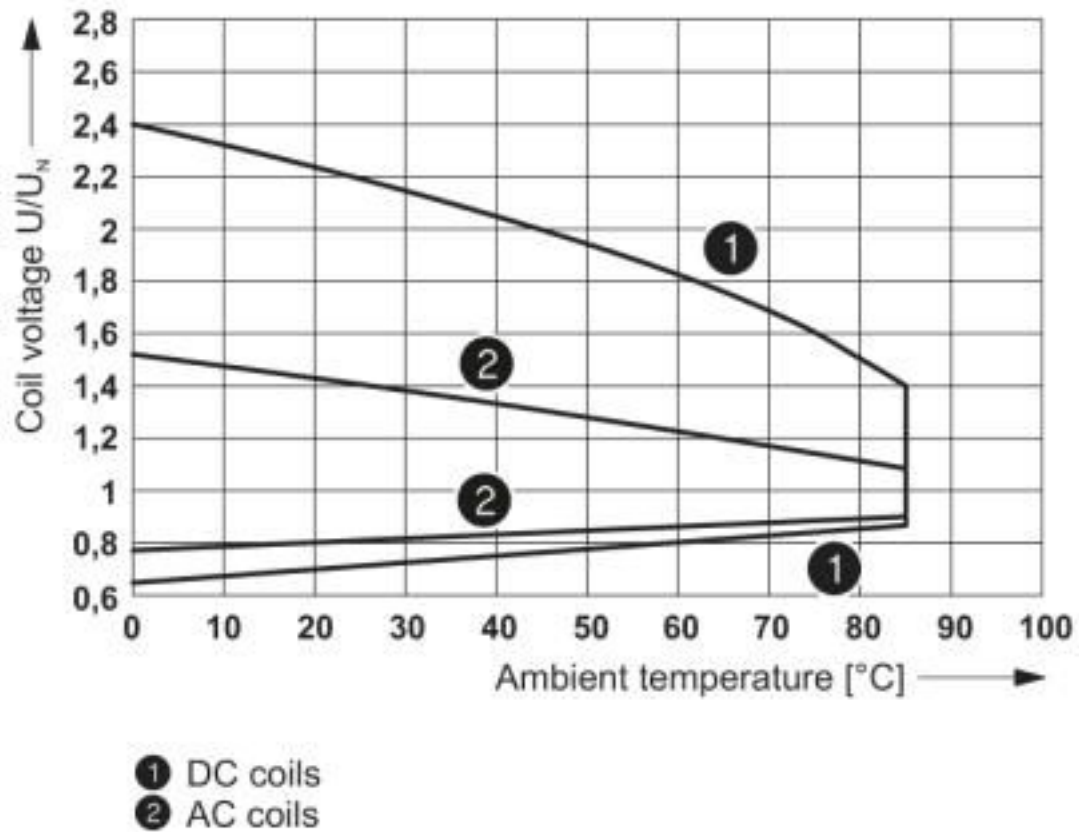
Drilling diagram



a = pitch division 2.5 mm

## Single relay - REL-MR-110DC/21HC/EX - 2908823

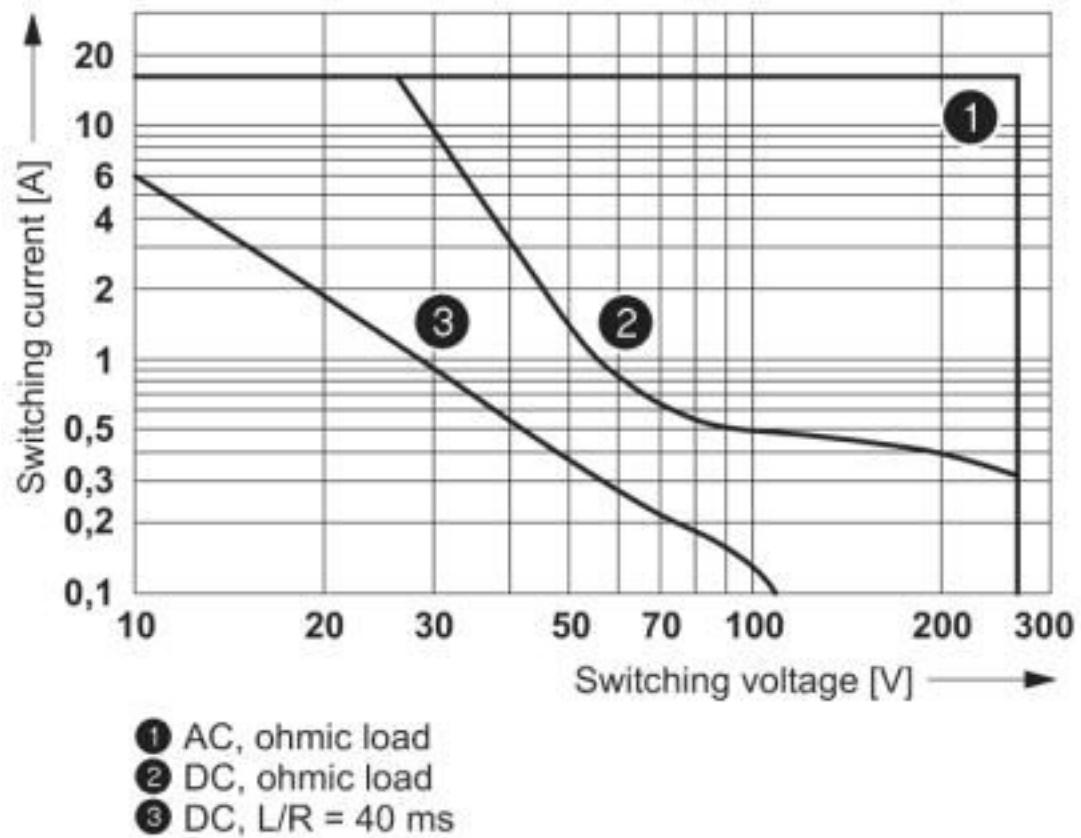
Diagram



Operating voltage range

## Single relay - REL-MR-110DC/21HC/EX - 2908823

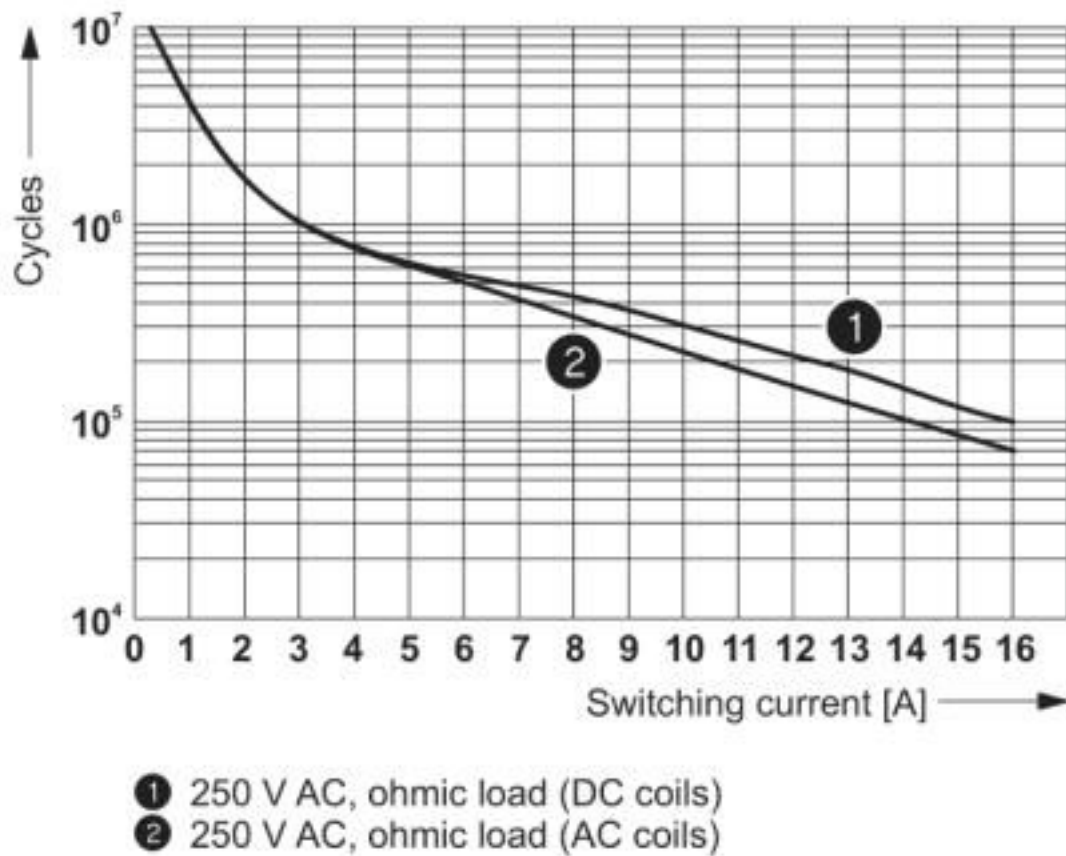
Diagram



Interrupting rating

## Single relay - REL-MR-110DC/21HC/EX - 2908823

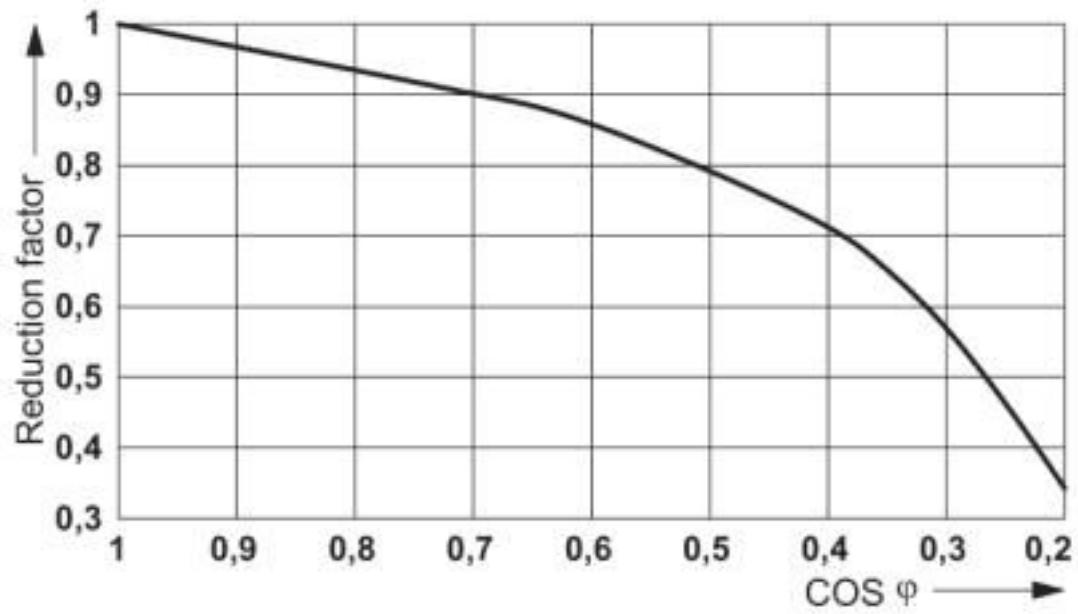
Diagram



Electrical service life

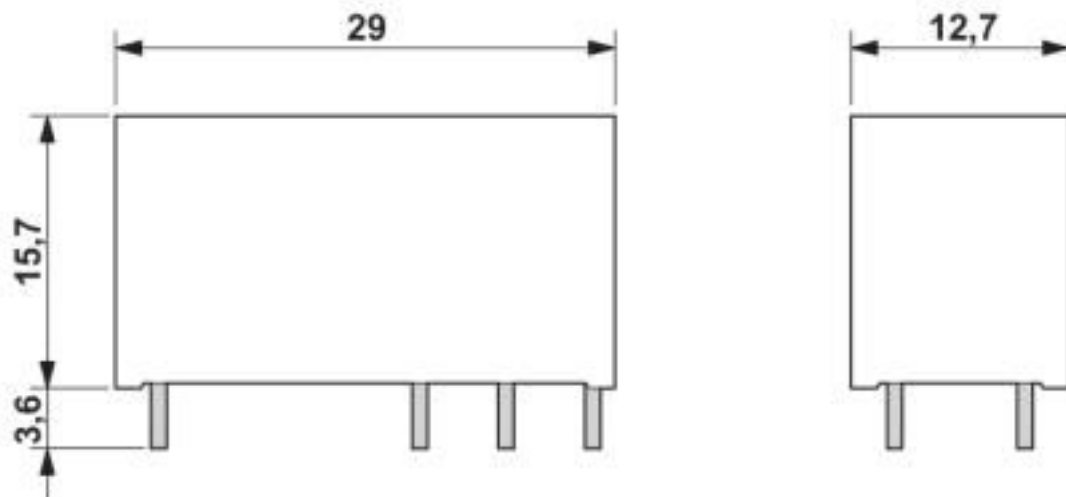
## Single relay - REL-MR-110DC/21HC/EX - 2908823

Diagram



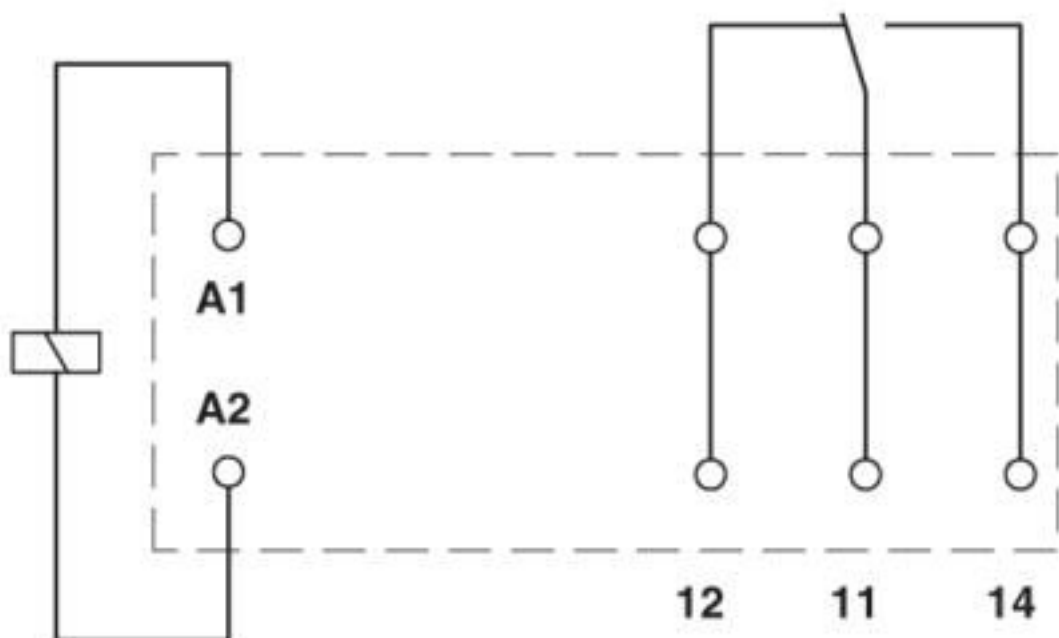
Service life reduction factor with various cos phi

Dimensional drawing



## Single relay - REL-MR-110DC/21HC/EX - 2908823

Circuit diagram



### Classifications

#### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27371601 |
| eCl@ss 5.0    | 27371600 |
| eCl@ss 5.1    | 27371600 |
| eCl@ss 6.0    | 27371600 |
| eCl@ss 7.0    | 27371601 |
| eCl@ss 8.0    | 27371601 |
| eCl@ss 9.0    | 27371601 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001437 |
| ETIM 3.0 | EC001437 |
| ETIM 4.0 | EC001437 |
| ETIM 5.0 | EC001437 |
| ETIM 6.0 | EC001437 |
| ETIM 7.0 | EC001437 |

#### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 13.2 | 39122334 |
| UNSPSC 18.0 | 39122334 |
| UNSPSC 19.0 | 39122334 |
| UNSPSC 20.0 | 39122334 |



## Single relay - REL-MR-110DC/21HC/EX - 2908823

### Classifications

#### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39122334 |
|-------------|----------|

### Approvals

#### Approvals

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UL Recognized / cUL Recognized / VDE Zeichengenehmigung / EAC / cULus Recognized

#### Ex Approvals

### Approval details

|               |                                                                                     |                                                                                                                                                       |               |
|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| UL Recognized |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 228652 |
|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|                |                                                                                     |                                                                                                                                                       |               |
|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| cUL Recognized |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 228652 |
|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|                        |                                                                                     |                                                                                                                                                                                                           |          |
|------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| VDE Zeichengenehmigung |  | <a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40007758 |
|------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|

|     |                                                                                     |  |                          |
|-----|-------------------------------------------------------------------------------------|--|--------------------------|
| EAC |  |  | RU C-<br>DE.A*30.B.01082 |
|-----|-------------------------------------------------------------------------------------|--|--------------------------|

|                  |                                                                                     |  |  |
|------------------|-------------------------------------------------------------------------------------|--|--|
| cULus Recognized |  |  |  |
|------------------|-------------------------------------------------------------------------------------|--|--|

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