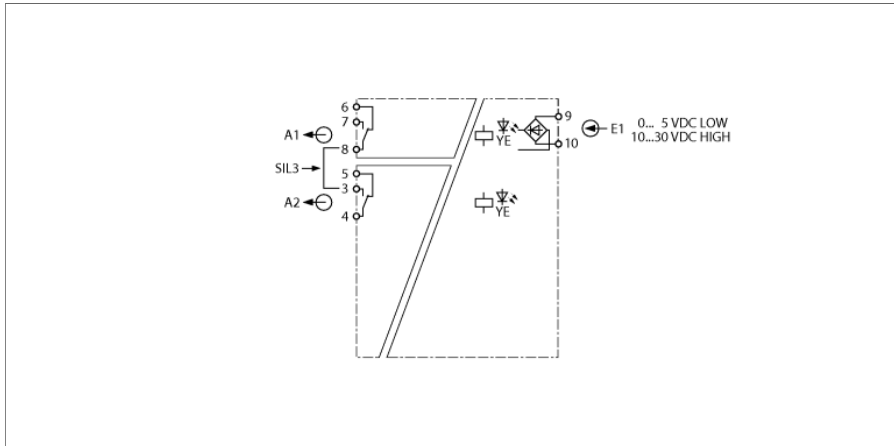


# Coupling Relay

## 1-channel

### IM12-CD01-2R-1U-0/L/CC



The IM12-CD01-2R-1U-0/L/CC one-channel relay coupler is designed for safe galvanic isolation between contact and control circuits. The device also enables the creation of safety-related applications up to and including SIL3 (high and low demand in accordance with IEC 61508).

The relay coupler is equipped with two synchronously controlled relay outputs (changeover contacts). The input signals are interpreted as low or high signals depending on the input level, and provided as a corresponding output signal. The inputs are not polarized. Input E1 controls output A1 and output A2 simultaneously. The device is powered through the input signal (loop-powered).

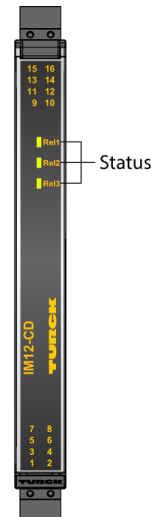
The switching status of the output is indicated by two yellow LEDs (Rel...).

If applied in SIL-3 circuits, the following conditions have to be observed:

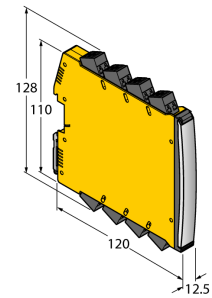
- If the output relay triggers a contactor directly: Equip the contactor with protective circuitry at the coil.
- Connect both relays in series.
- Equip the output relay with a fuse that is activated when 60% of the nominal current is achieved.

The device is equipped with removable spring type terminals.

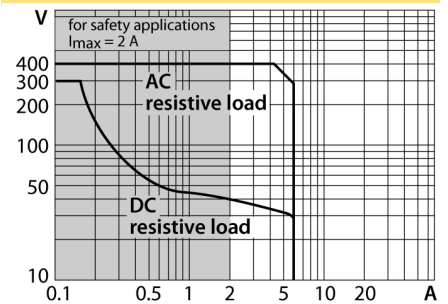
- The inputs are not polarized
- Input E1 activates both outputs simultaneously
- NE load connection: SIL 3 Safety Function for NE (Normally Energized) load (de-energized in safe state) is available
- ND load connection: SIL 3 Safety Function for ND (Normally De-Energized) load (energized in safe state) is available
- Complete galvanic isolation
- Input reverse-polarity protected
- Removable spring type terminals
- ATEX use in Zone 2
- SIL 3



## Dimensions



## Output relay – Load curve



|                                |                                                                                                                                                                                               |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                           | IM12-CD01-2R-1U-0/L/CC                                                                                                                                                                        |
| ID                             | 7580623                                                                                                                                                                                       |
| 0-signal                       | 0...5 VDC                                                                                                                                                                                     |
| 1-signal                       | 10...30 VDC                                                                                                                                                                                   |
| Voltage input                  | max. 30 VDC                                                                                                                                                                                   |
| Output circuits                |                                                                                                                                                                                               |
| Output circuits (digital)      | 2 x relays (change-over)                                                                                                                                                                      |
| Output switching voltage relay | ≤ 30 VDC / ≤ 250 VAC                                                                                                                                                                          |
| Switching current per output   | ≤ 2 A                                                                                                                                                                                         |
| Switching capacity per output  | ≤ 500 VA/60 W                                                                                                                                                                                 |
| Switching frequency            | ≤ 15 Hz                                                                                                                                                                                       |
| Contact quality                | AgNi, 0.3μ Au                                                                                                                                                                                 |
| Galvanic isolation             |                                                                                                                                                                                               |
| Test voltage                   | 2.5 kV RMS                                                                                                                                                                                    |
| Important note                 | For Ex-applications the values specified in the corresponding Ex certificates (ATEX, IECEx, UL, etc.) apply.                                                                                  |
| Important note                 | If the device is used in applications to achieve functional safety according to IEC 61508, the safety manual must be used. Information in the data sheet are not valid for functional safety. |
| Use in SIL safety circuits     | SIL 3 acc. to IEC 61508                                                                                                                                                                       |
| Displays/Operating elements    |                                                                                                                                                                                               |
| Switching state                | Yellow                                                                                                                                                                                        |

|                                  |                                        |                              |
|----------------------------------|----------------------------------------|------------------------------|
| Mechanical data                  |                                        |                              |
| Protection class                 | IP20                                   |                              |
| Flammability class acc. to UL 94 | V-0                                    |                              |
| Ambient temperature              | -25...+70 °C                           |                              |
| Storage temperature              | -40...+80 °C                           |                              |
| Dimensions                       | 120 x 12.5 x 128 mm                    |                              |
| Weight                           | 1 g                                    |                              |
| Mounting instructions            | DIN rail (NS35)                        |                              |
| Housing material                 | Polycarbonate/ABS                      |                              |
| Electrical connection            | Removable spring-type terminals, 2-pin |                              |
| Terminal cross-section           | 0.2...2.5 mm² (AWG: 24...14)           |                              |
| Environmental conditions         | Operating height                       | Up to 2000 m above sea level |
|                                  | Pollution degree                       | II                           |
|                                  | Surge/Overvoltage category             | II (EN 61010-1)              |
|                                  | Standards used                         |                              |
|                                  | Voltage resistance and insulation      |                              |
|                                  |                                        | EN 50178                     |
|                                  |                                        | EN 61010-1                   |
|                                  |                                        | EN 50155                     |
|                                  |                                        | GL VI-7-2                    |
|                                  | Shock                                  |                              |
|                                  |                                        | EN 61373 class B             |
|                                  |                                        | EN 50155                     |
|                                  |                                        | GL VI-7-2                    |
|                                  |                                        | EN 60068-2-6                 |
|                                  |                                        | EN 60068-2-27                |
|                                  | Temperature                            |                              |
|                                  |                                        | EN 60068-2-1 Ad              |
|                                  |                                        | EN 50155                     |
|                                  |                                        | GL VI-7-2                    |
|                                  |                                        | EN 60068-2-2 Bd              |
|                                  |                                        | EN 60068-2-1                 |
|                                  | Air humidity                           |                              |
|                                  |                                        | EN 60068-2-38                |
|                                  | EMC                                    |                              |
|                                  |                                        | EN 50155                     |
|                                  |                                        | GL VI-7-2                    |
|                                  |                                        | NE21                         |
|                                  |                                        | EN 61326-1                   |
|                                  |                                        | EN 61326-3-1                 |
|                                  |                                        | EN 61000-4-2                 |
|                                  |                                        | EN 61000-4-3                 |
|                                  |                                        | EN 61000-4-4                 |
|                                  |                                        | EN 61000-4-5                 |
|                                  |                                        | EN 61000-4-6                 |
|                                  |                                        | EN 61000-4-11                |
|                                  |                                        | EN 61000-4-29                |
|                                  |                                        | EN 55011                     |
|                                  |                                        | EN 55016                     |
|                                  |                                        | EN 50121-3-2                 |
|                                  |                                        | EN 61000-6-2                 |

**Accessories**

| Type code       | Ident no. |                                                                                            | Dimension drawing |
|-----------------|-----------|--------------------------------------------------------------------------------------------|-------------------|
| IMX12-SC-2X-4BK | 7580940   | Screw terminals for IM(X)12 modules; included in delivery: 4 pcs. of 2-pin black terminals |                   |
| IMX12-CC-2X-4BK | 7580942   | Spring terminals for IM(X)12 modules; included in delivery: 4 pcs. black terminals, 2-pin  |                   |