

Reversing contactor combination, 380 V 400 V: 3 kW, 230 V 50 Hz, 240 V 60 Hz, AC operation

Part no. DIULM7/21(230V50HZ,240V60HZ)  
 Catalog No. 278061  
 Alternate Catalog XTCR007B21F  
 No.  
 EL-Nummer 4130464  
 (Norway)

## Delivery program

|                                                       |                |    |                                                                                                                                                    |
|-------------------------------------------------------|----------------|----|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Product range                                         |                |    | Contactor combinations                                                                                                                             |
| Application                                           |                |    | Contactor combinations for starting motors with two directions of rotation                                                                         |
| Accessories                                           |                |    | DIUL reversing combinations                                                                                                                        |
| Utilization category                                  |                |    | NAC-3: Normal AC induction motors: starting, switch off during running<br>AC-4: Normal AC induction motors: starting, plugging, reversing, inching |
| Notes                                                 |                |    | Also suitable for motors with efficiency class IE3.                                                                                                |
| <b>Rated operational current</b>                      |                |    |                                                                                                                                                    |
| AC-3                                                  |                |    |                                                                                                                                                    |
| 380 V 400 V                                           | I <sub>e</sub> | A  | 7                                                                                                                                                  |
| <b>Max. rating for three-phase motors, 50 - 60 Hz</b> |                |    |                                                                                                                                                    |
| AC-3                                                  |                |    |                                                                                                                                                    |
| 220 V 230 V                                           | P              | kW | 2.2                                                                                                                                                |
| 380 V 400 V                                           | P              | kW | 3                                                                                                                                                  |
| 660 V 690 V                                           | P              | kW | 3.5                                                                                                                                                |
| AC-4                                                  |                |    |                                                                                                                                                    |
| 220 V 230 V                                           | P              | kW | 1                                                                                                                                                  |
| 380 V 400 V                                           | P              | kW | 2.2                                                                                                                                                |
| 660 V 690 V                                           | P              | kW | 2.9                                                                                                                                                |
| Actuating voltage                                     |                |    | 230 V 50 Hz, 240 V 60 Hz                                                                                                                           |
| Voltage AC/DC                                         |                |    | AC operation                                                                                                                                       |
| Individual components of the combination              |                |    |                                                                                                                                                    |
| Contactor Q11 DILM7-01<br>+ DILA-XHI20                |                |    |                                                                                                                                                    |
| Contactor Q12 DILM7-01<br>+ DILA-XHI20                |                |    |                                                                                                                                                    |
| Spare auxiliary contacts                              |                |    |                                                                                                                                                    |
| Mechanical interlock +                                |                |    |                                                                                                                                                    |

## Design verification as per IEC/EN 61439

|                                                                                                                        |                   |    |                                            |
|------------------------------------------------------------------------------------------------------------------------|-------------------|----|--------------------------------------------|
| Technical data for design verification                                                                                 |                   |    |                                            |
| Rated operational current for specified heat dissipation                                                               | I <sub>n</sub>    | A  | 7                                          |
| Heat dissipation per pole, current-dependent                                                                           | P <sub>vid</sub>  | W  | 0.17                                       |
| Equipment heat dissipation, current-dependent                                                                          | P <sub>vid</sub>  | W  | 0.51                                       |
| Static heat dissipation, non-current-dependent                                                                         | P <sub>vs</sub>   | W  | 1.4                                        |
| Heat dissipation capacity                                                                                              | P <sub>diss</sub> | W  | 0                                          |
| Operating ambient temperature min.                                                                                     |                   | °C | -25                                        |
| Operating ambient temperature max.                                                                                     |                   | °C | 60                                         |
| IEC/EN 61439 design verification                                                                                       |                   |    |                                            |
| 10.2 Strength of materials and parts                                                                                   |                   |    |                                            |
| 10.2.2 Corrosion resistance                                                                                            |                   |    | Meets the product standard's requirements. |
| 10.2.3.1 Verification of thermal stability of enclosures                                                               |                   |    | Meets the product standard's requirements. |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat                                             |                   |    | Meets the product standard's requirements. |
| 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects |                   |    | Meets the product standard's requirements. |
| 10.2.4 Resistance to ultra-violet (UV) radiation                                                                       |                   |    | Meets the product standard's requirements. |

|                                                          |  |                                                                                                                                  |
|----------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------|
| 10.2.5 Lifting                                           |  | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| 10.2.6 Mechanical impact                                 |  | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| 10.2.7 Inscriptions                                      |  | Meets the product standard's requirements.                                                                                       |
| 10.3 Degree of protection of ASSEMBLIES                  |  | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| 10.4 Clearances and creepage distances                   |  | Meets the product standard's requirements.                                                                                       |
| 10.5 Protection against electric shock                   |  | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| 10.6 Incorporation of switching devices and components   |  | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| 10.7 Internal electrical circuits and connections        |  | Is the panel builder's responsibility.                                                                                           |
| 10.8 Connections for external conductors                 |  | Is the panel builder's responsibility.                                                                                           |
| 10.9 Insulation properties                               |  |                                                                                                                                  |
| 10.9.2 Power-frequency electric strength                 |  | Is the panel builder's responsibility.                                                                                           |
| 10.9.3 Impulse withstand voltage                         |  | Is the panel builder's responsibility.                                                                                           |
| 10.9.4 Testing of enclosures made of insulating material |  | Is the panel builder's responsibility.                                                                                           |
| 10.10 Temperature rise                                   |  | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| 10.11 Short-circuit rating                               |  | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| 10.12 Electromagnetic compatibility                      |  | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| 10.13 Mechanical function                                |  | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |

## Technical data ETIM 7.0

|                                                                                                                                                                                  |    |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------------------|
| Low-voltage industrial components (EG000017) / Combination of contactors (EC000010)                                                                                              |    |                  |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Combination of contactor (ecl@ss10.0.1-27-37-10-09 [AGZ572014]) |    |                  |
| Function                                                                                                                                                                         |    | Reversing safety |
| Rated control supply voltage Us at AC 50HZ                                                                                                                                       | V  | 230 - 230        |
| Rated control supply voltage Us at AC 60HZ                                                                                                                                       | V  | 240 - 240        |
| Rated control supply voltage Us at DC                                                                                                                                            | V  | 0 - 0            |
| Voltage type for actuating                                                                                                                                                       |    | AC               |
| Rated operation current Ie at AC-1, 400 V                                                                                                                                        |    | 7                |
| Rated operation current Ie at AC-3, 400 V                                                                                                                                        | A  | 7                |
| Rated operation power at AC-3, 400 V                                                                                                                                             | kW | 3                |
| Rated operation power NEMA                                                                                                                                                       | kW | 2.2              |
| Number of normally closed contacts as main contact                                                                                                                               |    | 0                |
| Number of main contacts as normally open contact                                                                                                                                 |    | 6                |
| Type of electrical connection for auxiliary- and control current circuit                                                                                                         |    | EV000415         |
| Type of electrical connection of main circuit                                                                                                                                    |    | Screw connection |
| Degree of protection (IP)                                                                                                                                                        |    | IP20             |
| Degree of protection (NEMA)                                                                                                                                                      |    | Other            |
| Rail mounting possible                                                                                                                                                           |    | Yes              |