

|   |                   |     |           |  |
|---|-------------------|-----|-----------|--|
| Product designation                                       |                   |     |           | Enclosed rotary cam switch                     |
| Product type designation                                  |                   |     |           | 7GN20  |
| <b>General characteristics</b>                            |                   |     |           |  |
| Switching diagram   |                   |     |           | 19 - Dahlander motor control switch 0-1-2      |
| N° of elements  |                   |     |           | 4  |
| Mounting form   |                   |     |           | P25 - Plastic enclosure with red/yellow handle |
| <b>Contact characteristics</b>                            |                   |     |           |  |
| Rated insulation voltage $U_i$                            | IEC/EN            | V   | 690       |  |
|   | UL/CSA            | V   | 600       |  |
| Rated impulse withstand voltage $U_{imp}$                 |                   | kV  | 6         |  |
| Conventional free air thermal current $I_{th}$            | IEC/EN            | A   | 20        |  |
|   | UL/CSA            | A   | 20        |  |
| Rated operational voltage                                 |                   | V   | 480       |  |
| Rated operational impulse voltage                         |                   | kV  | 4         |  |
| Maximum fuse size for short-circuit protection $I_n$ (gG) | 10kA              | A   | 20        |  |
|   | 15kA              | A   | 16        |  |
|   | 25kA              | A   | 16        |  |
|   |                   |     |           |  |
| Rated short time current $I_{cw}$                         | 1s                | kA  | 250       |  |
|   |                   |     |           |  |
| Conductivity  |                   |     | 10/5 mA/V |  |
| Operational current $I_e$ IEC/EN                          | AC1/AC21A         |     |           | A 20   |
|   | AC15              |     |           |  |
|   | 110V              | A   | 10        |  |
|   | 220/230V          | A   | 8         |  |
|   | 380/400V          | A   | 6         |  |
|   | 660/690V          | A   | 1.5       |  |
| Rated operational power in AC                             | Three-phase AC-3  |     |           |  |
|   | 220/230V          | kW  | 3         |  |
|   | 380/440V          | kW  | 5.5       |  |
|   | 500/690V          | kW  | 5.5       |  |
|   | Single-phase AC-3 |     |           |  |
|   | 110V              | kW  | 0.8       |  |
|   | 220/230V          | kW  | 2.2       |  |
|   | 380/440V          | kW  | 3         |  |
|   | Three-phase AC23A |     |           |  |
|   | 220/230V          | kW  | 5         |  |
|   | 380/440V          | kW  | 7.5       |  |
|   | 500/690V          | kW  | 7.5       |  |
| Single-phase AC23A  |                   |     |           |  |
| 110V  | kW                | 0.8 |           |  |
| 220/230V  | kW                | 2.5 |           |  |
| 380/440V  | kW                | 3.7 |           |  |
| Rated operational current in DC                           |                   |     |           |  |

|  |      |                 |                   |    |
|--|------|-----------------|-------------------|----|
| DC21A                                  |      |                 |                   |    |
|  | 48V  | A               | 20                |    |
|  | 60V  | A               | 20                |    |
|  | 110V | A               | 4                 |    |
|  | 220V | A               | 0.6               |    |
|  | 440V | A               | 0.25              |    |
| DC23A (poles in series)                |      |                 |                   |    |
|  | 24V  | A               | 20 (1)            |    |
|  | 48V  | A               | 20 (2)            |    |
|  | 60V  | A               | 20 (3)            |    |
|  | 110V | A               | 10 (3)            |    |
|  | 220V | A               | 8 (4)             |    |
| DC13                                   |      |                 |                   |    |
|  | 24V  | A               | 20                |    |
|  | 48V  | A               | 16                |    |
|  | 60V  | A               | 12                |    |
|  | 110V | A               | 1                 |    |
|  | 220V | A               | 0.4               |    |
|  | 440V | A               | 0.15              |    |
| Power dissipation                      |      | W               | 0.8               |    |
| <b>Mechanical features</b>             |      |                 |                   |    |
| Terminals screw                        |      |                 |                   | M3 |
| Tightening torque for terminals max    |      | Nm              | 0.5               |    |
| Conductor size                         |      |                 |                   |    |
| AWG - Rigid cable                      |      |                 |                   |    |
|  | min  | AWG             | 20                |    |
|  | Max  | AWG             | 12                |    |
| AWG - Flexible cable                   |      |                 |                   |    |
|  | min  | AWG             | 20                |    |
|  | Max  | AWG             | 14                |    |
| Conductor size (IEC) - Flexible cable  |      |                 |                   |    |
|  | min  | mm <sup>2</sup> | 0.5               |    |
|  | Max  | mm <sup>2</sup> | 2.5               |    |
| Conductor size (IEC) - Rigid cable     |      |                 |                   |    |
|  | min  | mm <sup>2</sup> | 0.5               |    |
|  | Max  | mm <sup>2</sup> | 2.5               |    |
| Mechanical life                        |      | cycles          | 5x10 <sup>6</sup> |    |
| <b>UL technical data</b>               |      |                 |                   |    |
| Motor power for direct-on-line control |      |                 |                   |    |
| for three-phase motor                  |      |                 |                   |    |
|  | 120V | HP              | 1.5               |    |
|  | 240V | HP              | 3                 |    |
|  | 480V | HP              | 7.5               |    |
|  | 600V | HP              | 10                |    |
| for single-phase motor                 |      |                 |                   |    |
|  | 120V | HP              | 0.75              |    |
|  | 240V | HP              | 2                 |    |
| <b>Ambient conditions</b>              |      |                 |                   |    |
| Temperature                            |      |                 |                   |    |
| Operating temperature                  |      |                 |                   |    |
|  | min  | °C              | -25               |    |
|  | max  | °C              | +55               |    |
| Storage temperature                    |      |                 |                   |    |
|  | min  | °C              | -40               |    |

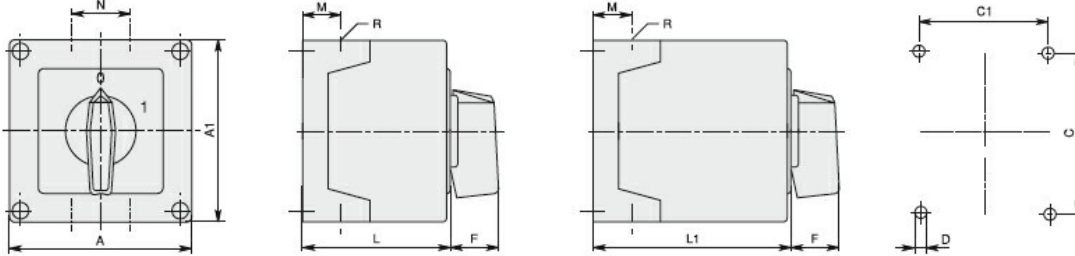
max °C +70

**Resistance & Protection**

Frontal IP degree IP65

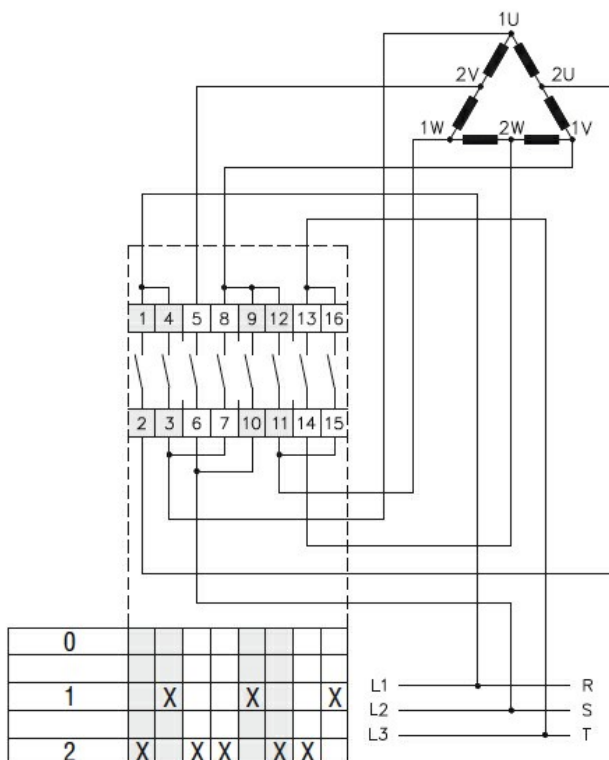
Terminals IP degree IP00

**Dimensions**



| Series | Enclosure size | Number of elements |     | Dimensions |     |      |     |     |    |    |      |      |       | Cable entry      | Protection degree |
|--------|----------------|--------------------|-----|------------|-----|------|-----|-----|----|----|------|------|-------|------------------|-------------------|
|        |                | L                  | L1  | A          | A1  | C    | C1  | D   | F  | M  | N    | L    | L1    |                  |                   |
| 7GN12  | 75x75          | 1-2                | 3-4 | 75         | 75  | 50   | 64  | 4.5 | 19 | 14 | 28   | 57.5 | 79.8  | 4xPG13.5         | IP65              |
| 7GN20  |                | 1-2                | 3-4 |            |     |      |     |     |    |    |      |      |       |                  |                   |
| 7GN25  |                | 1                  | 2-3 |            |     |      |     |     |    |    |      |      |       |                  |                   |
| 7GN12  | 90x90          | 1-3                | 4-6 | 90         | 90  | 79   | 63  | 4.5 | 25 | 19 | 30   | 71.3 | 98.3  | 4xPG16           | IP65              |
| 7GN20  |                | 1-3                | 4-6 |            |     |      |     |     |    |    |      |      |       |                  |                   |
| 7GN25  |                | 1-2                | 3-4 |            |     |      |     |     |    |    |      |      |       |                  |                   |
| 7GN32  |                | 1-2                | 3-4 |            |     |      |     |     |    |    |      |      |       |                  |                   |
| 7GN40  |                | 1                  | 2-3 |            |     |      |     |     |    |    |      |      |       |                  |                   |
| 7GN12  | 110x110        | 1-4                | 5-8 | 110        | 110 | 98.4 | 83  | 4.5 | 32 | 21 | 39.5 | 85.5 | 119.5 | 4xPG21           | IP65              |
| 7GN20  |                | 1-4                | 5-8 |            |     |      |     |     |    |    |      |      |       |                  |                   |
| 7GN25  |                | 1-3                | 4-5 |            |     |      |     |     |    |    |      |      |       |                  |                   |
| 7GN32  |                | 1-3                | 4-5 |            |     |      |     |     |    |    |      |      |       |                  |                   |
| 7GN40  |                | 1-2                | 3-5 |            |     |      |     |     |    |    |      |      |       |                  |                   |
| 7GN63  |                | 1-2                | 3-4 |            |     |      |     |     |    |    |      |      |       |                  |                   |
| 7GN32  | 125x175        | 1-3                | 4-5 | 125        | 175 | 146  | 112 | 5.5 | 32 | 21 | 68   | 84.3 | 118.3 | 4xPG21<br>2xPG11 | IP65              |
| 7GN40  |                | 1-2                | 3-4 |            |     |      |     |     |    |    |      |      |       |                  |                   |
| 7GN63  |                | 1-2                | 3-4 |            |     |      |     |     |    |    |      |      |       |                  |                   |
| 7GN125 |                | 1                  | 2   |            |     |      |     |     |    |    |      |      |       |                  |                   |
| 7GN32  | 180x254        | 1-5                | 6-8 | 180        | 254 | 120  | 190 | 5.5 | 32 | 35 | 76   | 121  | 175   | 4xPG29<br>2xPG11 | IP65              |
| 7GN40  |                | 1-4                | 5-7 |            |     |      |     |     |    |    |      |      |       |                  |                   |
| 7GN63  |                | 1-3                | 4-6 |            |     |      |     |     |    |    |      |      |       |                  |                   |
| 7GN125 |                | 1-2                | 3-4 |            |     |      |     |     |    |    |      |      |       |                  |                   |

**Wiring diagrams**



**Certifications and compliance**

Compliance

IEC/EN/BS 60947-1  
IEC/EN/BS 60947-3  
IEC/EN/BS 60947-5-1

Certificates

EAC

**ETIM classification**

ETIM 8.0

EC001029 -  
Selector switch,  
complete