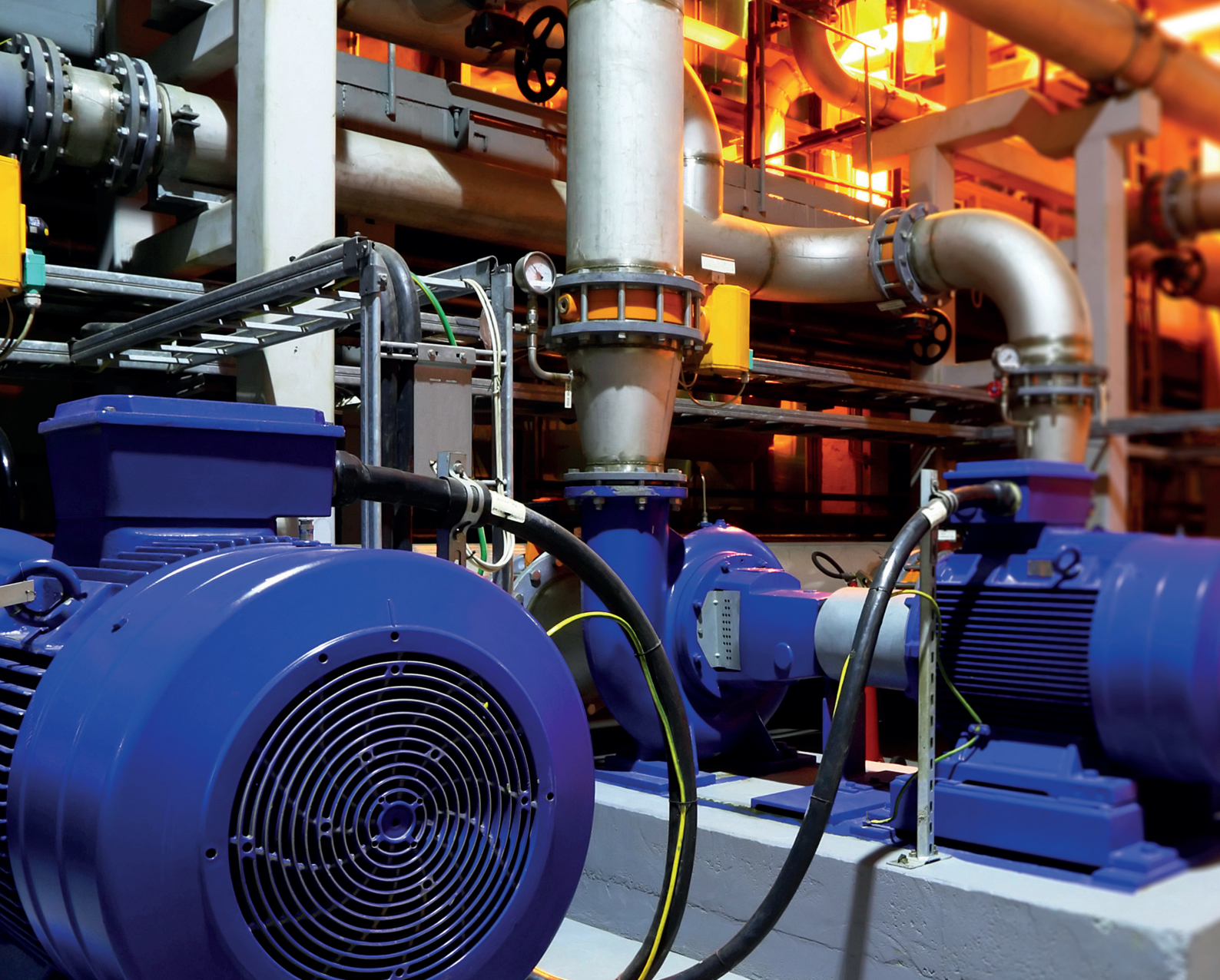




Part of **Easy** series

# Easy TeSys

Catalog



<https://www.se.com>

Life Is On

**Schneider**  
Electric



# 90 years of leadership in motor starter technology

Easy TeSys provides you **Essential** control & protection for your applications:



HVAC



Compressor



Pumps



Heating/  
Furnace



Material  
Handling



Packaging



> Easy choice for  
simple applications

# Easy TeSys



Control motor and other loads

> Easy TeSys™ contactors  
9A to 32A

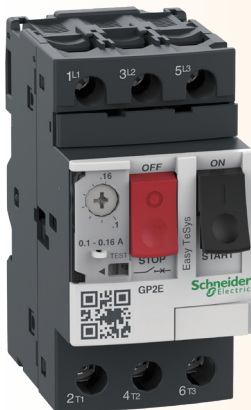
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Protect your load  
(direct mounting under contactors)

> Easy TeSys™ thermal  
overload relays up to  
32A

- Characteristics ▶ B-2
- Dimensions, mounting ▶ B-4



Standalone & group applications

> Easy TeSys™ Manual  
motor starters up to  
32A

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## Presentation

An easy solution for OEM's, panel builders, contractors and system integrators who have a need for motor control, resistive load switching, and isolation applications.

For use on conveyors, packaging, pumps, compressors, HVAC, refrigeration, furnace applications, and more!

Easy TeSys contactors are ideal for these types of applications with power ratings and an operational life of approximately 1 million electrical operations.

UL/CSA approved rated up to 32 amps, 20 HP/480VAC and 25 HP/600VAC.

They are suitable for the utilisation categories specified in standard IEC 60947:

- **AC-1:** non inductive loads or slightly inductive loads, resistance furnaces
- **AC-3:** squirrel cage motors. Motor starting and breaking whilst running.  
Example: standard squirrel cage motors, pumps and fans.
- **AC-4:** squirrel cage or slip ring motors. Applications with reverse current braking and inching.
- **AC-8a:** control of sealed refrigeration compressor motors with manual reset of overload trips.
- **AC-8b:** control of sealed refrigeration compressor motors with automatic reset of overload trips.



DPE 09●●



DPE 38●●

### 3-pole Contactors for Connection by Screw Clamp Terminals

| Utilisation category AC-3                                           |       |       |       |       |       |       | Rated<br>Operational<br>Current 440<br>V up to | Instantan-<br>eous<br>Auxiliary<br>Contact | Basic<br>Reference<br>To be<br>Completed<br>by Adding<br>the Voltage<br>Code (1) | Weight          |
|---------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|------------------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------|-----------------|
| Standard Power Ratings<br>of 3-phase Motors<br>50/60 Hz (θ ≤ 60 °C) |       |       |       |       |       |       |                                                |                                            |                                                                                  |                 |
| 220 V                                                               | 380 V | 415 V | 440 V | 500 V | 660 V | 690 V |                                                |                                            |                                                                                  |                 |
| 230 V                                                               | 400 V |       |       |       |       |       |                                                |                                            |                                                                                  |                 |
|                                                                     |       |       |       |       |       |       |                                                |                                            |                                                                                  |                 |
| kW                                                                  | kW    | kW    | kW    | kW    |       | A     |                                                |                                            |                                                                                  | Lb              |
| 2.2                                                                 | 4     | 4     | 4     | 5.5   | 5.5   | 9     |                                                | 1                                          | DPE 09●●                                                                         | 0.705 (0.320kg) |
| 3                                                                   | 5.5   | 5.5   | 5.5   | 7.5   | 7.5   | 12    |                                                | 1                                          | DPE 12●●                                                                         | 0.717 (0.325kg) |
| 4                                                                   | 7.5   | 9     | 9     | 10    | 10    | 18    |                                                | 1                                          | DPE 18●●                                                                         | 0.728 (0.330kg) |
| 5.5                                                                 | 11    | 11    | 11    | 15    | 15    | 25    |                                                | 1                                          | DPE 25●●                                                                         | 0.816 (0.370kg) |
| 7.5                                                                 | 15    | 15    | 15    | 18.5  | 18.5  | 32    |                                                | 1                                          | DPE 32●●                                                                         | 0.827 (0.375kg) |
| 9                                                                   | 18.5  | 18.5  | 18.5  | 18.5  | 18.5  | 38    |                                                | 1                                          | DPE 38●●                                                                         | 0.838 (0.380kg) |

### 3-pole Contactors Conforming to UL and CSA Standards (North American Market)

| Standard Power Ratings of Motors<br>50/60 Hz θ < 140°F (60°C) |                |      |      |      |      | Associated<br>Cable Type<br>75°C-Cu | Continuous<br>Current | Basic<br>Reference<br>To be<br>Completed<br>by Adding<br>the Voltage<br>Code (1) | Weight          |
|---------------------------------------------------------------|----------------|------|------|------|------|-------------------------------------|-----------------------|----------------------------------------------------------------------------------|-----------------|
| Single-<br>phase<br>1 Ø                                       | 3-phase<br>3 Ø |      |      |      |      |                                     |                       |                                                                                  |                 |
| 115V                                                          | 230V           | 200V | 230V | 460V | 575V |                                     |                       |                                                                                  |                 |
|                                                               | 240V           | 208V | 240V | 480V | 600V |                                     |                       |                                                                                  |                 |
| HP                                                            | HP             | HP   | HP   | HP   | HP   | AWG                                 | A                     |                                                                                  | Lb              |
| 1/3                                                           | 1              | 2    | 2    | 3    | 7.5  | 18...10                             | 20                    | DPE 09●●                                                                         | 0.705 (0.320kg) |
| 1/3                                                           | 1              | 2    | 2    | 5    | 7.5  | 18...10                             | 25                    | DPE 12●●                                                                         | 0.717 (0.325kg) |
| 1/2                                                           | 2              | 3    | 3    | 7.5  | 10   | 18...10                             | 25                    | DPE 18●●                                                                         | 0.728 (0.330kg) |
| 1                                                             | 3              | 5    | 5    | 10   | 15   | 18...8                              | 32                    | DPE 25●●                                                                         | 0.816 (0.370kg) |
| 2                                                             | 3              | 7.5  | 7.5  | 15   | 20   | 14...6                              | 40                    | DPE 32●●                                                                         | 0.827 (0.375kg) |
| 2                                                             | 5              | 10   | 10   | 20   | 25   | 14...6                              | 52                    | DPE 38●●                                                                         | 0.838 (0.380kg) |

| Utilisation Category AC-1      |  |  |  | Instantaneous Auxiliary Contact | Basic Reference To be Completed by Adding the Voltage Code (1) | Weight          |
|--------------------------------|--|--|--|---------------------------------|----------------------------------------------------------------|-----------------|
| Non Inductive Loads            |  |  |  |                                 |                                                                |                 |
| Maximum Current<br>(θ ≤ 60 °C) |  |  |  |                                 |                                                                |                 |
| A                              |  |  |  | Lb                              |                                                                |                 |
| 20                             |  |  |  | 1                               | DPE 09●●                                                       | 0.705 (0.320kg) |
| 25                             |  |  |  | 1                               | DPE 12●●                                                       | 0.717 (0.325kg) |
| 32                             |  |  |  | 1                               | DPE 18●●                                                       | 0.728 (0.330kg) |
| 40                             |  |  |  | 1                               | DPE 25●●                                                       | 0.816 (0.370kg) |
| 50                             |  |  |  | 1                               | DPE 32●●                                                       | 0.827 (0.375kg) |
|                                |  |  |  |                                 | DPE 38●●                                                       | 0.838 (0.380kg) |
|                                |  |  |  |                                 | or                                                             |                 |

(1) Standard control circuit voltages:

| a.c. Supply |    |     |     |
|-------------|----|-----|-----|
| Volts       | 24 | 120 | 240 |
| 50/60 Hz    | B7 | G7  | U7  |

| d.c. Supply |                   |
|-------------|-------------------|
| Volts       | 24                |
|             | BL <sup>(1)</sup> |

(1) Built-in suppression device, by bi-directional peak limiting diode.

| Environment Characteristics                                       |                                                                               |    |                                                                 |             |
|-------------------------------------------------------------------|-------------------------------------------------------------------------------|----|-----------------------------------------------------------------|-------------|
| Contactor Type                                                    |                                                                               |    | DPE 09...25                                                     | DPE 32...38 |
| Rated insulation voltage (Ui)                                     | Conforming to IEC 60947-4-1, overvoltage category III, degree of pollution: 3 | V  | 690                                                             |             |
|                                                                   | Conforming to UL, CSA                                                         | V  | 600                                                             |             |
| Rated impulse withstand voltage (Uimp)                            | Conforming to IEC 60947                                                       | kV | 6                                                               |             |
| Conforming to standards                                           |                                                                               |    | IEC/EN 60947-4-1, UL 60947-4-1, CSA C22.2 No. 60947-4-1         |             |
| Product certifications                                            |                                                                               |    | UL, CSA                                                         |             |
| Isolation                                                         | Conforming to VDE 0106 part 101 and A1 (draft 2/89)                           | V  | 400                                                             |             |
| Degree of protection (1) (front face only) Conforming to VDE 0106 | Power connection                                                              |    | Protection against direct finger contact IP 2X                  |             |
|                                                                   | Coil connection                                                               |    | Protection against direct finger contact IP 2X                  |             |
| Protective treatment                                              | Conforming to IEC 60068                                                       |    | "TH"                                                            |             |
| Ambient air temperature around the device                         | Storage                                                                       | °F | -76...176 (-60...80°C)                                          |             |
|                                                                   | Operation                                                                     | °F | 23...140 (-5...60°C)                                            |             |
|                                                                   | Permissible                                                                   | °F | -40...158 (-40...70°C), for operation at Uc                     |             |
| Maximum operating altitude                                        | Without derating                                                              | ft | 6561.68 (2000m)                                                 |             |
| Operating positions                                               | Without derating                                                              |    | ± 30° occasional, in relation to normal vertical mounting plane |             |
| Flame resistance                                                  | Conforming to UL 94                                                           |    | V1                                                              |             |
|                                                                   | Conforming to IEC 60695-2-1                                                   | °F | 1760 (960°C)                                                    |             |
| Shock resistance (2)<br>1/2 sine wave = 11 ms                     | Contactor open                                                                |    | 8 gn                                                            | 6.4 gn      |
|                                                                   | Contactor closed                                                              |    | 12 gn                                                           | 12 gn       |
| Vibration resistance (2)<br>5...300 Hz                            | Contactor open                                                                |    | 1.6 gn                                                          | 1.6 gn      |
|                                                                   | Contactor closed                                                              |    | 3.2 gn                                                          | 3.2 gn      |

### Power Circuit Connection Characteristics

| Connection by Cable              |                    |        |                 |                 |                 |                 |
|----------------------------------|--------------------|--------|-----------------|-----------------|-----------------|-----------------|
| Contactor Type                   |                    |        | DPE 09...18     | DPE 25          | DPE 32          | DPE 38          |
| Tightening torque                |                    |        | Screw terminals |                 |                 |                 |
| Flexible cable without cable end | 1 conductor        | mm²    | 1...4           | 1.5...6         | 1.5...10        | 2.5...10        |
|                                  | 2 conductors       | mm²    | 1...4           | 1.5...6         | 1.5...6         | 2.5...10        |
| Flexible cable with cable end    | 1 conductor        | mm²    | 1...4           | 1...6           | 1...6           | 1...10          |
|                                  | 2 conductors       | mm²    | 1...2.5         | 1...4           | 1...4           | 1.5...6         |
| Solid cable without cable end    | 1 conductor        | mm²    | 1...4           | 1.5...6         | 1.5...6         | 1.5...10        |
|                                  | 2 conductors       | mm²    | 1...4           | 1.5...6         | 1.5...6         | 2.5...10        |
| Screwdriver                      | Philips            |        | N°2             | N°2             | N°2             | N°2             |
|                                  | Flat screwdriver Ø |        | Ø 6             | Ø 6             | Ø 6             | Ø 6             |
| Tightening torque                |                    | Lbf.in | 15.05 (1.7 N.m) | 15.05 (1.7 N.m) | 15.05 (1.7 N.m) | 15.05 (1.7 N.m) |
| AWG                              |                    |        | 10...18         | 8...18          | 6...14          | 6...14          |

(1) Protection provided for the cabling c.s.a.'s indicated below and for connection by cable.

(2) Without modifying the contact states, in the most unfavourable direction (coil energised at Ue).

## Control Circuit Connection Characteristics

### Connection by Cable (Screw Clamp Connections)

| Contactor Type                   |                    |                 | DPE 09...18 | DPE 25  | DPE 32  | DPE 38  |
|----------------------------------|--------------------|-----------------|-------------|---------|---------|---------|
| Flexible cable without cable end | 1 conductor        | mm <sup>2</sup> | 1...4       | 1...4   | 1...4   | 1...4   |
|                                  | 2 conductors       | mm <sup>2</sup> | 1...4       | 1...4   | 1...4   | 1...4   |
| Flexible cable with cable end    | 1 conductor        | mm <sup>2</sup> | 1...4       | 1...4   | 1...4   | 1...4   |
|                                  | 2 conductors       | mm <sup>2</sup> | 1...2.5     | 1...2.5 | 1...2.5 | 1...2.5 |
| Solid cable without cable end    | 1 conductor        | mm <sup>2</sup> | 1...4       | 1...4   | 1...4   | 1...4   |
|                                  | 2 conductors       | mm <sup>2</sup> | 1...4       | 1...4   | 1...4   | 1...4   |
| Screwdriver                      | Philips            |                 | N°2         | N°2     | N°2     | N°2     |
|                                  | Flat screwdriver Ø |                 | Ø 6         | Ø 6     | Ø 6     | Ø 6     |
| Tightening torque                |                    | N.m             | 1.7         | 1.7     | 2.5     | 2.5     |
| AWG                              |                    |                 | 10...18     | 10...18 | 10...18 | 10...18 |

## Pole Characteristics

| Contactor Type                                                                                        |                                   |    | DPE 09        | DPE 12   | DPE 18   | DPE 25   | DPE 32   | DPE 38   |
|-------------------------------------------------------------------------------------------------------|-----------------------------------|----|---------------|----------|----------|----------|----------|----------|
| Rated operational current (I <sub>e</sub> )<br>(U <sub>e</sub> ≤ 440 V)                               | In AC-3, θ ≤ 140°F (60°C)         | A  | 9             | 12       | 18       | 25       | 32       | 38       |
|                                                                                                       | In AC-1, θ ≤ 140°F (60°C)         | A  | 20            | 25       | 32       | 40       | 50       | 50       |
| Electrical durability at rated operational current                                                    | @600V                             |    | 1M operations |          |          |          |          |          |
| Rated operational voltage (U <sub>e</sub> )                                                           | Up to                             | V  | 690           | 690      | 690      | 690      | 690      | 690      |
| Frequency limits                                                                                      | Of the operating current          | Hz | 25...400      | 25...400 | 25...400 | 25...400 | 25...400 | 25...400 |
| Conventional thermal current (I <sub>th</sub> )                                                       | θ 140°F (60°C)                    | A  | 25            | 25       | 32       | 40       | 50       | 50       |
| Rated making capacity (440 V)                                                                         | Conforming to IEC 60947           |    | 250           | 250      | 300      | 450      | 550      | 550      |
| Rated breaking capacity (440 V)                                                                       | Conforming to IEC 60947           |    | 250           | 250      | 300      | 450      | 550      | 550      |
| Permissible short time rating<br>No current flowing for preceding<br>15 minutes with θ ≤ 104°F (40°C) | For 1 s                           | A  | 210           | 210      | 240      | 380      | 430      | 430      |
|                                                                                                       | For 10 s                          | A  | 105           | 105      | 145      | 240      | 260      | 310      |
|                                                                                                       | For 1 min                         | A  | 61            | 61       | 84       | 120      | 138      | 150      |
|                                                                                                       | For 10 min                        | A  | 30            | 30       | 40       | 50       | 60       | 60       |
| Protection by fuses<br>Short-circuit protection<br>(U ≤ 690 V)                                        | Without thermal Type 1            | A  | 25            | 40       | 50       | 63       | 63       | 63       |
|                                                                                                       | overload relay, Type 2<br>gG fuse | A  | 20            | 25       | 35       | 40       | 63       | 63       |
| Average impedance per pole                                                                            | At I <sub>th</sub> and 50 Hz      | mΩ | 2.5           | 2.5      | 2.5      | 2        | 2        | 2        |
| Power dissipated per pole<br>for the above operational<br>currents                                    | AC-3                              | W  | 0.20          | 0.36     | 0.8      | 1.25     | 2        | 3        |
|                                                                                                       | AC-1                              | W  | 1.56          | 1.56     | 2.5      | 3.2      | 5        | 5        |

## Applications with High-Fault Short-Circuit Current ratings

### High fault short-circuit current rating with fuses

| Cat. Nos. | Max Current | Max Voltage | Maximum Class J Fuse Size |
|-----------|-------------|-------------|---------------------------|
| DPE09     | 100 kA      | 600 Vac     | 25 A                      |
| DPE12     | 100 kA      | 600 Vac     | 25 A                      |
| DPE18     | 100 kA      | 600 Vac     | 30 A                      |
| DPE25     | 100 kA      | 600 Vac     | 40 A                      |
| DPE32     | 100 kA      | 600 Vac     | 60 A                      |
| DPE38     | 100 kA      | 600 Vac     | 80 A                      |

### High fault short-circuit current rating with circuit breakers

| Cat. Nos. | Max Current | Max Voltage | Maximum Listed Circuit Breaker Size |
|-----------|-------------|-------------|-------------------------------------|
| DPE09     | 35 kA       | 480 Vac     | 35 A                                |
| DPE12     | 35 kA       | 480 Vac     | 35 A                                |
| DPE18     | 35 kA       | 480 Vac     | 35 A                                |
| DPE25     | 35 kA       | 480 Vac     | 60 A                                |
| DPE32     | 35 kA       | 480 Vac     | 60 A                                |
| DPE38     | 35 kA       | 480 Vac     | 60 A                                |

### High fault short-circuit current rating with circuit breakers

| Cat. Nos. | Max Current | Max Voltage | Maximum Listed Circuit Breaker Size |
|-----------|-------------|-------------|-------------------------------------|
| DPE09     | 18 kA       | 600 Vac     | 35 A                                |
| DPE12     | 18 kA       | 600 Vac     | 35 A                                |
| DPE18     | 18 kA       | 600 Vac     | 35 A                                |
| DPE25     | 18 kA       | 600 Vac     | 35 A                                |
| DPE32     | 18 kA       | 600 Vac     | 60 A                                |
| DPE38     | 18 kA       | 600 Vac     | 60 A                                |

| Control Circuit Characteristics, a.c. Supply                 |                              |             |               |                                                                      |               |
|--------------------------------------------------------------|------------------------------|-------------|---------------|----------------------------------------------------------------------|---------------|
| Contactor Type                                               |                              |             | DPE 09...25   |                                                                      | DPE 32 and 38 |
| Rated voltage of control circuit (Uc)                        |                              | 50/60 Hz    | V             | 24...240                                                             | 24...240      |
| Control voltage limits                                       | Coils 50/60 Hz               | Operation   |               | 0.8...1.1 Uc at 50 Hz and 0.85...1.1 Uc at 60 Hz and at 140°F (60°C) |               |
|                                                              |                              | Drop-out    |               | 0.3...0.6 Uc at 140°F (60°C)                                         |               |
| Average consumption at 68°F (20°C) and at Uc                 | ~ 50 Hz                      | Inrush      | Cos φ         | 0.75                                                                 | 0.75          |
|                                                              |                              |             | 50/60 Hz coil | VA                                                                   | 70            |
|                                                              |                              | Sealed      | Cos φ         | 0.3                                                                  | 0.3           |
|                                                              |                              |             | 50/60 Hz coil | VA                                                                   | 7             |
|                                                              | ~ 60 Hz                      | Inrush      | Cos φ         | 0.75                                                                 | 0.75          |
|                                                              |                              |             | 50/60 Hz coil | VA                                                                   | 70            |
|                                                              |                              | Sealed      | Cos φ         | 0.3                                                                  | 0.3           |
|                                                              |                              |             | 50/60 Hz coil | VA                                                                   | 7.5           |
| Heat dissipation                                             | 50/60 Hz                     |             | W             | 2...3                                                                | 2...3         |
| Operating time (1)                                           |                              | Closing "C" | ms            | 12...22                                                              | 12...22       |
|                                                              |                              | Opening "O" | ms            | 4...19                                                               | 4...19        |
| Mechanical durability in millions of operating cycles        | 50 or 60 Hz coils            |             |               | -                                                                    | -             |
|                                                              | 50/60 Hz coil at 60 Hz       |             |               | 10                                                                   | 10            |
| Maximum operating rate at ambient temperature ≤ 140°F (60°C) | In operating cycles per hour |             |               | 3600                                                                 | 3600          |

(1) The closing time "C" is measured from the moment the coil supply is switched on to initial contact of the main poles.

(2) The opening time "O" is measured from the moment the coil supply is switched off to the moment the main poles separate.

| Control Circuit Characteristics, d.c. Supply                 |                                 |     |                                                                                                                                                                                                                                                        |                                 |               |
|--------------------------------------------------------------|---------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------|
| Contactor Type                                               |                                 |     | DPE 09...25                                                                                                                                                                                                                                            |                                 | DPE 32 and 38 |
| Rated control circuit voltage (Uc)                           |                                 |     | V                                                                                                                                                                                                                                                      | 24                              | 24            |
| Rated insulation voltage                                     | Conforming to IEC 60947-1       |     | V                                                                                                                                                                                                                                                      | 690                             |               |
|                                                              | Conforming to UL, CSA           |     | V                                                                                                                                                                                                                                                      | 600                             |               |
| Control voltage limits                                       | Operation                       |     |                                                                                                                                                                                                                                                        | 0.7 ... 1.25 Uc at 140°F (60°C) |               |
|                                                              | Drop-out                        |     |                                                                                                                                                                                                                                                        | 0.1 ... 0.25 Uc at 140°F (60°C) |               |
| Average consumption at 68°F (20°C) and at Uc                 | Inrush                          |     | W                                                                                                                                                                                                                                                      | 5.4                             | 5.4           |
|                                                              | Sealed                          |     | W                                                                                                                                                                                                                                                      | 5.4                             | 5.4           |
| Operating time                                               | Closing                         | "C" | ms                                                                                                                                                                                                                                                     | 63±15%                          | 63±15%        |
|                                                              | Opening                         | "O" | ms                                                                                                                                                                                                                                                     | 63±15%                          | 63±15%        |
|                                                              |                                 |     | Note: The arcing time depends on the circuit switched by the poles. For all normal 3-phase applications, the arcing time is less than 10ms. The load is isolated from the supply after a time equal to the sum of the opening time and the arcing time |                                 |               |
| Time constant (L/R)                                          | Closing "C"                     |     | ms                                                                                                                                                                                                                                                     | 28                              | 28            |
| Mechanical durability at Uc                                  | In millions of operating cycles |     |                                                                                                                                                                                                                                                        | 30                              | 30            |
| Maximum operating rate at ambient temperature ≤ 140°F (60°C) | In operating cycles per hour    |     |                                                                                                                                                                                                                                                        | 3600                            | 3600          |

### Characteristics of Auxiliary Contacts Incorporated in the Contactor

|                                                          |                                        |                      |
|----------------------------------------------------------|----------------------------------------|----------------------|
| <b>Rated operational voltage (Ue)</b> Up to              | V                                      | 690                  |
| <b>Rated insulation voltage (Ui)</b>                     | Conforming to IEC 60947-1              | V 690                |
|                                                          | Conforming to UL, CSA                  | V 600                |
| <b>Conventional thermal current (Ith)</b>                | For ambient temperature ≤ 140°F (60°C) | A 10                 |
| <b>Frequency of the operational current</b>              | Hz                                     | 25...400             |
| <b>Minimum switching capacity</b><br>$\lambda = 10^{-8}$ | U min                                  | V 17                 |
|                                                          | I min                                  | mA 5                 |
| <b>Short-circuit protection</b>                          | Conforming to IEC 60947-5-1            | gG fuse: 10 A        |
| <b>Rated making capacity</b>                             | Conforming to IEC 60947-5-1, I rms     | A ~ : 140, --- : 250 |
| <b>Short-time rating</b>                                 | Permissible for 1 s                    | A 100                |
|                                                          | 500 ms                                 | A 120                |
|                                                          | 100 ms                                 | A 140                |
| <b>Insulation resistance</b>                             | MΩ                                     | > 10                 |

### Rated Operational Power of Auxiliary Contacts (Conforming to IEC 60947-5-1)

#### a.c. Supply, Categories AC-14 and AC-15

Electrical durability (valid for up to 3600 operating cycles/hour) on an inductive load such as the coil of an electromagnet: making power ( $\cos \varphi 0.7$ ) = 10 times the power broken ( $\cos \varphi 0.4$ ).

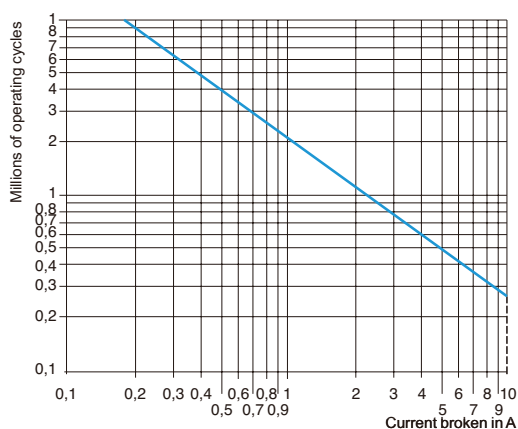
|                             | V  | 24 | 48  | 115 | 230 | 400 | 440  | 600  |
|-----------------------------|----|----|-----|-----|-----|-----|------|------|
| 1 million operating cycles  | VA | 60 | 120 | 280 | 560 | 960 | 1050 | 1440 |
| 3 million operating cycles  | VA | 16 | 32  | 80  | 160 | 280 | 300  | 420  |
| 10 million operating cycles | VA | 4  | 8   | 20  | 40  | 70  | 80   | 100  |

#### d.c. Supply, Category DC-13

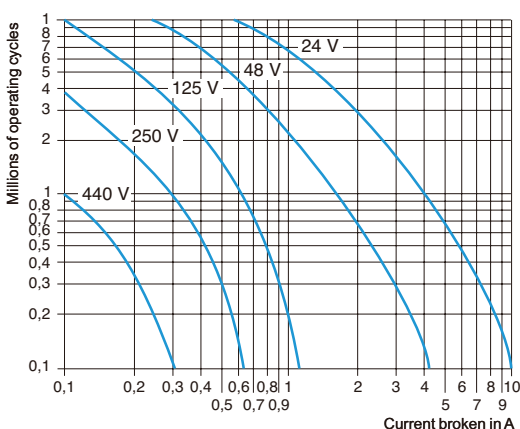
Electrical durability (valid for up to 1200 operating cycles/hour) on an inductive load such as the coil of an electromagnet, without economy resistor, the time constant increasing with the power.

| V  | 24 | 48 | 125 | 250 | 440 |
|----|----|----|-----|-----|-----|
| VA | 96 | 76 | 76  | 76  | 44  |
| VA | 48 | 38 | 38  | 32  | -   |
| VA | 14 | 12 | 12  | -   | -   |

#### AC-15

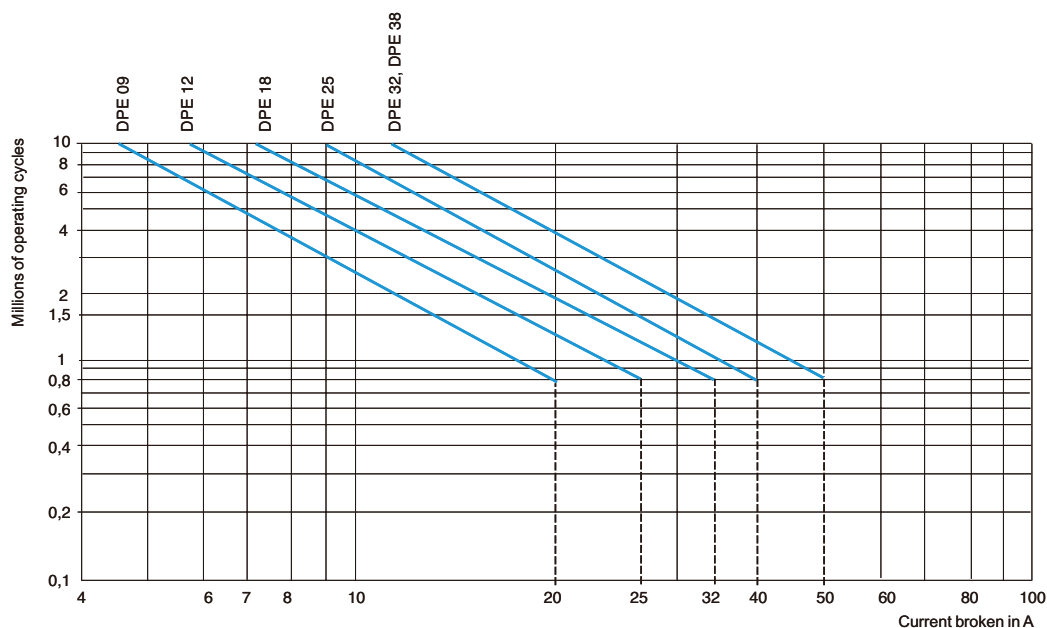


#### DC-13



| Environment Characteristics                       |                                                                                       |                                                                                   |                                                |
|---------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------|
| For Use in Normal Operating Environments          |                                                                                       |                                                                                   |                                                |
| Type of Contact Block                             |                                                                                       | DPEAN                                                                             |                                                |
| Conforming to standards                           |                                                                                       | IEC 60947-5-1, NF C 63-140, EN 60947-5-1, UL 60947-5-1 and CSA C22.2 No.60947-5-1 |                                                |
| Product certifications                            |                                                                                       | UL, CSA                                                                           |                                                |
| Protective treatment                              | Conforming to IEC 60068                                                               |                                                                                   | "TH"                                           |
| Degree of protection                              | Conforming to VDE 0106                                                                |                                                                                   | Protection against direct finger contact IP 2X |
| Ambient air temperature around the device         | Storage                                                                               | °F                                                                                | -76...176 (-60...80°C)                         |
|                                                   | Operation                                                                             | °F                                                                                | 23...140 (-5...60°C)                           |
|                                                   | Permissible for operation at U <sub>c</sub>                                           | °F                                                                                | -40...158 (-40...70°C)                         |
| Maximum operating altitude                        | Without derating                                                                      | ft                                                                                | 6561.68 (2000m)                                |
| Connection by cable                               | Philips n°2 and Ø 0.236 (6mm)<br>Flexible or rigid cable<br>with or without cable end | mm²                                                                               | Min: 1 x 1, max: 2 x 2.5                       |
| Characteristics of Instantaneous Contacts         |                                                                                       |                                                                                   |                                                |
| Type of Contact Block                             |                                                                                       | DPEAN                                                                             |                                                |
| Number of contacts                                |                                                                                       |                                                                                   | 2                                              |
| Rated operational voltage (U <sub>e</sub> ) Up to |                                                                                       | V                                                                                 | 690                                            |
| Rated insulation voltage (U <sub>i</sub> )        | Conforming to IEC 60947-5-1                                                           | V                                                                                 | 690                                            |
|                                                   | Conforming to UL, CSA                                                                 | V                                                                                 | 600                                            |
| Conventional thermal current (I <sub>th</sub> )   | For ambient temperature ≤ 140°F (60°C)                                                | A                                                                                 | 10                                             |
| Frequency of the operational current              |                                                                                       | Hz                                                                                | 25...400                                       |
| Minimum switching capacity                        | U min                                                                                 | V                                                                                 | 17                                             |
|                                                   | I min                                                                                 | mA                                                                                | 5                                              |
| Short-circuit protection                          | Conforming to IEC 60947-5-1 and VDE 0660                                              | gG                                                                                | fuse: 10 A                                     |
| Rated making capacity                             | Conforming to IEC 60947-5-1, I rms                                                    | A                                                                                 | a : 140, c : 250                               |
| Short-time rating                                 | Permissible for 1 s                                                                   | A                                                                                 | 100                                            |
|                                                   | 500 ms                                                                                | A                                                                                 | 120                                            |
|                                                   | 100 ms                                                                                | A                                                                                 | 140                                            |
| Insulation resistance                             |                                                                                       | mΩ                                                                                | > 10                                           |
| Mechanical durability                             | In millions of operating cycles                                                       |                                                                                   | 30                                             |

## Use in Category AC-1 ( $U_e \leq 440 \text{ V}$ )



Control of resistive circuits ( $\cos \varphi \geq 0.95$ ).

The current broken ( $I_c$ ) in category AC-1 is equal to the current ( $I_e$ ) normally drawn by the load.

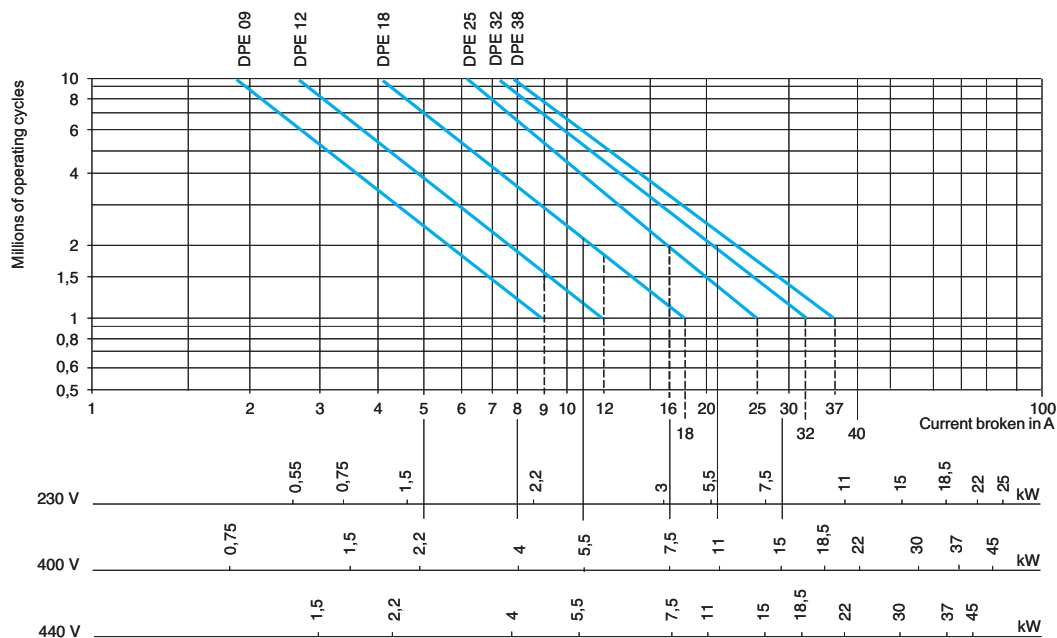
**Example:**

$U_e = 400 \text{ V} - I_e = 25 \text{ A} - \theta \leq 104^\circ\text{F} (40^\circ\text{C}) - I_c = 25 \text{ A}$

1.5 million operating cycles required

The above selection curves show the contactor rating needed: DPE 25

## Use in Category AC-3 ( $U_e \leq 440 \text{ V}$ )



Control of 3-phase asynchronous squirrel cage motors with breaking whilst running. The current broken ( $I_c$ ) in category AC-3 is equal to the rated operational current of the motor.

**Example:**

Asynchronous motor with  $P = 5.5 \text{ kW} - U_e = 400 \text{ V} - I_e = 11 \text{ A} - I_c = I_e = 11 \text{ A}$

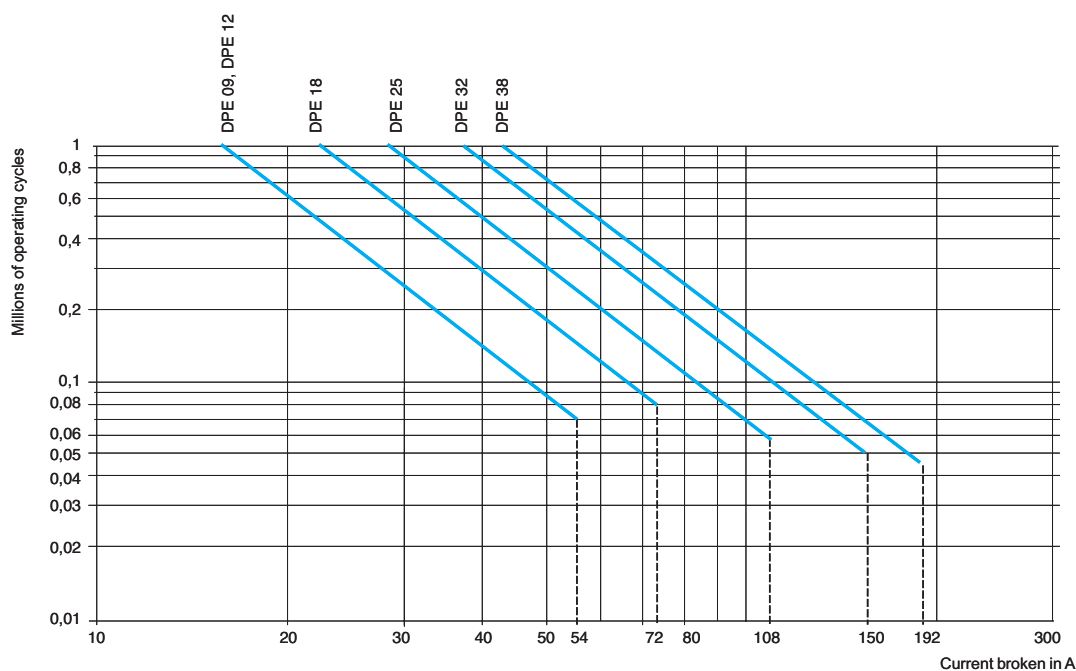
or asynchronous motor with  $P = 5.5 \text{ kW} - U_e = 415 \text{ V} - I_e = 11 \text{ A} - I_c = I_e = 11 \text{ A}$

2 million operating cycles required

The above selection curves show the contactor rating needed: DPE 18

## Use in Category AC-4 ( $U_e \leq 440$ V)

Control of 3-phase asynchronous squirrel cage motors with breaking whilst motor stalled.  
The current broken in AC-4 is equal to  $6 \times I_e$ .  
( $I_e$  = rated operational current of the motor).

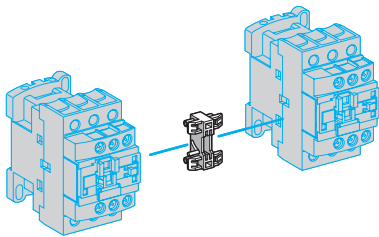


### Example:

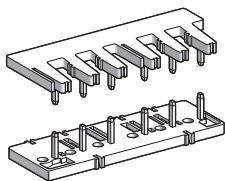
Asynchronous motor with  $P = 5.5$  kW -  $U_e = 400$  V -  $I_e = 11$  A  
or asynchronous motor with  $P = 5.5$  kW -  $U_e = 415$  V -  $I_e = 11$  A  
 $I_c = 6 \times I_e = 66$  A

300 000 operating cycles required.

The above selection curves show the contactor rating needed: DPE 32



+



LAD 9R1

**For 3-pole Reversing Contactors for Motor Control (1)**

| Description                                                                                                                                                     | Reference     | Weight<br>Lb    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------|
| Kit comprising: <ul style="list-style-type: none"><li>■ 1 mechanical interlock without electrical interlocking.</li><li>■ 1 set of power connections.</li></ul> | <b>LAD9R1</b> | 0.099 (0.045kg) |

**Instantaneous Auxiliary Contact Blocks for Connection by Screw Clamp Terminals**

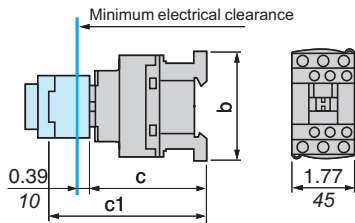
| Description                                | Number of<br>Contacts per<br>Block | NO | NC | Reference      | Weight<br>Lb    |
|--------------------------------------------|------------------------------------|----|----|----------------|-----------------|
| Contact blocks<br>(clip-on front mounting) | 2                                  | 1  | 1  | <b>DPEAN11</b> | 0.066 (0.030kg) |

(1) Horizontally mounted, assembled by the customer using 2 identical contactors.

## Dimensions

### DPE 09...25

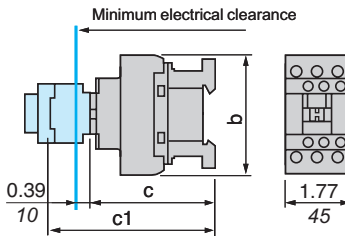
in.  
mm



### DPE 09...25

|                            |              |
|----------------------------|--------------|
| b                          | 3.03 (77mm)  |
| c without add-on block     | 3.31 (84mm)  |
| c1 with DPEAN (2 contacts) | 4.61 (117mm) |

### DPE 32 and 38

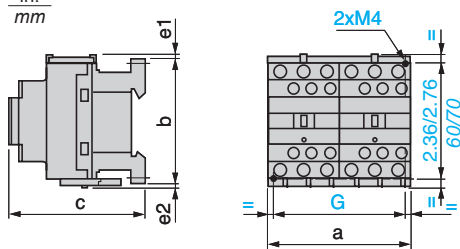


### DPE 32 and 38

|                            |              |
|----------------------------|--------------|
| b without add-on block     | 3.35 (85mm)  |
| c without add-on block     | 3.54 (90mm)  |
| c1 with DPEAN (2 contacts) | 4.84 (123mm) |

### Reversing Contactors DPE 09...38

in.  
mm

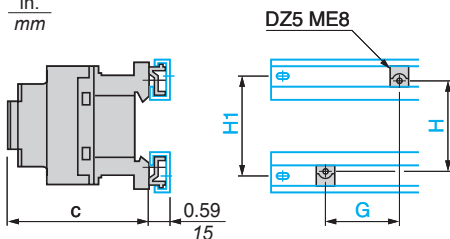


|    | DPE 09...25  | DPE 32 and 38 |
|----|--------------|---------------|
| a  | 3.54 (90mm)  | 3.54 (90mm)   |
| b  | 3.03 (77mm)  | 3.35 (85mm)   |
| c  | 3.39 (86mm)  | 3.62 (92mm)   |
| e1 | 0.16 (4mm)   | 0.35 (9mm)    |
| e2 | 0.06 (1.5mm) | 0.20 (5mm)    |
| G  | 3.15 (80mm)  | 3.15 (80mm)   |

## Dimensions

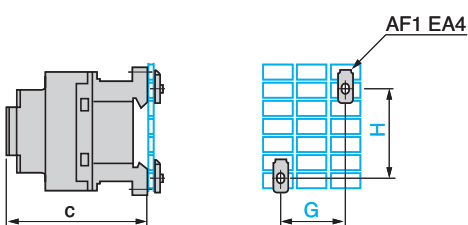
### DPE 09...25

in.  
mm



|    | DPE 09...25 | DPE 32 and 38 |
|----|-------------|---------------|
| c  | 3.39 (86mm) | 3.62 (92mm)   |
| G  | 1.38 (35mm) | 1.38 (35mm)   |
| H  | 2.36 (60mm) | 2.36 (60mm)   |
| H1 | 2.76 (70mm) | 2.76 (70mm)   |

### DPE 32 and 38

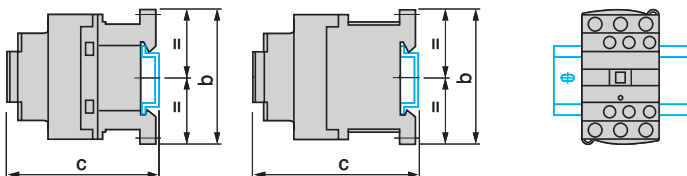


|   | DPE 09...25 | DPE 32 and 38 |
|---|-------------|---------------|
| c | 3.39 (86mm) | 3.62 (92mm)   |
| G | 1.38 (35mm) | 1.38 (35mm)   |
| H | 2.36 (60mm) | 2.36 (60mm)   |

## Mounting

DPE 09...38 on Mounting Rail AM1 DP200, DR 200 or AM1 DE200 (Width 1.38 in./35 mm)

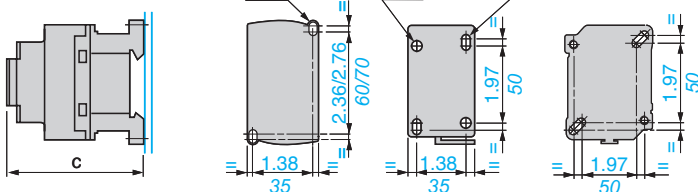
in.  
mm



|                        | DPE 09...25 | DPE 32 and 38 |
|------------------------|-------------|---------------|
| b                      | 3.03 (77mm) | 3.35 (85mm)   |
| c (AM1-DP200 or DR200) | 3.46 (88mm) | 3.70 (94mm)   |
| c (AM1-DE200)          | 3.78 (96mm) | 4.02 (102mm)  |

## DPE 09...38 Panel Mounted

in.  
mm

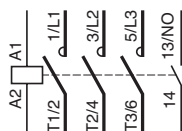


|   | DPE 09...25 | DPE 32 and 38 |
|---|-------------|---------------|
| c | 3.39 (86mm) | 3.62 (92mm)   |

## Schemes

### 3-pole Contactors

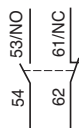
DPE 09...38



### Front Mounted Add-on Contact Blocks. Instantaneous Auxiliary Contacts

1 N/O + 1 N/C

DPEAN11





## Presentation



Easy TeSys thermal overload relays are designed to protect a.c. circuits and motors against:

- overloads
- phase failure
- long starting time
- prolonged stalled rotor condition.

The thermal relay permanently controls the current driven by the motor. When this current exceeds the setting, its auxiliary contacts will change state, causing the motor to stop.

## Description

- 1 Adjustment dial  $I_r$
- 2 Test button  
Operation of the Test button allows:
  - checking of control circuit wiring
  - simulation of relay tripping (actuates both the N/O and N/C contacts)
- 3 Stop button. Actuates the N/C contact; does not affect the N/O contact
- 4 Reset button
- 5 Trip indicator
- 6 Setting locked by sealing the cover
- 7 Selector for manual or automatic reset

Easy TeSys overload relays are supplied with the selector in the manual position, protected by a cover.

Deliberate action is required to move it to the automatic position.

## Easy TeSys thermal overload relays

3-pole thermal overload relays

Direct connection to Easy TeSys contactors



### Differential Thermal Overload Relays

for Use with Fuses or Circuit Breakers

- Compensated relays with manual or automatic reset
- with relay trip indicator
- for a.c

| Relay Setting Range (A)                                         | Fuses to Be Used with Selected Relay |        | For Use with Contactor | Reference | Weight Lb      |
|-----------------------------------------------------------------|--------------------------------------|--------|------------------------|-----------|----------------|
|                                                                 | aM (A)                               | gG (A) |                        |           |                |
| Class 10 <sup>(1)</sup> for Connection by Screw Clamp Terminals |                                      |        |                        |           |                |
| 0.10...0.16                                                     | 0.25                                 | 2      | DPE09...32             | DPER01    | 0.287 (0.13kg) |
| 0.16...0.25                                                     | 0.5                                  | 2      | DPE09...32             | DPER02    | 0.287 (0.13kg) |
| 0.25...0.40                                                     | 1                                    | 2      | DPE09...32             | DPER03    | 0.287 (0.13kg) |
| 0.40...0.63                                                     | 1                                    | 2      | DPE09...32             | DPER04    | 0.287 (0.13kg) |
| 0.63...1                                                        | 2                                    | 4      | DPE09...32             | DPER05    | 0.287 (0.13kg) |
| 1...1.6                                                         | 2                                    | 4      | DPE09...32             | DPER06    | 0.287 (0.13kg) |
| 1.6...2.5                                                       | 4                                    | 6      | DPE09...32             | DPER07    | 0.287 (0.13kg) |
| 2.5...4                                                         | 6                                    | 10     | DPE09...32             | DPER08    | 0.287 (0.13kg) |
| 4...6                                                           | 8                                    | 16     | DPE09...32             | DPER10    | 0.287 (0.13kg) |
| 5.5...8                                                         | 12                                   | 20     | DPE09...32             | DPER12    | 0.287 (0.13kg) |
| 7...10                                                          | 12                                   | 20     | DPE09...32             | DPER14    | 0.287 (0.13kg) |
| 9...13                                                          | 16                                   | 25     | DPE12...32             | DPER16    | 0.287 (0.13kg) |
| 12...18                                                         | 20                                   | 35     | DPE18...32             | DPER21    | 0.287 (0.13kg) |
| 16...24                                                         | 25                                   | 50     | DPE25...32             | DPER22    | 0.287 (0.13kg) |
| 23...32                                                         | 40                                   | 63     | DPE25...32             | DPER32    | 0.287 (0.13kg) |

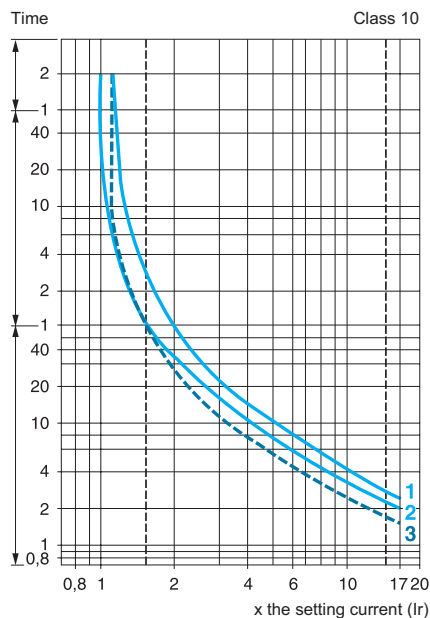
<sup>(1)</sup> Standard UL 60947-4-1 specifies a tripping time for 7.2 times the setting current  $I_R$ : class 10: between 4 and 10 seconds.

| Power Circuit Characteristics                                                                                          |                                                                      |                        |                                                                     |                        |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|------------------------|---------------------------------------------------------------------|------------------------|
| Relay Type                                                                                                             |                                                                      | Ref.                   | DPER                                                                |                        |
|                                                                                                                        |                                                                      | Size                   | 01...21                                                             | 22...32                |
|                                                                                                                        |                                                                      |                        | 1                                                                   |                        |
| Tripping class                                                                                                         | Conforming to IEC 60947-4-1                                          |                        | 10                                                                  |                        |
| Rated insulation voltage                                                                                               | Conforming to IEC 60947-4-1                                          | V                      | 690                                                                 |                        |
| Rated impulse withstand voltage (Uimp)                                                                                 |                                                                      | kV                     | 6                                                                   |                        |
| Frequency limits                                                                                                       | Of the operating current                                             | Hz                     | 50...60                                                             |                        |
| Setting range                                                                                                          | Depending on model                                                   | A                      | 0.1...18                                                            | 16...38                |
| Power Circuit Connections                                                                                              |                                                                      |                        |                                                                     |                        |
| Connection by Screw Clamp Terminals                                                                                    |                                                                      | Minimum/maximum c.s.a. |                                                                     |                        |
|                                                                                                                        | Flexible cable without cable end 1 conductor                         | mm²                    | 1.5...6<br>AWG 16...10                                              | 2.5...10<br>AWG 14...8 |
|                                                                                                                        | Flexible cable with cable end 1 conductor                            |                        | 1...4<br>AWG 18...10                                                | 1.5...6<br>AWG 16...10 |
|                                                                                                                        | Solid cable without cable end 1 conductor                            |                        | 1...6<br>AWG 18...10                                                | 2.5...10<br>AWG 14...8 |
|                                                                                                                        | Tightening torque                                                    | Lbf.in                 | 15.05 (1.7N.m)                                                      | 22.13 (2.5N.m)         |
| Auxiliary Contact Characteristics                                                                                      |                                                                      |                        |                                                                     |                        |
| Conventional thermal current                                                                                           |                                                                      | A                      | 5                                                                   |                        |
| Max. sealed consumption of the operating coils of controlled contactors (Occasional operating cycles of contact 95-96) | a.c. supply                                                          | V                      | 110                                                                 | 120                    |
|                                                                                                                        |                                                                      | A                      | 3.27                                                                | 3                      |
| Protection against short-circuits                                                                                      | By gG, maximum rating or by GB2                                      | A                      | 5                                                                   |                        |
| Connection by screw clamp terminals                                                                                    | Flexible cable without cable end 1 conductor                         | mm²                    | Minimum/maximum c.s.a.<br>2 x 1...2.5 AWG 2 x 18...10               |                        |
|                                                                                                                        | Flexible cable with cable end 1 conductor                            |                        | 2 x 1...2.5 AWG 2 x 18...10                                         |                        |
|                                                                                                                        | Solid cable without cable end 1 conductor                            |                        | 2 x 1...2.5 AWG 2 x 18...10                                         |                        |
|                                                                                                                        | Tightening torque                                                    | Lbf.in                 | 15.05 (1.7N.m)                                                      |                        |
| Environment                                                                                                            |                                                                      |                        |                                                                     |                        |
| Conforming to standard                                                                                                 |                                                                      |                        | IEC 60947-4-1, IEC 60947-5-1, UL 60947-4-1, CSA C22.2 No. 60947-4-1 |                        |
| Product certifications                                                                                                 |                                                                      |                        | cUL, UL Listed                                                      |                        |
| Degree of protection                                                                                                   | Conforming to IEC 60529                                              |                        | IP2X                                                                |                        |
| Protective treatment                                                                                                   | Conforming to IEC 60068                                              |                        | "TH"                                                                |                        |
| Ambient air temperature                                                                                                | Storage                                                              | °F                     | -76...176 (-60...80°C)                                              |                        |
|                                                                                                                        | Normal operation without derating (IEC 60947-4-1)                    |                        | -4...140 (-20...+60°C)                                              |                        |
|                                                                                                                        | Minimum/maximum operating temperature (with derating) <sup>(1)</sup> |                        | -4...158 (-20...70°C)                                               |                        |
| Operating positions without derating                                                                                   | In relation to normal vertical mounting plane                        |                        | Any position                                                        |                        |
| Flame resistance                                                                                                       | Conforming to IEC 60068-2-1                                          | °F                     | 1562 (850°C)                                                        |                        |
| Shock resistance                                                                                                       | Permissive acceleration conforming to IEC 60068-2-7                  |                        | 6 gn - 11 ms                                                        |                        |
| Vibration resistance                                                                                                   | Permissive acceleration conforming to IEC 60068-2-6                  |                        | 3 gn                                                                |                        |
| Dielectric strength at 50 Hz                                                                                           | Conforming to IEC 60255-5                                            | kV                     | 6                                                                   |                        |
| Surge withstand                                                                                                        | Conforming to IEC 60801-5                                            |                        | 6                                                                   |                        |
| Operating Characteristics                                                                                              |                                                                      |                        |                                                                     |                        |
| Temperature compensation                                                                                               |                                                                      | °F                     | -4...140 (-20...+60°C)                                              |                        |
| Tripping threshold                                                                                                     | Conforming to IEC 60947-4-1                                          | A                      | 1.14 ± 0.06 Ir                                                      |                        |
| Sensitivity to phase failure                                                                                           | Conforming to IEC 60947-4-1                                          |                        | Tripping current 130 % of Ir on two phase, the last one at 0        |                        |

<sup>(1)</sup> Contact your regional sales.

## Tripping Curves

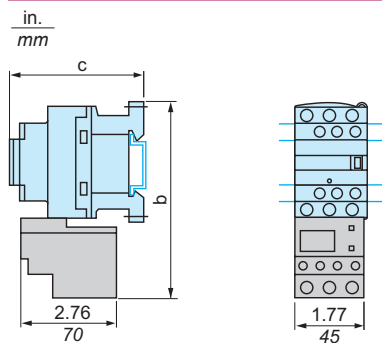
Average Operating Time Related to Multiples of The Setting Current



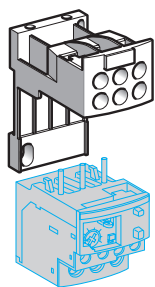
- 1 Balanced operation, 3-phase, without prior current flow (cold state)
- 2 2-phase operation, without prior current flow (cold state)
- 3 Balanced operation, 3-phase, after a long period at the set current (hot state)

## DPER01...32

Direct Mounting Under DPE Contactors with Screw Clamp Connections



|   | DPER01...18  | DPER25...35  |
|---|--------------|--------------|
| b | 4.84 (123mm) | 5.39 (137mm) |
| c | 3.39 (86mm)  | 3.62 (92mm)  |

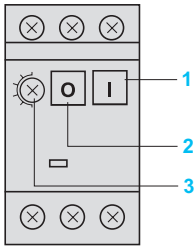


LAD7B106

## Panel Mount Accessory

| Description    | For Use with | Sold in Lots of | Unit Reference |
|----------------|--------------|-----------------|----------------|
| Terminal block | DPER01...32  | 1               | LAD7B106       |

### Presentation



GP2E

Easy TeSys includes 3-pole thermal-magnetic circuit breakers conforming to IEC 60947-2 and IEC 60947-4-1.

These devices also conform to UL 60947-4-1 as manual motor controllers and are suitable for the motor disconnect.

Easy TeSys manual motor controllers are designed to control and protect motors.

#### Connection

These circuit breakers are designed for connection by screw clamp terminals. This technique ensures secure, permanent and durable clamping that is resistant to harsh environments, vibration and impact and is even more effective when conductors without cable ends are used. Each connection can take two independent conductors.

#### Push button control

Energisation is controlled manually by operating the Start button "I" 1. De-energisation is controlled manually by operating the Stop button "O" 2, or automatically by the thermal-magnetic protection elements or by a voltage trip attachment.

#### Protection of motors

Motor protection is provided by the thermal-magnetic protection elements incorporated in the motor circuit breaker.

As per IEC 60947-4-1 the magnetic elements (short-circuit protection) have a non-adjustable tripping threshold, which is equal to about 13 times the maximum setting current of the thermal trips.

The thermal elements (overload protection) include automatic compensation for ambient temperature variations.

The rated operational current of the motor is displayed by means of a graduated knob 3.

All live parts are protected against direct finger contact.

Easy TeSys manual motor controllers are easily mounted on din rail or directly to the panel.

### Manual Motor Controllers

#### Push Button Control

| Standard Power Ratings of 3-phase Motors 50/60 Hz in Category AC-3 |       |       |       |       | Setting Range of Thermal Trips | Magnetic Tripping Current $I_d \pm 20\%$ | Reference | Weight          |
|--------------------------------------------------------------------|-------|-------|-------|-------|--------------------------------|------------------------------------------|-----------|-----------------|
| 230 V                                                              | 400 V | 440 V | 500 V | 690 V |                                |                                          |           |                 |
| kW                                                                 | kW    | kW    | kW    | kW    | A                              | A                                        |           | Lb              |
| —                                                                  | —     | —     | —     | —     | 0.1...0.16                     | 1.5                                      | GP2E01    | 0.573 (0.260kg) |
| —                                                                  | —     | —     | —     | —     | 0.16...0.25                    | 2.4                                      | GP2E02    | 0.573 (0.260kg) |
| —                                                                  | —     | —     | —     | —     | 0.25...0.40                    | 5                                        | GP2E03    | 0.573 (0.260kg) |
| —                                                                  | —     | —     | —     | 0.37  | 0.40...0.63                    | 8                                        | GP2E04    | 0.573 (0.260kg) |
| —                                                                  | —     | —     | 0.37  | 0.55  | 0.63...1                       | 13                                       | GP2E05    | 0.573 (0.260kg) |
| —                                                                  | 0.37  | 0.55  | 0.75  | 1.1   | 1...1.6                        | 22.5                                     | GP2E06    | 0.573 (0.260kg) |
| 0.37                                                               | 0.75  | 1.1   | 1.1   | 1.5   | 1.6...2.5                      | 33.5                                     | GP2E07    | 0.573 (0.260kg) |
| 0.75                                                               | 1.5   | 1.5   | 2.2   | 3     | 2.5...4                        | 51                                       | GP2E08    | 0.573 (0.260kg) |
| 1.1                                                                | 2.2   | 3     | 3.7   | 4     | 4...6.3                        | 78                                       | GP2E10    | 0.573 (0.260kg) |
| 2.2                                                                | 4     | 4     | 5.5   | 7.5   | 6...10                         | 138                                      | GP2E14    | 0.573 (0.260kg) |
| —                                                                  | 5.5   | 5.5   | 9     | 11    | 9...14                         | 170                                      | GP2E16    | 0.573 (0.260kg) |
| 4                                                                  | 7.5   | 9     | 10    | 15    | 13...18                        | 223                                      | GP2E20    | 0.573 (0.260kg) |
| 5.5                                                                | 9     | 11    | 11    | 18.5  | 17...23                        | 327                                      | GP2E21    | 0.573 (0.260kg) |
| 5.5                                                                | 11    | 11    | 15    | 22    | 20...25                        | 327                                      | GP2E22    | 0.573 (0.260kg) |
| 7.5                                                                | 15    | 15    | 18.5  | 22    | 24...32                        | 416                                      | GP2E32    | 0.573 (0.260kg) |

### Manual Motor Controllers from 3/4 to 20HP/460V, with Screw Clamp Terminals

#### Push Button Control

| Thermal Setting (A) | Maximum Horsepower Ratings |      |      |             |      |      |      |      | Group Motor Applications | Reference |
|---------------------|----------------------------|------|------|-------------|------|------|------|------|--------------------------|-----------|
|                     | Single-Phase               |      |      | Three-Phase |      |      |      |      |                          |           |
|                     | 115V                       | 200V | 230V | 115V        | 200V | 230V | 460V | 575V |                          |           |
| 0.1...0.16          | —                          | —    | —    | —           | —    | —    | —    | —    | 450                      | GP2E01    |
| 0.16...0.25         | —                          | —    | —    | —           | —    | —    | —    | —    | 450                      | GP2E02    |
| 0.25...0.40         | —                          | —    | —    | —           | —    | —    | —    | —    | 450                      | GP2E03    |
| 0.40...0.63         | —                          | —    | —    | —           | —    | —    | —    | —    | 450                      | GP2E04    |
| 0.63...1            | —                          | —    | —    | —           | —    | —    | —    | 1/2  | 450                      | GP2E05    |
| 1...1.6             | —                          | —    | 1/10 | —           | —    | —    | 3/4  | 3/4  | 450                      | GP2E06    |
| 1.6...2.5           | —                          | 1/6  | 1/6  | —           | 1/2  | 1/2  | 1    | 1.5  | 450                      | GP2E07    |
| 2.5...4             | 1/8                        | 1/4  | 1/3  | —           | 3/4  | 3/4  | 2    | 3    | 450                      | GP2E08    |
| 4...6.3             | 1/4                        | 1/2  | 1/2  | 3/4         | 1    | 1.5  | 3    | 5    | 450                      | GP2E10    |
| 6...10              | 1/2                        | 1    | 1.5  | 1           | 2    | 3    | 5    | 7.5  | 450                      | GP2E14    |
| 9...14              | 3/4                        | 2    | 2    | 2           | 3    | 3    | 10   | 10   | 450                      | GP2E16    |
| 13...18             | 1                          | 2    | 3    | 2           | 5    | 5    | 10   | 15   | 450                      | GP2E20    |
| 17...23             | 1.5                        | 3    | 3    | 3           | 5    | 7.5  | 15   | 20   | 450                      | GP2E21    |
| 20...25             | 2                          | —    | —    | —           | 7.5  | 7.5  | 15   | 20   | 450                      | GP2E22    |
| 24...32             | 2                          | 5    | 5    | 5           | 7.5  | 10   | 20   | 25   | 450                      | GP2E32    |

# Protection components

## Easy TeSys manual motor controllers

### North American Short Circuit and Motor Group Ratings

| Model  | Overload Range | Maximum RMS Short-Circuit Current, kA |        |        |
|--------|----------------|---------------------------------------|--------|--------|
|        |                | 240 V+                                | 480 V+ | 600 V+ |
| GP2E01 | 0.1-0.16       | 35                                    | 35     | 18     |
| GP2E02 | 0.16-0.25      | 35                                    | 35     | 18     |
| GP2E03 | 0.25-0.40      | 35                                    | 35     | 18     |
| GP2E04 | 0.40-0.63      | 35                                    | 35     | 18     |
| GP2E05 | 0.63-1.0       | 35                                    | 35     | 18     |
| GP2E06 | 1.0-1.6        | 35                                    | 35     | 18     |
| GP2E07 | 1.6-2.5        | 35                                    | 35     | 18     |
| GP2E08 | 2.5-4.0        | 35                                    | 35     | 18     |
| GP2E10 | 4.0-6.3        | 35                                    | 35     | 18     |
| GP2E14 | 6-10           | 30                                    | 30     | 18     |
| GP2E16 | 9-14           | 25                                    | 25     | 10     |
| GP2E20 | 13-18          | 25                                    | 25     | 10     |
| GP2E21 | 17-23          | 25                                    | 10     | 10     |
| GP2E22 | 20-25          | 25                                    | 10     | 10     |
| GP2E32 | 24-32          | 25                                    | 10     | 10     |

+ - Nominal System Voltage.

Easy TeSys contactors may be used on the load side of the Easy TeSys Manual Motor Controllers in Group Installations on a circuit with an available short-circuit current no greater than shown in the Table below when protected by fuses or circuit breakers:

| Type   | Contactor DPE  | Maximum RMS Short-Circuit Current, kA |         |
|--------|----------------|---------------------------------------|---------|
|        |                | 480 Vac                               | 600 Vac |
| GP2E01 | DPE09 to DPE38 | 22                                    | 22      |
| GP2E02 | DPE09 to DPE38 | 22                                    | 22      |
| GP2E03 | DPE09 to DPE38 | 22                                    | 22      |
| GP2E04 | DPE09 to DPE38 | 22                                    | 22      |
| GP2E05 | DPE09 to DPE38 | 22                                    | 22      |
| GP2E06 | DPE09 to DPE38 | 22                                    | 22      |
| GP2E07 | DPE09 to DPE38 | 22                                    | 22      |
| GP2E08 | DPE09 to DPE38 | 22                                    | 22      |
| GP2E10 | DPE09 to DPE38 | 22                                    | 22      |
| GP2E14 | DPE12 to DPE38 | 22                                    | 22      |
| GP2E16 | DPE18 to DPE38 | 22                                    | 10      |
| GP2E20 | DPE18 to DPE38 | 22                                    | 10      |
| GP2E21 | DPE32 to DPE38 | 10                                    | 10      |
| GP2E22 | DPE32 to DPE38 | 10                                    | 10      |

\* The above Group Installations may be used with Schneider's GV2Gx45 or GV2Gx54 busbar, and/or GV1-G09 adapter.

| Environment                                         |                                   |                                                                            |                        |
|-----------------------------------------------------|-----------------------------------|----------------------------------------------------------------------------|------------------------|
| Circuit Breaker Type                                |                                   | GP2E                                                                       |                        |
| Conforming to standards                             |                                   | IEC 60947-2, IEC 60947-4-1, UL 60947-4-1, CSA C22.2 No. 60947-4-1          |                        |
| Product certifications                              |                                   | cUL, UL Listed                                                             |                        |
| Protective treatment                                | Conforming to IEC 60068-2-30      | IEC60068-2-30 Test Db, Variant 2                                           |                        |
| Degree of protection                                |                                   | In <b>GV2 MC01</b> enclosure: IP 41<br>In <b>GV2 MC02</b> enclosure: IP 55 |                        |
| Ambient air temperature                             | Storage                           | °F                                                                         | -40...176 (-40...80°C) |
|                                                     | Operation                         |                                                                            | -4...140 (-20...60°C)  |
| Flame resistance                                    | Conforming to IEC 60695-2-1       | °F                                                                         | 1760 (960°C)           |
| Maximum operating altitude                          |                                   | ft                                                                         | 6561.68 (2000m)        |
| Cabling                                             |                                   | Min.                                                                       | Max.                   |
| Number of conductors and c.s.a.                     | Solid cable                       | mm²                                                                        | 2 x 1                  |
|                                                     | Flexible cable without cable end  | mm²                                                                        | 2 x 1.5                |
|                                                     | Flexible cable with cable end     | mm²                                                                        | 2 x 1                  |
|                                                     | AWG 75°C CU                       |                                                                            | 8-18                   |
| Suitable for isolation                              | Conforming to IEC 60947-1 § 7-1-6 |                                                                            | Yes                    |
| Tightening torque                                   |                                   | Lbf.in                                                                     | 15.05 (1.7N.m)         |
| Rated operational voltage (U <sub>e</sub> )         | Conforming to IEC 60947-2         | V                                                                          | 690                    |
| Rated insulation voltage (U <sub>i</sub> )          | Conforming to IEC 60947-2         | V                                                                          | 690                    |
| Rated operational frequency                         | Conforming to IEC 60947-2         | Hz                                                                         | 50/60                  |
| Rated impulse withstand voltage (U <sub>imp</sub> ) | Conforming to IEC 60947-2         | kV                                                                         | 6                      |
| Total power dissipated per pole                     |                                   | W                                                                          | 2.5                    |
| Mechanical durability (C.O.: closing, opening)      |                                   | C.O.                                                                       | 100 000                |
| Electrical durability                               | For AC-3 duty                     | C.O.                                                                       | 100 000                |
| Duty class (maximum operating rate)                 |                                   | C.O./h                                                                     | 25                     |

| Breaking Capacity                           |           |                                  |    |          |            |     |     |     |    |    |     |
|---------------------------------------------|-----------|----------------------------------|----|----------|------------|-----|-----|-----|----|----|-----|
| Circuit Breaker Type                        |           |                                  |    | GP2E     |            |     |     |     |    |    |     |
|                                             |           |                                  |    | 01 to 06 | 07         | 08  | 10  | 14  | 16 | 20 | 21  |
| Rating                                      |           |                                  |    | A        | 0.1 to 1.6 | 2,5 | 4   | 6.3 | 10 | 14 | 18  |
| Breaking capacity conforming to IEC 60947-2 | 230/240 V | I <sub>cu</sub>                  | kA | ★        | ★          | ★   | ★   | ★   | ★  | ★  | 30  |
|                                             |           | I <sub>cs</sub> % <sup>(1)</sup> |    | ★        | ★          | ★   | ★   | ★   | ★  | ★  | 100 |
|                                             | 400/415 V | I <sub>cu</sub>                  | kA | ★        | ★          | ★   | ★   | ★   | 10 | 10 | 10  |
|                                             |           | I <sub>cs</sub> % <sup>(1)</sup> |    | ★        | ★          | ★   | ★   | ★   | 50 | 50 | 40  |
|                                             | 440 V     | I <sub>cu</sub>                  | kA | ★        | ★          | ★   | 30  | 10  | 6  | 6  | 5   |
|                                             |           | I <sub>cs</sub> % <sup>(1)</sup> |    | ★        | ★          | ★   | 100 | 100 | 50 | 50 | 50  |
|                                             | 500 V     | I <sub>cu</sub>                  | kA | ★        | ★          | ★   | 30  | 8   | 5  | 5  | 3   |
|                                             |           | I <sub>cs</sub> % <sup>(1)</sup> |    | ★        | ★          | ★   | 100 | 100 | 75 | 75 | 75  |
|                                             | 690 V     | I <sub>cu</sub>                  | kA | ★        | 2          | 2   | 2   | 2   | 2  | 2  | 2   |
|                                             |           | I <sub>cs</sub> % <sup>(1)</sup> |    | ★        | 75         | 75  | 75  | 75  | 75 | 75 | 75  |

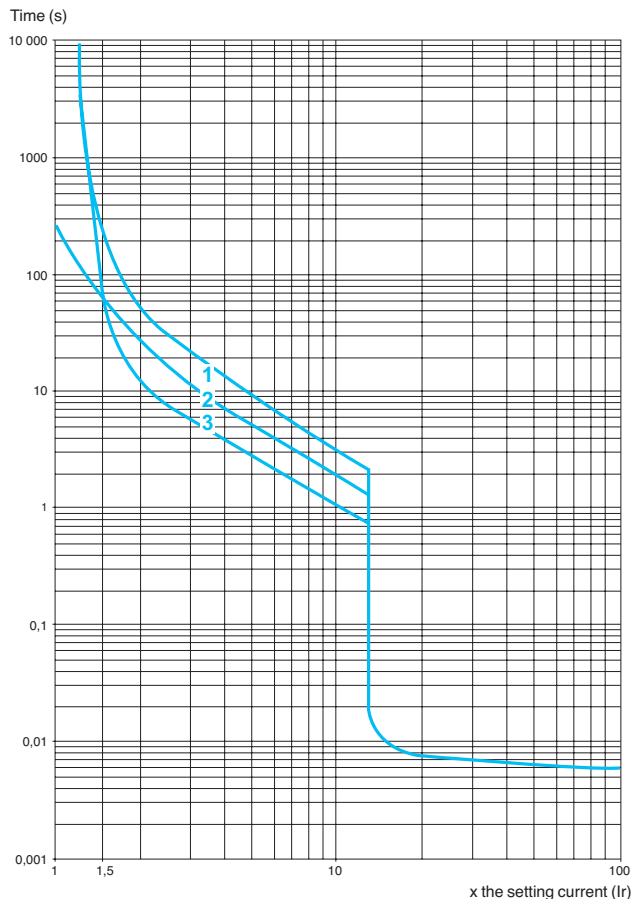
★ > 100 kA  
(1) As % of I<sub>cu</sub>

# Protection components

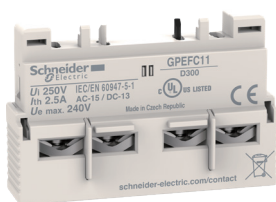
## Easy TeSys manual motor controllers

### Tripping Curves

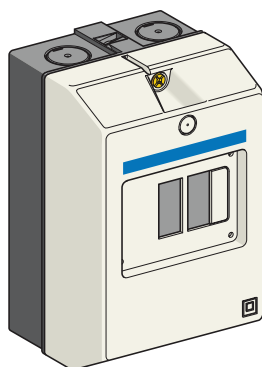
Average Operating Times at 20 °C Related to Multiples of the Setting Current



- 1 3 poles from cold state  
 2 2 poles from cold state  
 3 3 poles from hot state



GPEFC11



GV2MC

### Contact Blocks

#### Instantaneous Auxiliary Contacts

| Mounting | Maximum Number | Type of Contacts | Unit Reference | Weight Lb      | Tightening Torque |
|----------|----------------|------------------|----------------|----------------|-------------------|
| Side     | 2              | N/O + N/C        | GPEFC11        | 0.11 (0.050kg) | 1.2               |

### Enclosures

| Type                                                               | Degree of Protection | Reference | Weight Lb       |
|--------------------------------------------------------------------|----------------------|-----------|-----------------|
| Surface mounting, double insulated, with protective sealable cover | IP41                 | GV2MC01   | 0.639 (0.290kg) |
|                                                                    | IP55                 | GV2MC02   | 0.639 (0.290kg) |

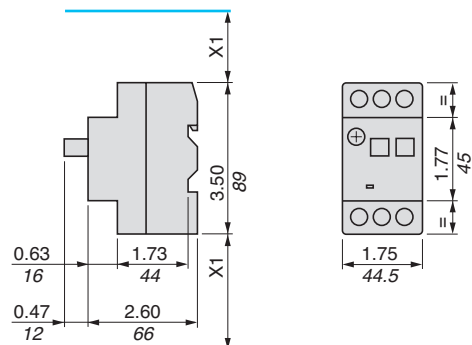
### Wiring Accessories

| Description                | Application                               | Pitch in.       | Unit Reference |
|----------------------------|-------------------------------------------|-----------------|----------------|
| Sets of 3-pole 63A busbars | 2 tap-offs                                | 1.77 (45mm)     | GV2G245        |
|                            | 3 tap-offs                                | 1.77 (45mm)     | GV2G345        |
|                            | 4 tap-offs                                | 1.77 (45mm)     | GV2G445        |
| Description                | Application                               | Sold in Lots of | Unit Reference |
| Terminal Block             | Connection from the top                   | 1               | GV1G09         |
| Combination Block          | Between GP2E and contactor DPE09 to DPE38 | 10              | GV2AF3         |

### Dimensions

#### GP2E

in.  
mm

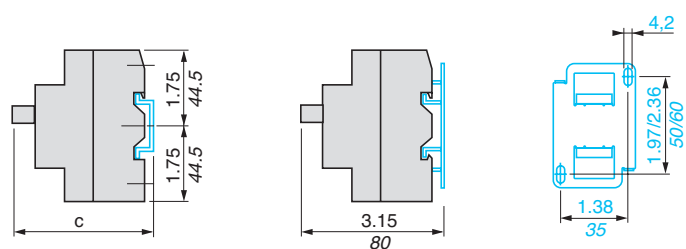


X1: electrical clearance = 1.73 (40mm) for  $U_e \leq 690$  V

### Mounting

#### GP2E on 1.38 (35mm) ≤ rail

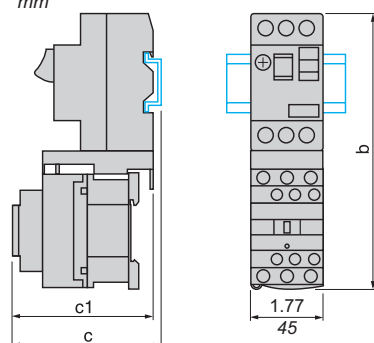
in.  
mm



$c = 3.09$  (78.5mm) on AM1 DP200 (35 x 7.5)  
 $c = 3.39$  (86mm) on AM1 DE200 and AM1 ED200 (35 x 15)

#### GV2AF3, Combination GP2E + DPE Contactor

in.  
mm

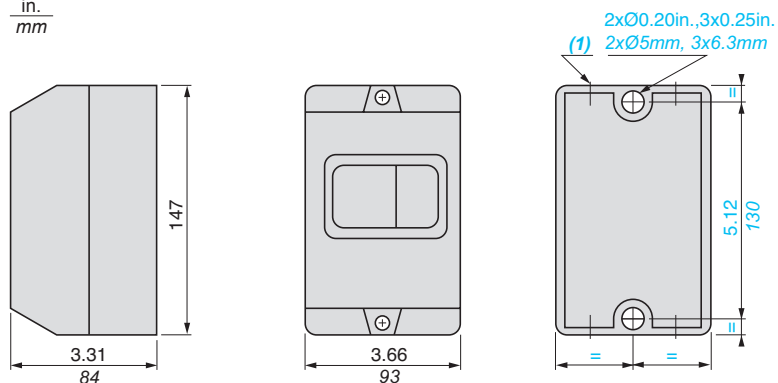


| GP2E + | DPE09...D18    | DPE25 and D32  |
|--------|----------------|----------------|
| b      | 6.94 (176.4mm) | 7.35 (186.8mm) |
| c1     | 3.70 (94.1mm)  | 3.95 (100.4mm) |
| c      | 3.92 (99.6mm)  | 4.17 (105.9mm) |

## Dimensions

### Surface Mounting Enclosure GV2 MC0●

$\frac{\text{in.}}{\text{mm}}$



(1) 4 knock-outs for 0.63 (16 mm) plastic cable gland or 0.63 (16 mm) conduit



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