

# Manual Motor Starters

## Ex9S



[na.noark-electric.com](http://na.noark-electric.com)

# NOARK



# Manual Motor Starters

## Ex9S PRODUCT OVERVIEW

---

## Features

Ex9S Manual Motor Starters provide manual isolation, manual motor control, and overcurrent protection. They are electro-mechanical devices combining the functions below in one unit.

- Disconnect for Motor Branch Circuit
- Manual Motor Control (automatic when used with contactor)
- Branch-Circuit Short Circuit Protection (Magnetic Protection)
- Overload Protection (Thermal Protection) - Trip Class 10

The National Electrical Code requires an individual Motor Branch Circuit to be protected by a UL/CSA Listed Fuse, Circuit breaker or Self-Protected Combination Motor Controller.

### Available as:

- Up to 80A @600Vac
- UL 60947-4-1 Type E Self Protection-Ex9S32 and Ex9S80
- UL 60947-4-1 Type F Group Motor Protection-Ex9S32
- Built-in fault indication
- Full range of accessories
- Lockable handle



## Manual Motor Starters

NOARK Ex9S SERIES

---

### Certifications

Ex9S Manual Motor Starters provide manual isolation, manual motor control, and overcurrent protection. They are electro-mechanical devices combining the functions below in one unit.

- UL listed
- CCC Certified
- NOM Certified
- RoHs Compliant



### Standards Compliance

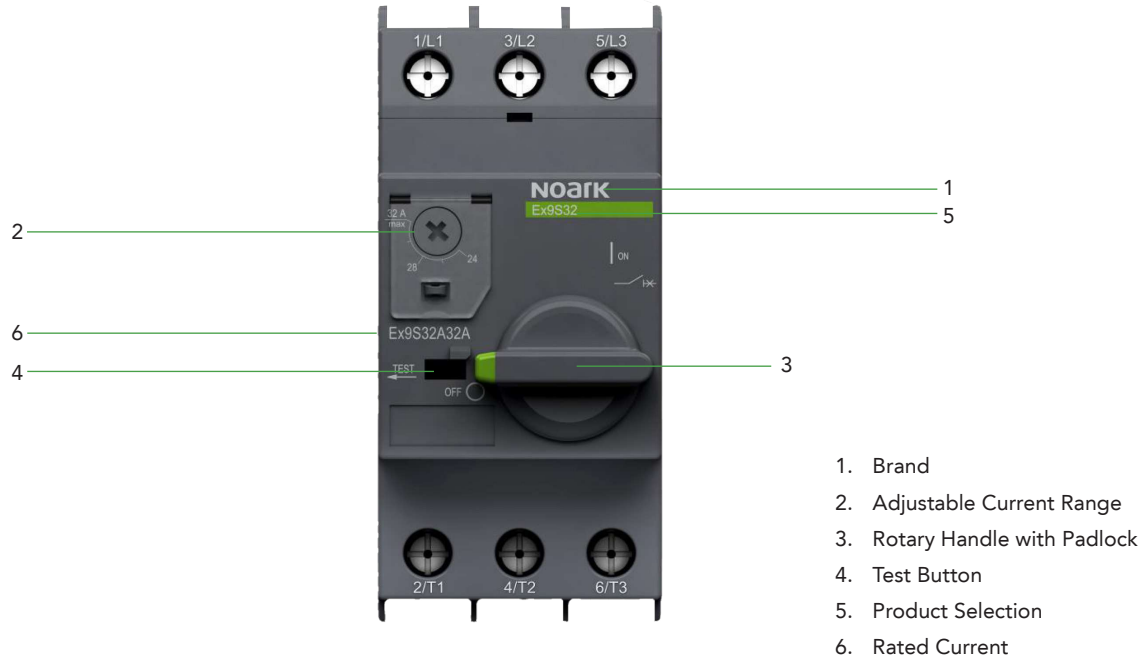
- UL 60947-1; UL 60947-4-1
- IEC/EN 60947-1, IEC/EN 60947-2, IEC/EN 60947-4-1, IEC/EN 60947 -5-1
- GB 14048.1, GB 14048.2, GB 14048.4
- CSA 22.2 NO. 60947-1, CSA 22.2 NO. 60947-4-1



# Manual Motor Starters

## Ex9S PRODUCT SELECTION

### Label



## Product Selection Guide

| Ex9S                              | 32                             | A  | 25  | A                                       | M   |
|-----------------------------------|--------------------------------|--|---|---|---|
| <b>NOARK Manual Motor Starter</b> | <b>Frame Sizes</b>             | <b>Operation Type</b>  | <b>Setting Current</b>  | <b>Instantaneous Magnetic Trip Type</b> | <b>Protection Type</b>                    |
| Ex9S                              | 32: Up to 32A<br>80: Up to 80A | A: Rotary Operation<br>B: Pushbutton Operation (Not Available) | *<br>0.16: 0.1-0.16A<br>0.25: 0.16-0.25A<br>0.4: 0.25-0.4A<br>0.63: 0.4-0.63A<br>1: 0.63-1A<br>1.6: 1-1.6A<br>2.5: 1.6-2.5A<br>4: 2.5-4A<br>6.3: 4-6.3A<br>10: 6-10A<br>14: 9-14A<br>18: 13-18A<br>23: 17-23A<br>25: 20-25A<br>32: 24-32A<br><br>**<br>20: 14-20A<br>25: 18-25A<br>32: 23-32A<br>40: 30-40A<br>50: 38-50A<br>63: 48-63A<br>72: 60-72A<br>80: 70-80A | A : Standard<br>**B: High               | Blank : Thermal-Magnetic<br>**M: Magnetic |

\* Applies to Ex9S32  
 \*\* Applies to Ex9S80



# Manual Motor Starters

## Ex9S SPECIFICATIONS



### Ex9S32

| Rated Current Amp (Min-Max) | Thermal Magnetic protection |             |
|-----------------------------|-----------------------------|-------------|
|                             | Product                     | Part Number |
| 0.10~0.16                   | Ex9S32A0.16A                | 1600046     |
| 0.16~0.25                   | Ex9S32A0.25A                | 1600047     |
| 0.25~0.40                   | Ex9S32A0.4A                 | 1600048     |
| 0.40~0.63                   | Ex9S32A0.63A                | 1600049     |
| 0.63~1                      | Ex9S32A1A                   | 1600050     |
| 1~1.6                       | Ex9S32A1.6A                 | 1600051     |
| 1.6~2.5                     | Ex9S32A2.5A                 | 1600052     |
| 2.5~4                       | Ex9S32A4A                   | 1600053     |
| Rated Current Amp (Min-Max) | Thermal Magnetic protection |             |
|                             | Product                     | Part Number |
| 4~6.3                       | Ex9S32A6.3A                 | 1600054     |
| 6~10                        | Ex9S32A10A                  | 1600055     |
| 9~14                        | Ex9S32A14A                  | 1600056     |
| 13~18                       | Ex9S32A18A                  | 1600057     |
| 17~23                       | Ex9S32A23A                  | 1600058     |
| 20~25                       | Ex9S32A25A                  | 1600059     |
| 24~32                       | Ex9S32A32A                  | 1600060     |



### Ex9S80

**Certifications**  
IEC/EN 60947-4-1

| Rated Current Amp (Min-Max) | Thermal Magnetic protection |             |
|-----------------------------|-----------------------------|-------------|
|                             | Product                     | Part Number |
| 14~20                       | Ex9S80A20A                  | 1600170     |
| 18~25                       | Ex9S80A25A                  | 1600171     |
| 23~32                       | Ex9S80A32A                  | 1600172     |
| 30~40                       | Ex9S80A40A                  | 1600173     |
| 38~50                       | Ex9S80A50A                  | 1600174     |
| 48~63                       | Ex9S80A63A                  | 1600175     |
| 60~72                       | Ex9S80A72A                  | 1600176     |
| 70~80                       | Ex9S80A80A                  | 1600177     |
| Rated Current Amp (Min-Max) | Magnetic protection         |             |
|                             | Product                     | Part Number |
| 14~20                       | Ex9S80A20AM                 | 1600185     |
| 18~25                       | Ex9S80A25AM                 | 1600186     |
| 23~32                       | Ex9S80A32AM                 | 1600187     |
| 30~40                       | Ex9S80A40AM                 | 1600188     |
| 38~50                       | Ex9S80A50AM                 | 1600189     |
| 48~63                       | Ex9S80A63AM                 | 1600190     |
| 60~72                       | Ex9S80A72AM                 | 1600191     |
| 70~80                       | Ex9S80A80AM                 | 1600192     |
| Rated Current Amp (Min-Max) | Thermal Magnetic protection |             |
|                             | Product                     | Part Number |
| 14~20                       | Ex9S80A20B                  | 1600178     |
| 18~25                       | Ex9S80A25B                  | 1600179     |
| 23~32                       | Ex9S80A32B                  | 1600180     |
| 30~40                       | Ex9S80A40B                  | 1600181     |
| 38~50                       | Ex9S80A50B                  | 1600182     |
| 48~63                       | Ex9S80A63B                  | 1600183     |
| 60~72                       | Ex9S80A72B                  | 1600184     |
| Rated Current Amp (Min-Max) | Magnetic protection         |             |
|                             | Product                     | Part Number |
| 14~20                       | Ex9S80A20BM                 | 1600193     |
| 18~25                       | Ex9S80A25BM                 | 1600194     |
| 23~32                       | Ex9S80A32BM                 | 1600195     |
| 30~40                       | Ex9S80A40BM                 | 1600196     |
| 38~50                       | Ex9S80A50BM                 | 1600197     |
| 48~63                       | Ex9S80A63BM                 | 1600198     |
| 60~72                       | Ex9S80A72BM                 | 1600199     |



# Manual Motor Starters

## Ex9S SPECIFICATIONS

# Technical Data

| Description  |                           | Ex9S32  | Ex9S80                              |
|--|---------------------------|---|-------------------------------------|
| Rated operational current I <sub>e</sub> (A)           |                           | 32A   | 80A                                 |
| Conventional rated thermal current I <sub>th</sub> (A) |                           | 0.16~32A  | 14-80A                              |
| Tripping Class   |                           | 10  |                                     |
| Rated insulation voltage U <sub>i</sub> (Vac)          |                           | 690/IEC; 600/UL, CSA  |                                     |
| Rated operational voltage U <sub>e</sub> (AC)          |                           | 230/240, 400/415, 460/480, 575/600  |                                     |
| Rated impulse withstand voltage U <sub>imp</sub> (AC)  |                           | 6,000V  |                                     |
| Rated Operational Frequency (Hz)                       |                           | 50/60Hz   |                                     |
| Resistance to shock                                    |                           | 30 gn -11 ms  |                                     |
| Resistance to vibrations                               |                           | 5gn (5 -150Hz)  |                                     |
| Environmental Temperature                              | Transportation or Storage | -40°F to 176°F (-40°C to 80°C) <sup>1</sup>   |                                     |
|  | Working at                | -4°F to 140°F (-20°C to 60°C) <sup>2</sup>  |                                     |
|  | Testing at                | 59°F to 77°F (15°C to 25°C)   |                                     |
|  | Instantaneous limit       | -31°F to 158°F (-35°C to 70°C)  |                                     |
| Altitude ft (m)  |                           | Not to exceed 6,562 (2,000)   |                                     |
| Ambient Conditions                                     |                           | At mounting site, relative humidity not exceed 90% at the temperature 104°F (40°C), higher relative humidity is allowable under lower temperature   |                                     |
| Pollution Grade  |                           | III   |                                     |
| Mounting Conditions                                    |                           | The inclination between the mounting plane and the vertical plane shall not exceed 30°; The product shall be installed and operated at a place without obvious shock, impact and vibration. |                                     |
| Service life* (cycles)                                 | Electrical                | 50,000  | 50,000 (up to 63A) ;30,000(72A&80A) |
|  | Mechanical                | 100,000   | 50,000 (up to 72A) ;30,000(80A)     |
| Duty Class (cycles/hr)                                 |                           | 30, max. operating rate   |                                     |
| Degree of Protection                                   |                           | IP 20   |                                     |

1: 24 hours max. at the ultimated temperature  
 2: with temperature reduction factor  
 \*: close/open operation, and 30 cycles/hr for AC-3 Duty@400/415Vac



# Manual Motor Starters

## Ex9S SPECIFICATIONS

| Overload Protection Properties |                             |                                  |                     |                  |   |
|--------------------------------|-----------------------------|----------------------------------|---------------------|------------------|---|
|                                | Multiple of Setting Current | Initial Status                   | Time                | Expected Results | Ambient Temperature   |
| 1                              | 1.05                        | Cold Status                      | $t \geq 2h$         | Non-Tripping     | 68°F to $\pm 35.6^\circ\text{F}$<br>(+20°C to $\pm 2^\circ\text{C}$ ) |
| 2                              | 1.25                        | Heat Status (right after test 1) | $t < 2h$            | Tripping         |   |
| 3                              | 1.50                        |                                  | $t < 4 \text{ min}$ |                  |   |
| 4                              | 7.20                        | Cold Status                      | $4s < t \leq 10s$   |                  |   |

| Phase Failure Protection Properties |                             |                 |                                  |             |                  |   |
|-------------------------------------|-----------------------------|-----------------|----------------------------------|-------------|------------------|---|
|                                     | Multiple of Setting Current |                 | Initial Status                   | Time        | Expected Results | Ambient Temperature   |
|                                     | Any 2 Phase                 | The Other Phase |                                  |             |                  |   |
| 1                                   | 1.0                         | 0.9             | Cold Status                      | $t \geq 2h$ | Non-Tripping     | 68°F to $\pm 35.6^\circ\text{F}$<br>(+20°C to $\pm 2^\circ\text{C}$ ) |
| 2                                   | 1.15                        | 0               | Heat Status (right after test 1) | $t < 2h$    | Tripping         |   |

| Temperature Compensation Properties |                             |                                  |             |                  |  |
|-------------------------------------|-----------------------------|----------------------------------|-------------|------------------|--|
|                                     | Multiple of Setting Current | Initial Status                   | Time        | Expected Results | Ambient Temperature  |
| 1                                   | 1.0                         | Cold Status                      | $t \geq 2h$ | Non-Tripping     | 104°F to $\pm 35.6^\circ\text{F}$<br>(+40°C to $\pm 2^\circ\text{C}$ ) |
| 2                                   | 1.25                        | Heat Status (right after test 1) | $t < 2h$    | Tripping         |  |
| 3                                   | 1.05                        | Cold Status                      | $t \geq 2h$ | Non-Tripping     | -23°F to $\pm 35.6^\circ\text{F}$<br>(-5°C to $\pm 2^\circ\text{C}$ )  |
| 4                                   | 1.3                         | Heat Status (right after test 1) | $t < 2h$    | Tripping         |  |



# Manual Motor Starters

## Ex9S SPECIFICATIONS

### IEC Motor Power

| Manual self-protected starter | Overload Trip Range | Standard rated power of three-phase motor (kW)<br>AC-3,50Hz/60Hz |            |        |        |
|-------------------------------|---------------------|--|------------|--------|--------|
|                               |                     | 230/240Vac   | 400/415Vac | 500Vac | 690Vac |
| Ex9S32A0.16A                  | 0.1 - 0.16A         | -  | -          | 0.06   | 0.06   |
| Ex9S32A0.25A                  | 0.16- 0.25A         | -  | 0.06       | 0.09   | 0.12   |
| Ex9S32A0.4A                   | 0.25 - 4A           | 0.06   | 0.09       | 0.12   | 0.18   |
| Ex9S32A0.63A                  | 0.4 - 0.63A         | 0.09   | 0.18       | 0.18   | 0.25   |
| Ex9S32A1A                     | 0.63 - 1A           | 0.18   | 0.25       | 0.37   | 0.55   |
| Ex9S32A1.6A                   | 1 - 1.6A            | 0.25   | 0.55       | 0.75   | 1.1    |
| Ex9S32A2.5A                   | 1.6 - 2.5A          | 0.37   | 0.75       | 1.1    | 1.5    |
| Ex9S32A4A                     | 2.5 - 4A            | 0.75   | 1.5        | 2.2    | 3      |
| Ex9S32A6.3A                   | 4 - 6.3A            | 1.5  | 2.2        | 3      | 4      |
| Ex9S32A10A                    | 6 - 10A             | 2.2  | 4          | 5.5    | 7.5    |
| Ex9S32A14A                    | 9 - 14A             | 3  | 5.5        | 7.5    | 11     |
| Ex9S32A18A                    | 13 - 18A            | 4  | 7.5        | 11     | 15     |
| Ex9S32A23A                    | 17 - 23A            | 5.5  | 11         | 15     | 18.5   |
| Ex9S32A25A                    | 20 - 25A            | 5.5  | 11         | 15     | 22     |
| Ex9S32A32A                    | 24 - 32A            | 7.5  | 15         | 18.5   | 22     |
| Ex9S80A20A(M)                 | 14- 20A             | 4  | 7.5        | 11     | 15     |
| Ex9S80A20B(M)                 | 14- 20A             | 4  | 7.5        | 11     | 15     |
| Ex9S80A25A(M)                 | 18- 25A             | 5.5  | 11         | 15     | 22     |
| Ex9S80A25B(M)                 | 18- 25A             | 5.5  | 11         | 15     | 22     |
| Ex9S80A32A(M)                 | 23- 32A             | 7.5  | 15         | 18.5   | 30     |
| Ex9S80A32B(M)                 | 23- 32A             | 7.5  | 15         | 18.5   | 30     |
| Ex9S80A40A(M)                 | 30- 40A             | 11   | 18.5       | 22     | 37     |
| Ex9S80A40B(M)                 | 30- 40A             | 11   | 18.5       | 22     | 37     |
| Ex9S80A50A(M)                 | 38- 50A             | 11   | 22         | 30     | 45     |
| Ex9S80A50B(M)                 | 38- 50A             | 11   | 22         | 30     | 45     |
| Ex9S80A63A(M)                 | 48- 63A             | 15   | 30         | 37     | 55     |
| Ex9S80A63B(M)                 | 48- 63A             | 15   | 30         | 37     | 55     |
| Ex9S80A72A(M)                 | 60- 72A             | 18.5   | 37         | 45     | 65     |
| Ex9S80A72B(M)                 | 60- 72A             | 18.5   | 37         | 45     | 65     |
| Ex9S80A80A(M)                 | 70- 80A             | 22   | 45         | 50     | 70     |





# Manual Motor Starters

## Ex9S SPECIFICATIONS

### IEC Interrupting Capacity

| Manual self-protected starter | Overload Trip Range | 400 Vac              |                      |      |       | 690 Vac              |                      |      |       |
|-------------------------------|---------------------|----------------------|----------------------|------|-------|----------------------|----------------------|------|-------|
|                               |                     | I <sub>cu</sub> (kA) | I <sub>cs</sub> (kA) | FUSE |       | I <sub>cu</sub> (kA) | I <sub>cs</sub> (kA) | FUSE |       |
|                               |                     |                      |                      | aM   | gl/gG |                      |                      | aM   | gl/gG |
| Ex9S32A0.16A                  | 0.1 - 0.16A         | 100                  | 100                  | -    | -     | 100                  | 100                  | -    | -     |
| Ex9S32A0.25A                  | 0.16 - 0.25A        | 100                  | 100                  | -    | -     | 100                  | 100                  | -    | -     |
| Ex9S32A0.4A                   | 0.25 - 4A           | 100                  | 100                  | -    | -     | 100                  | 100                  | -    | -     |
| Ex9S32A0.63A                  | 0.4 - 0.63A         | 100                  | 100                  | -    | -     | 100                  | 100                  | -    | -     |
| Ex9S32A1A                     | 0.63 - 1A           | 100                  | 100                  | -    | -     | 100                  | 100                  | -    | -     |
| Ex9S32A1.6A                   | 1 - 1.6A            | 100                  | 100                  | -    | -     | 100                  | 100                  | -    | -     |
| Ex9S32A2.5A                   | 1.6 - 2.5A          | 100                  | 100                  | -    | -     | 100                  | 100                  | -    | -     |
| Ex9S32A4A                     | 2.5 - 4A            | 100                  | 100                  | -    | -     | 6                    | 4                    | 25   | 32    |
| Ex9S32A6.3A                   | 4 - 6.3A            | 100                  | 100                  | -    | -     | 6                    | 4                    | 32   | 40    |
| Ex9S32A10A                    | 6 - 10A             | 100                  | 100                  | -    | -     | 6                    | 4                    | 32   | 40    |
| Ex9S32A14A                    | 9 - 14A             | 100                  | 100                  | -    | -     | 6                    | 4                    | 40   | 50    |
| Ex9S32A18A                    | 13 - 18A            | 50                   | 30                   | 63   | 80    | 6                    | 4                    | 40   | 50    |
| Ex9S32A23A                    | 17 - 23A            | 50                   | 30                   | 80   | 100   | 6                    | 4                    | 40   | 50    |
| Ex9S32A25A                    | 20 - 25A            | 50                   | 30                   | 80   | 100   | 6                    | 4                    | 40   | 50    |
| Ex9S32A32A                    | 24 - 32A            | 50                   | 30                   | 100  | 125   | 6                    | 4                    | 50   | 63    |
| Ex9S80A20A(M)                 | 14 - 20A            | 100                  | 100                  | -    | -     | 8                    | 8                    | 50   | 63    |
| Ex9S80A20B(M)                 | 14 - 20A            | 100                  | 100                  | -    | -     | 8                    | 8                    | 50   | 63    |
| Ex9S80A25A(M)                 | 18 - 25A            | 100                  | 100                  | -    | -     | 8                    | 8                    | 50   | 63    |
| Ex9S80A25B(M)                 | 18 - 25A            | 100                  | 100                  | -    | -     | 8                    | 8                    | 50   | 63    |
| Ex9S80A32A(M)                 | 23 - 32A            | 100                  | 100                  | -    | -     | 8                    | 8                    | 50   | 63    |
| Ex9S80A32B(M)                 | 23 - 32A            | 100                  | 100                  | -    | -     | 8                    | 8                    | 50   | 63    |
| Ex9S80A40A(M)                 | 30 - 40A            | 50                   | 50                   | 125  | 160   | 8                    | 8                    | 63   | 80    |
| Ex9S80A40B(M)                 | 30 - 40A            | 50                   | 50                   | 125  | 160   | 8                    | 8                    | 63   | 80    |
| Ex9S80A50A(M)                 | 38 - 50A            | 50                   | 50                   | 125  | 160   | 8                    | 8                    | 63   | 80    |
| Ex9S80A50B(M)                 | 38 - 50A            | 50                   | 50                   | 125  | 160   | 8                    | 8                    | 63   | 80    |
| Ex9S80A63A(M)                 | 48 - 63A            | 50                   | 50                   | 125  | 160   | 8                    | 8                    | 80   | 100   |
| Ex9S80A63B(M)                 | 48 - 63A            | 50                   | 50                   | 125  | 160   | 8                    | 8                    | 80   | 100   |
| Ex9S80A72A(M)                 | 60 - 72A            | 50                   | 50                   | 160  | 200   | 8                    | 8                    | 100  | 125   |
| Ex9S80A72B(M)                 | 60 - 72A            | 50                   | 50                   | 160  | 200   | 8                    | 8                    | 100  | 125   |
| Ex9S80A80A(M)                 | 70 - 80A            | 50                   | 50                   | 160  | 200   | 8                    | 8                    | 100  | 125   |



# Manual Motor Starters

## Ex9S SPECIFICATIONS

### UL Motor Power

| UL Motor Power (hp)           |                     |            |            |        |        |            |            |            |
|-------------------------------|---------------------|------------|------------|--------|--------|------------|------------|------------|
| Manual self-protected starter | Overload Trip Range | 1PH        |            |        |        | 3PH        |            |            |
|                               |                     | 110-120Vac | 220-240Vac | 200Vac | 208Vac | 220-240Vac | 460-480Vac | 575-600Vac |
| Ex9S32A0.16A                  | 0.1 - 0.16A         | -          | -          | -      | -      | -          | -          | -          |
| Ex9S32A0.25A                  | 0.16- 0.25A         | -          | -          | -      | -      | -          | -          | -          |
| Ex9S32A0.4A                   | 0.25 - 4A           | -          | -          | -      | -      | -          | -          | -          |
| Ex9S32A0.63A                  | 0.4 - 0.63A         | -          | -          | -      | -      | -          | -          | -          |
| Ex9S32A1A                     | 0.63 - 1A           | -          | -          | -      | -      | -          | -          | 0.5        |
| Ex9S32A1.6A                   | 1 - 1.6A            | -          | 0.1        | -      | -      | -          | 0.75       | 0.75       |
| Ex9S32A2.5A                   | 1.6 - 2.5A          | -          | 0.167      | 0.5    | 0.5    | 0.5        | 1          | 1.5        |
| Ex9S32A4A                     | 2.5 - 4A            | 0.125      | 0.333      | 0.75   | 0.75   | 0.75       | 2          | 3          |
| Ex9S32A6.3A                   | 4 - 6.3A            | 0.25       | 0.5        | 1      | 1      | 1.5        | 3          | 5          |
| Ex9S32A10A                    | 6 - 10A             | 0.5        | 1.5        | 2      | 2      | 3          | 5          | 7.5        |
| Ex9S32A14A                    | 9 - 14A             | 0.75       | 2          | 3      | 3      | 3          | 10         | 10         |
| Ex9S32A18A                    | 13 - 18A            | 1          | 3          | 5      | 5      | 5          | 10         | 15*        |
| Ex9S32A23A                    | 17 - 23A            | 1.5        | 3          | 5      | -      | 7.5        | 15         | 20*        |
| Ex9S32A25A                    | 20 - 25A            | 2          | -          | -      | -      | 7.5        | 15         | 20*        |
| Ex9S32A32A                    | 24 - 32A            | 2          | 5          | 7.5    | 7.5    | 10         | 20         | 25*        |
| Ex9S80A20A(M)                 | 14- 20A             | 1          | 3          | 5      | 5      | 5          | 10         | 15         |
| Ex9S80A20B(M)                 | 14- 20A             | 1          | 3          | 5      | 5      | 5          | 10         | 15         |
| Ex9S80A25A(M)                 | 18- 25A             | 2          | -          | -      | 7.5    | 7.5        | 15         | 20         |
| Ex9S80A25B(M)                 | 18- 25A             | 2          | -          | -      | 7.5    | 7.5        | 15         | 20         |
| Ex9S80A32A(M)                 | 23- 32A             | 2          | 5          | 7.5    | 7.5    | 10         | 20         | 25         |
| Ex9S80A32B(M)                 | 23- 32A             | 2          | 5          | 7.5    | 7.5    | 10         | 20         | 25         |
| Ex9S80A40A(M)                 | 30- 40A             | 3          | -          | 10     | 10     | -          | 25         | 30         |
| Ex9S80A40B(M)                 | 30- 40A             | 3          | -          | 10     | 10     | -          | 25         | 30         |
| Ex9S80A50A(M)                 | 38- 50A             | -          | -          | 15     | 15     | 15         | 30         | 40         |
| Ex9S80A50B(M)                 | 38- 50A             | -          | -          | 15     | 15     | 15         | 30         | 40         |
| Ex9S80A63A(M)                 | 48- 63A             | 5          | 10         | 15     | 20     | 20         | 40         | 50         |
| Ex9S80A63B(M)                 | 48- 63A             | 5          | 10         | 15     | 20     | 20         | 40         | 50         |
| Ex9S80A72A(M)                 | 60- 72A             | -          | -          | 20     | -      | 25         | 50         | 60         |
| Ex9S80A72B(M)                 | 60- 72A             | -          | -          | 20     | -      | 25         | 50         | 60         |
| Ex9S80A80A(M)                 | 70- 80A             | -          | -          | 25     | 25     | -          | 60         | 75         |

\* Manual Motor Control and Motor Disconnect only, not applied in Combination Motor Control.



# Manual Motor Starters

## Ex9S SPECIFICATIONS

# Short-Circuit Current Rating



### Type E: Self-Protected Combination Motor Controller

| Manual self-protected starter | Overload Trip Range | Type E    |        | Type E    |             | Type E    |             | Matching accessories |
|-------------------------------|---------------------|-----------|--------|-----------|-------------|-----------|-------------|----------------------|
|                               |                     | SCCR (kA) | 240Vac | SCCR (kA) | 480Y/277Vac | SCCR (kA) | 600Y/347Vac |                      |
| Ex9S32A0.16A                  | 0.1 - 0.16A         |           | 65     |           |             | 10        |             | CCES1, AL5111        |
| Ex9S32A0.25A                  | 0.16 - 0.25A        |           | 65     |           |             | 10        |             |                      |
| Ex9S32A0.4A                   | 0.25 - 0.4A         |           | 65     |           |             | 10        |             |                      |
| Ex9S32A0.63A                  | 0.4 - 0.63A         |           | 65     |           |             | 10        |             |                      |
| Ex9S32A1A                     | 0.63 - 1A           |           | 65     |           |             | 10        |             |                      |
| Ex9S32A1.6A                   | 1 - 1.6A            |           | 65     |           |             | 10        |             |                      |
| Ex9S32A2.5A                   | 1.6 - 2.5A          |           | 65     |           |             | 10        |             |                      |
| Ex9S32A4A                     | 2.5 - 4A            |           | 65     |           |             | 10        |             |                      |
| Ex9S32A6.3A                   | 4 - 6.3A            |           | 65     |           |             | 10        |             |                      |
| Ex9S32A10A                    | 6 - 10A             |           | 65     |           |             | 10        |             |                      |
| Ex9S32A14A                    | 9 - 14A             |           | 65     |           |             | 10        |             |                      |
| Ex9S32A18A                    | 13 - 18A            |           | 42     |           |             | -         |             |                      |
| Ex9S32A23A                    | 17 - 23A            |           | 42     |           |             | -         |             |                      |
| Ex9S32A25A                    | 20 - 25A            |           | 42     |           |             | -         |             |                      |
| Ex9S32A32A                    | 24 - 32A            |           | 42     |           |             | -         |             |                      |
| Ex9S80A20A/B                  | 14 - 20A            |           | 42     |           |             | 30        |             | AL5111               |
| Ex9S80A25A/B                  | 18 - 25A            |           | 42     |           |             | 30        |             |                      |
| Ex9S80A32A/B                  | 23 - 32A            |           | 42     |           |             | 30        |             |                      |
| Ex9S80A40A/B                  | 30 - 40A            |           | 42     |           |             | 18        |             |                      |
| Ex9S80A50A/B                  | 38 - 50A            |           | 42     |           |             | 18        |             |                      |
| Ex9S80A63A/B                  | 48 - 63A            |           | 42     |           |             | 10        |             |                      |
| Ex9S80A72A/B                  | 60 - 72A            |           | 42     |           |             | 10        |             |                      |
| Ex9S80A80A                    | 70 - 80A            |           | 10     |           |             | 10        |             |                      |



# Manual Motor Starters

## Ex9S SPECIFICATIONS

### UL Motor Power



Type F: Manual Self-Protected Combination Motor Controller

| Manual Self-Protected Starter | Associated Cable, AWG<br>75°C, Cu | Type of Contactor Required | Overload Trip Range(A) | SCCR (kA) |               |               | Fault Signaling Accessory | Combination Block | Mounting Bracket |
|-------------------------------|-----------------------------------|----------------------------|------------------------|-----------|---------------|---------------|---------------------------|-------------------|------------------|
|                               |                                   |                            |                        | 240V      | 480Y/<br>277V | 600Y/<br>347V |                           |                   |                  |
| Ex9S32A0.16A                  | 14                                | Ex9CS06/09<br>Ex9C09       | 0.1-0.16               | 65        | -             | 10            | AL5111                    | CC51/CC52         | DRA51            |
| Ex9S32A0.25A                  |                                   |                            | 0.16-0.25              |           |               |               |                           |                   |                  |
| Ex9S32A0.4A                   |                                   |                            | 0.25-0.4               |           |               |               |                           |                   |                  |
| Ex9S32A0.63A                  |                                   |                            | 0.4-.63                |           |               |               |                           |                   |                  |
| Ex9S32A1A                     |                                   |                            | 0.63-1                 |           |               |               |                           |                   |                  |
| Ex9S32A1.6A                   |                                   |                            | 1-1.6                  |           |               |               |                           |                   |                  |
| Ex9S32A2.5A                   |                                   |                            | 1.6-2.5                |           |               |               |                           |                   |                  |
| Ex9S32A4A                     |                                   |                            | 2.5-4                  |           |               |               |                           |                   |                  |
| Ex9S32A6.3A                   |                                   |                            | 4-6.3                  |           |               |               |                           |                   |                  |
| Ex9S32A10A                    |                                   |                            | Ex9CS12/9C12           |           |               |               |                           |                   |                  |
| Ex9S32A14A                    | 12                                | Ex9C18                     | 9-14                   | -         | -             | -             | CC52                      | -                 |                  |
| Ex9S32A18A                    |                                   |                            | 13-18                  |           |               |               |                           |                   |                  |
| Ex9S32A23A                    | 10                                | Ex9C25                     | 17-23                  | 42        | -             | -             | CC53                      | -                 |                  |
| Ex9S32A25A                    |                                   |                            | 20-25                  |           |               |               |                           |                   |                  |
| Ex9S32A32A                    |                                   |                            | 8                      |           |               |               |                           |                   | Ex9C38/32        |



# Manual Motor Starters

## Ex9S SPECIFICATIONS

# Temperature Derating Factor

| Device       | -20°C ≤ T ≤ 0°C |       | 0°C < T < 30°C |       | 30°C ≤ T ≤ 40°C |       | 40°C < T ≤ 60°C |       |
|--------------|-----------------|-------|----------------|-------|-----------------|-------|-----------------|-------|
|              | single          | group | single         | group | single          | group | single          | group |
| Ex9S32A0.16A | 1.05            | 1     | 1              | 1     | 1               | 1     | 1               | 0.98  |
| Ex9S32A0.25A | 1.05            | 1     | 1              | 1     | 1               | 0.99  | 0.98            | 0.97  |
| Ex9S32A0.4A  | 1.05            | 1     | 1              | 1     | 1               | 0.96  | 0.96            | 0.93  |
| Ex9S32A0.63A | 1.05            | 1     | 1              | 1     | 1               | 0.97  | 0.96            | 0.94  |
| Ex9S32A1A    | 1.05            | 1     | 1              | 1     | 1               | 0.96  | 0.96            | 0.91  |
| Ex9S32A1.6A  | 1.05            | 1     | 1              | 1     | 1               | 0.96  | 0.96            | 0.93  |
| Ex9S32A2.5A  | 1.05            | 1     | 1              | 1     | 1               | 1     | 1               | 0.99  |
| Ex9S32A4A    | 1.05            | 1     | 1              | 0.98  | 1               | 0.98  | 0.98            | 0.96  |
| Ex9S32A6.3A  | 1.05            | 1     | 1              | 0.97  | 1               | 0.96  | 0.96            | 0.95  |
| Ex9S32A10A   | 1.05            | 1     | 1              | 0.96  | 1               | 0.94  | 0.94            | 0.91  |
| Ex9S32A14A   | 1.05            | 1     | 1              | 0.96  | 1               | 0.94  | 0.94            | 0.90  |
| Ex9S32A18A   | 1.05            | 1     | 1              | 0.96  | 1               | 0.93  | 0.92            | 0.90  |
| Ex9S32A23A   | 1.05            | 1     | 1              | 0.95  | 1               | 0.94  | 0.93            | 0.90  |
| Ex9S32A25A   | 1.05            | 1     | 1              | 0.95  | 1               | 0.94  | 0.93            | 0.90  |
| Ex9S32A32A   | 1.05            | 1     | 1              | 0.92  | 1               | 0.91  | 0.91            | 0.87  |
| Ex9S80A20A/B | 1.05            | 1     | 1              | 1     | 1               | 0.98  | 1               | 0.96  |
| Ex9S80A25A/B | 1.05            | 1     | 1              | 1     | 1               | 0.98  | 1               | 0.96  |
| Ex9S80A32A/B | 1.05            | 1     | 1              | 1     | 1               | 0.98  | 1               | 0.96  |
| Ex9S80A40A/B | 1.05            | 1     | 1              | 0.98  | 1               | 0.98  | 1               | 0.96  |
| Ex9S80A50A/B | 1.05            | 1     | 1              | 0.97  | 1               | 0.96  | 0.96            | 0.93  |
| Ex9S80A63A/B | 1.05            | 1     | 1              | 0.95  | 1               | 0.93  | 0.92            | 0.9   |
| Ex9S80A72A/B | 1.05            | 1     | 1              | 0.95  | 1               | 0.93  | 0.93            | 0.9   |
| Ex9S80A80A   | 1.05            | 1     | 1              | 0.94  | 1               | 0.9   | 0.9             | 0.88  |

\* Please refer to derating table for multiple use of electromagnetic product or use single unit above 40°C

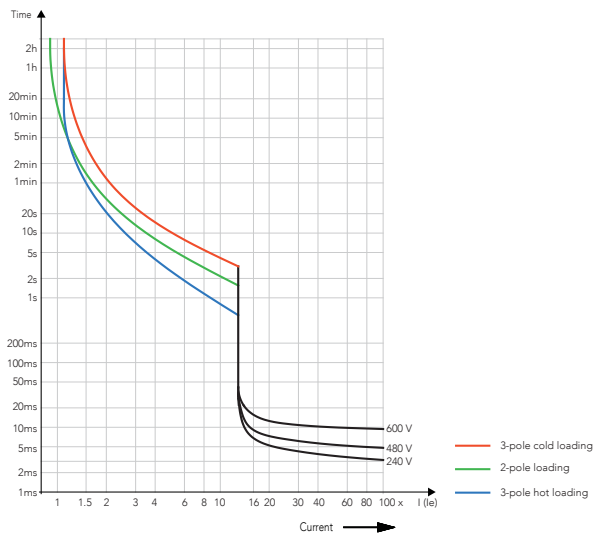


# Manual Motor Starters

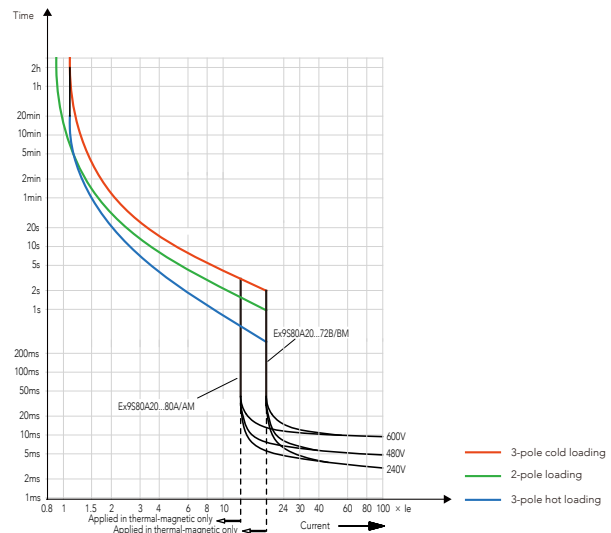
## Ex9S SPECIFICATIONS

| Manual self-protected starter | Setting Current (A) |         | Magnetic Trip Rating (A) |      |
|-------------------------------|---------------------|---------|--------------------------|------|
|                               | Minimum             | Maximum | A                        | B    |
| Ex9S32A0.16A                  | 0.1                 | 0.16    | 2.1                      | -    |
| Ex9S32A0.25A                  | 0.16                | 0.25    | 3.2                      | -    |
| Ex9S32A0.4A                   | 0.25                | 4       | 4.8                      | -    |
| Ex9S32A0.63A                  | 0.4                 | 0.63    | 7.2                      | -    |
| Ex9S32A1A                     | 0.63                | 1       | 11                       | -    |
| Ex9S32A1.6A                   | 1                   | 1.6     | 20                       | -    |
| Ex9S32A2.5A                   | 1.6                 | 2.5     | 30                       | -    |
| Ex9S32A4A                     | 2.5                 | 4       | 50                       | -    |
| Ex9S32A6.3A                   | 4                   | 6.3     | 72.5                     | -    |
| Ex9S32A10A                    | 6                   | 10      | 130                      | -    |
| Ex9S32A14A                    | 9                   | 14      | 175                      | -    |
| Ex9S32A18A                    | 13                  | 18      | 230                      | -    |
| Ex9S32A23A                    | 17                  | 23      | 280                      | -    |
| Ex9S32A25A                    | 20                  | 25      | 322                      | -    |
| Ex9S32A32A                    | 24                  | 32      | 416                      | -    |
| Ex9S80A20A(M)                 | 14                  | 20      | 310                      | 400  |
| Ex9S80A20B(M)                 | 14                  | 20      | 310                      | 400  |
| Ex9S80A25A(M)                 | 18                  | 25      | 375                      | 500  |
| Ex9S80A25B(M)                 | 18                  | 25      | 375                      | 500  |
| Ex9S80A32A(M)                 | 23                  | 32      | 445                      | 680  |
| Ex9S80A32B(M)                 | 23                  | 32      | 445                      | 680  |
| Ex9S80A40A(M)                 | 30                  | 40      | 560                      | 800  |
| Ex9S80A40B(M)                 | 30                  | 40      | 560                      | 800  |
| Ex9S80A50A(M)                 | 38                  | 50      | 700                      | 960  |
| Ex9S80A50B(M)                 | 38                  | 50      | 700                      | 960  |
| Ex9S80A63A(M)                 | 48                  | 63      | 950                      | 1150 |
| Ex9S80A63B(M)                 | 48                  | 63      | 950                      | 1150 |
| Ex9S80A72A(M)                 | 60                  | 72      | 1000                     | 1150 |
| Ex9S80A72B(M)                 | 60                  | 72      | 1000                     | 1150 |
| Ex9S80A80A(M)                 | 70                  | 80      | 1150                     | -    |

### Ex9S32 Trip Curve



### Ex9S80 Trip Curve

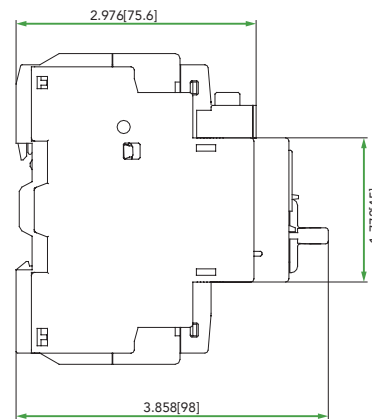
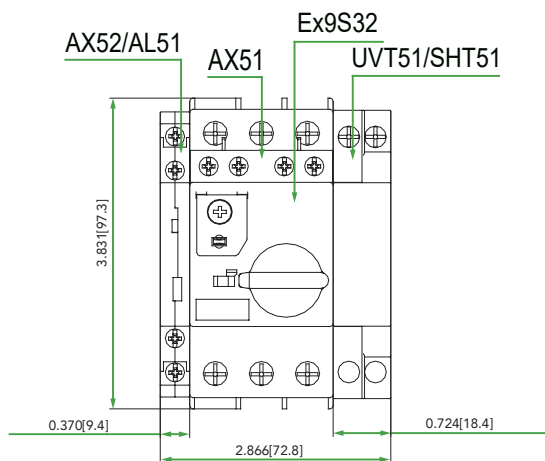
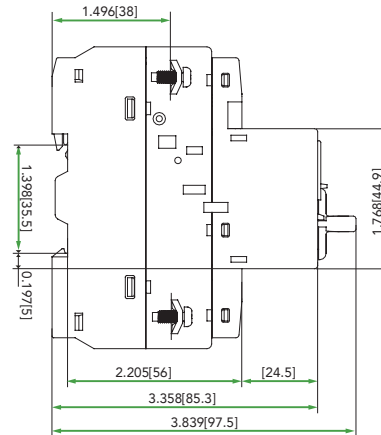
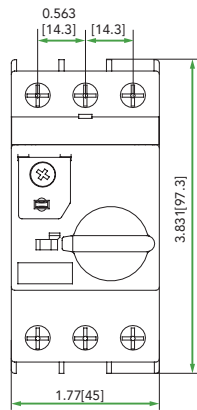




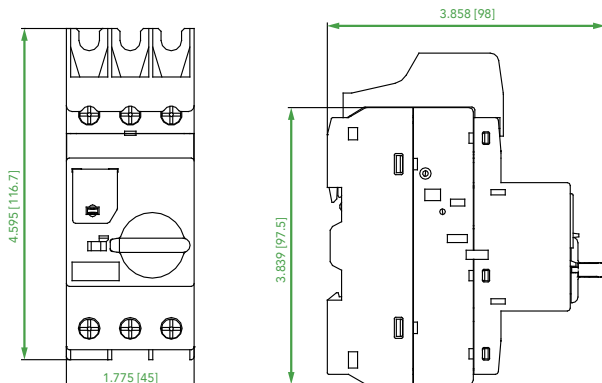
# Manual Motor Starters

## Ex9S32 DIMENSIONS

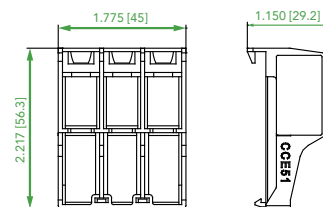
**Ex9S32**  
Unit: in. [mm]



**Ex9S32 + CCE51**  
Unit: in. [mm]



**CCE51**  
Unit: in. [mm]



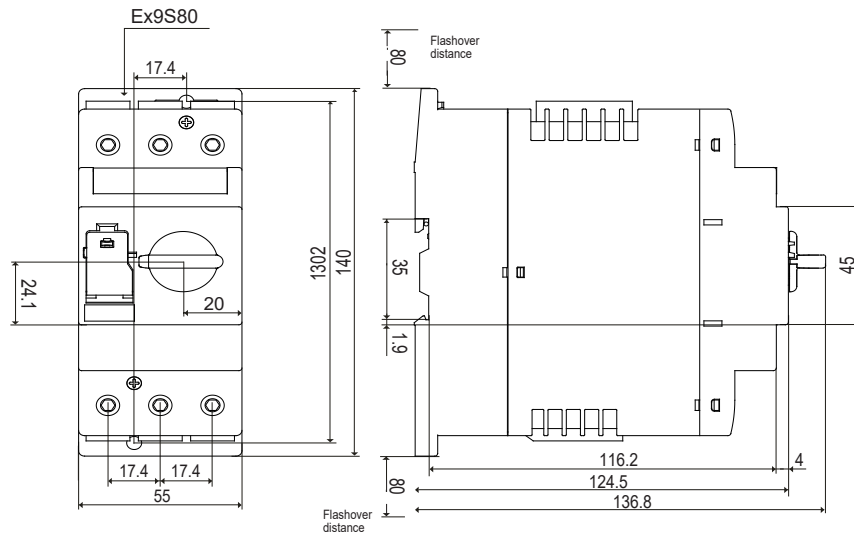


# Manual Motor Starters

## EX9S80 DIMENSIONS

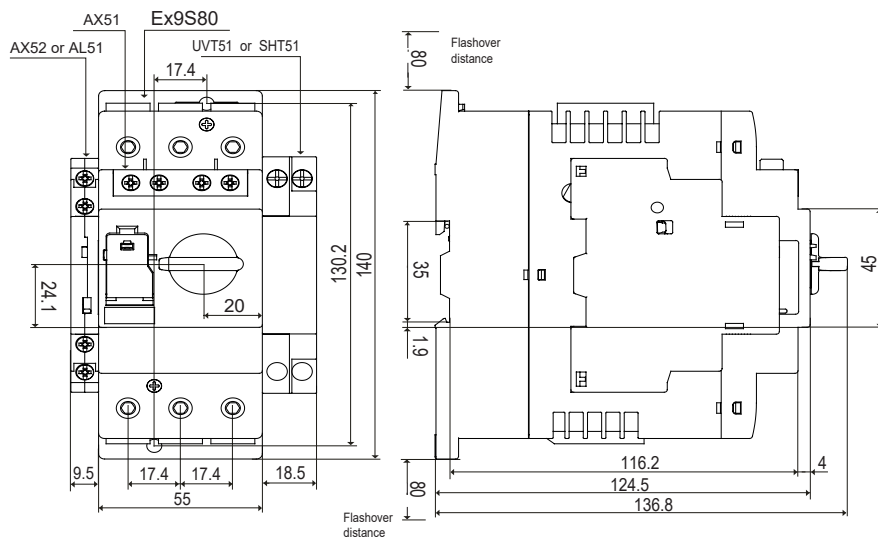
### Ex9S80

Unit: in [mm]



### Ex9S80+Accessory

Unit: in [mm]







# Manual Motor Starters

## Ex9S ACCESSORIES: SPECIFICATIONS



### Auxiliary Contact Blocks

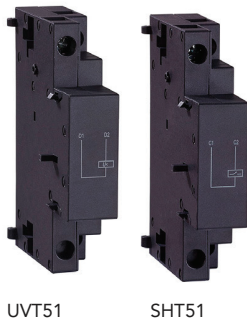
Applies to Ex9S32 and Ex9S80

| AX51   | 11                                 |
|--|------------------------------------|
| Description                                    | Auxiliary Contact                  |
| AX51: Auxiliary contact (front mount only)     | 11: 1NO+1NC (AX51,AX52,AL51, AX53) |
| AX52: Auxiliary contact (left side only)       | 20: 2NO (AX51,AX52)                |
| AX53: Auxiliary contact (front mount only)     | 02: 2NC (AX52)                     |
| AL51: Fault Signaling Contact (left side only) |                                    |

| Description                      | Mounting Location | Max. No. of Blocks | Contact Type | Catalog number |
|----------------------------------|-------------------|--------------------|--------------|----------------|
| Instantaneous auxiliary contacts | Front             | 1                  | NO+NC        | AX5111         |
|                                  |                   |                    | NO+NO        | AX5120         |
|                                  |                   |                    | NO+NC        | AX5311         |
| Fault Signaling Contact          | Left Side         | 2                  | NO+NC        | AX5211         |
|                                  |                   |                    | NO+NO        | AX5220         |
|                                  |                   |                    | NC+NC        | AX5202         |
|                                  |                   | 1                  | NO+NC        | AL5111         |

### Electrical Trip Unit

Applies to Ex9S32 and Ex9S80



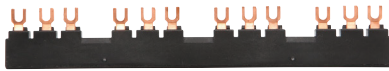
| UVT51   | G  | SHT51                                  | G  |
|---|--|--|--|
| Description                                   | Rated Voltage  | Description                            | Rated Voltage  |
| UVT51: Undervoltage release (right side only) | A: 110~120V 60Hz(UVT51)<br>B: 110~120V 50Hz & 127V 60Hz(UVT51)<br>C: 208V 60Hz(UVT51)<br>D: 240V 60Hz(UVT51)<br>E: 480V 60Hz(UVT51)<br>F: 600V 60Hz(UVT51)<br>G: 220~240V 50Hz(UVT51)<br>H: 380~415V 50Hz(UVT51) | SHT51: Shunt release (right side only) | A: 100~130V 50/60Hz(SHT51)<br>B: 190~330V 50/60Hz(SHT51)<br>C: 330~440V 50/60Hz(SHT51)<br>D: 480~500V 50/60Hz(SHT51)<br>E: 575~600V 50/60Hz(SHT51) |

| Description          | Mounting Location | Voltage  | Hz    | Catalog number |
|----------------------|-------------------|----------|-------|----------------|
| Undervoltage Release | Right Side        | 110-120V | 60    | UVT51A         |
|                      |                   | 127V     | 60    | UVT51B         |
|                      |                   | 110-120V | 50    | UVT51B         |
|                      |                   | 208V     | 60    | UVT51C         |
|                      |                   | 240V     | 60    | UVT51D         |
|                      |                   | 480V     | 60    | UVT51E         |
|                      |                   | 600V     | 60    | UVT51F         |
|                      |                   | 220-240V | 50    | UVT51G         |
|                      |                   | 380-415V | 50    | UVT51H         |
| Shunt Release        | Right Side        | 100-130V | 50/60 | SHT51A         |
|                      |                   | 190-330V | 50/60 | SHT51B         |
|                      |                   | 330-440V | 50/60 | SHT51C         |
|                      |                   | 480-500V | 50/60 | SHT51D         |
|                      |                   | 575-600V | 50/60 | SHT51E         |



# Manual Motor Starters

## Ex9S ACCESSORIES: SPECIFICATIONS



BBUM 454

### Busbars

Applies to Ex9S32

| Description                | No. of Ex9S32 Starter | No. of Side-Mounted Aux Contact on each Ex9S32 starter | Busbar Pitch (mm) | Catalog number |
|----------------------------|-----------------------|--|-------------------|----------------|
| Sets of 3-pole, 63A Busbar | 2                     | None   | 45                | BBUM 245       |
|                            |                       | 1 of AX52, AL51  | 54                | BBUM 254       |
|                            |                       | 2 of AX52 or 1 UVT51, SHT51                            | 63                | BBUM 263       |
|                            | 3                     | None   | 45                | BBUM 345       |
|                            |                       | 1 of AX52, AL51  | 54                | BBUM 354       |
|                            |                       | 2 of AX52 or 1 UVT51, SHT51                            | 63                | BBUM 363       |
|                            | 4                     | None   | 45                | BBUM 445       |
|                            |                       | 1 of AX52, AL51  | 54                | BBUM 454       |
|                            |                       | 2 of AX52 or 1 UVT51, SHT51                            | 63                | BBUM 463       |
|                            | 5                     | None   | 45                | BBUM 545       |
|                            |                       | 1 of AX52, AL51  | 54                | BBUM 554       |
|                            |                       | 2 of AX52 or 1 UVT51, SHT51                            | 63                | BBUM 563       |



CCE51

### Wiring Accessories

Applies to Ex9S32

| Description                     | Application  | Catalog number |
|---------------------------------|--|----------------|
| Terminal Cover                  | Terminal cover for Ex9S32 for use in type E application      | CCE51          |
| Input Terminal for CBB51 Busbar | Terminal block for power supply to one or more CBB51 bus bar | FD51           |
| Protective end cover            | For unused busbar outlets                                    | PC51           |



WPB51B



WPB51Y

### Enclosures

Applies to Ex9S32

| WPB                  | 51             | B                              |
|----------------------|----------------|--------------------------------|
| Description          | Type           | Color of Handle                |
| Waterproof Enclosure | 51: for Ex9S32 | B: Black/Gray<br>Y: Yellow/Red |

| Description                             | Type                       | Color       | Rating           | Catalog number |
|---|----------------------------|-------------|------------------|----------------|
| Waterproof Enclosure; Ex9S32 Protectors | Operation by rotary handle | Black/ Gray | NEMA 4X/4, IP 65 | WPB51B         |
|   |                            | Yellow/ Red |                  | WPB51Y         |



# Manual Motor Starters

## Ex9S ACCESSORIES: SPECIFICATIONS

### Operation Handle

Applies to Ex9S32 and Ex9S80



ERH51B

| ERH                    | 51           | B                              |
|------------------------|--------------|--------------------------------|
| Description            | Type         | Color of Handle                |
| Extended Rotary Handle | 51: for Ex9S | B: Black/Gray<br>Y: Yellow/Red |

| Description            | Type                               | Color                      | Rating          | Catalog number   |
|------------------------|------------------------------------|----------------------------|-----------------|------------------|
| Extended Rotary Handle | 9 inch (230mm) shaft, with bracket | Black/ Gray<br>Yellow/ Red | NEMA 4X/4, IP65 | ERH51B<br>ERH51Y |

The extended rotary handle makes it possible for a door-mounted rotary handle to operate starter installed on the inside back panel of an enclosure. The extended rotary handle consists of the following:

- a set of screws onto the handle of the starter
- an assembly (handle and front plate) that fits on the enclosure door
- an extension shaft which must be adjusted according to the distance between the mounting surface and the door: 9 inch (230 mm)
- a bracket that install with starter and the shaft through

### Mounting Accessories

Applies to Ex9S32

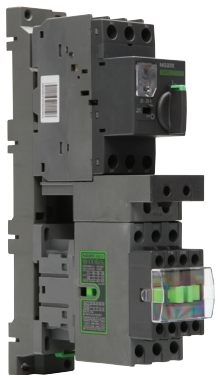


DRA51

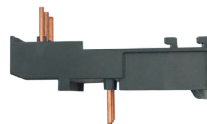
| DRA              | 51                                       |
|------------------|--|
| Description      | Type                                     |
| Mounting Bracket | 51: for mounting Ex9S32 with Ex9C 09-38A |

| CC                | 51                                  |
|-------------------|-------------------------------------|
| Description       | Type                                |
| Combination Block | 51: between Ex9S32 and Ex9CS 09-12A |

| Description       | Application   | Catalog number |
|-------------------|---|----------------|
| Combination Block | Between Ex9S32 and Ex9C Mini Type Contactor, 09-12A             | CC51           |
|                   | Between Ex9S32 and Ex9C Standard Type Contactor, 09-18A         | CC52           |
|                   | Between Ex9S32 and Ex9C Standard Type Contactor, 25-38A         | CC53           |
| Mounting Bracket  | For mounting a Ex9S32 to a Ex9C Standard Type Contactor, 09-38A | DRA51          |



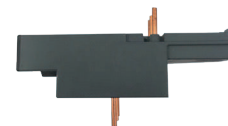
Ex9S32 + CC53 + Ex9C32 + DRA51



CC51



CC52



CC53



# Manual Motor Starters

## Ex9S ACCESSORIES: SPECIFICATIONS

### Technical Data

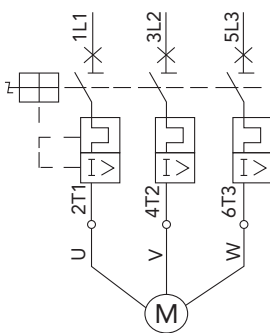
|  | Auxiliary contacts<br>AX51 | Auxiliary contacts<br>AX52 | Auxiliary contacts<br>AX53     | Auxiliary contacts<br>AX51 |
|--|----------------------------|----------------------------|--------------------------------|----------------------------|
| Rated operational voltage Ue               | 300V                       | 600V                       | 60VAC、24VDC                    | 600V                       |
| Rated frequency                            | 50/60Hz                    | 50/60Hz                    | -                              | 50/60Hz                    |
| Rated impulse withstand voltage Uimp       | 2500V                      | 6000V                      | 800V                           | 6000V                      |
| Conventional rated thermal current (Ith) " | 2.5A                       | 5A                         | 1A                             | 5A                         |
| Mechanical life (C-O operations)           | 100000                     | 100000                     | 100000                         | 100000                     |
| Electrical Rating                          | C300,Q300                  | B600,Q300                  | AC-12:60V/0.1A<br>DC-12:24V/1A | B600,Q300                  |
| Minimum connection Load                    | 5mA @24Vac/dc              | 8mA @24Vac/dc              | 2mA @12Vac/dc<br>3mA @5Vdc     | 8mA @24Vac/dc              |

### Terminal Wiring

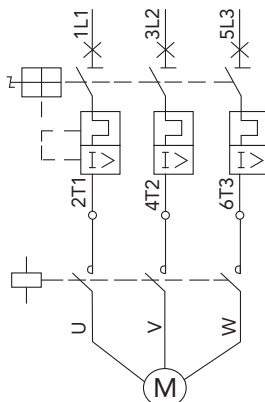
|                            | Ex9S32                    | Ex9S80                   |
|----------------------------|---------------------------|--------------------------|
| <b>Screw Type</b>          | <b>M4, Phil-Slot head</b> | <b>M8, Phil-Hex head</b> |
| Pull wire length inch (mm) | 0.4 (10)                  | 0.59 (15)                |
| Wire range AWG             | (1)x14-(2)x8              | 14~3                     |
| Torques lb-in (N.m)        | 22 (2.5)                  | 53 (6)                   |

|                | Model | Wire Ranges(AWG) | Torques lb-in (N.m) | Screw Type |
|----------------|-------|------------------|---------------------|------------|
| Phil-Slot Head | AX51  | (1)x18-(2)x12    | 7 (0.8)             | M3         |
|                | AX52  | (1)x18-(2)x12    | 7 (0.8)             | M3         |
|                | AX53  | (1)x18-(2)x14    | 7 (0.8)             | M3         |
|                | AL51  | (1)x18-(2)x12    | 7 (0.8)             | M3         |
|                | UVT51 | (1)x18-(2)x12    | 15 (1.7)            | M3.5       |
|                | SHT51 | (1)x18-(2)x12    | 15 (1.7)            | M3.5       |

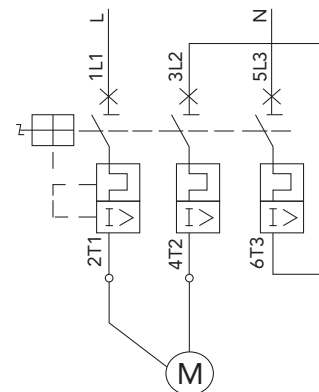
### Electrical Diagram



Operating principle diagram of starter



Principle connection diagram of starter and contactor



Principle connection diagram of single-phase Motor

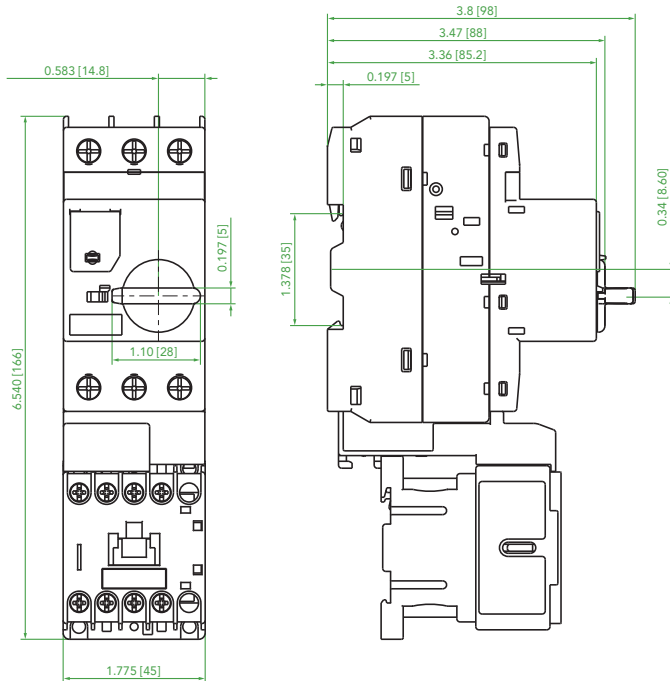


# Manual Motor Starters

## Ex9S ACCESSORY DIMENSIONS

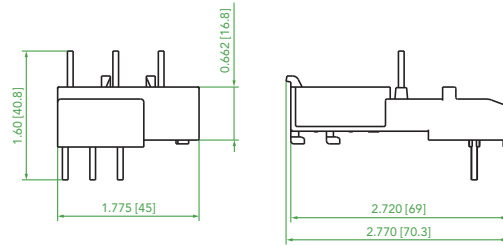
### Ex9S32 + CC51 + Ex9CS06, 09, 12

Unit: in [mm]



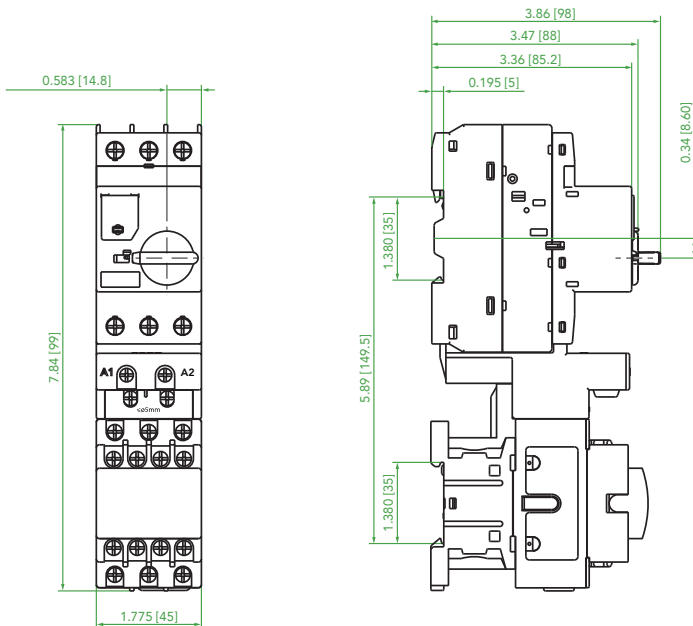
### CC51

Unit: in [mm]



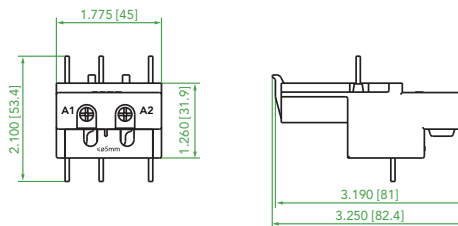
### Ex9S32 + CC52 + Ex9C09, 12 18

Unit: in [mm]



### CC52

Unit: in [mm]



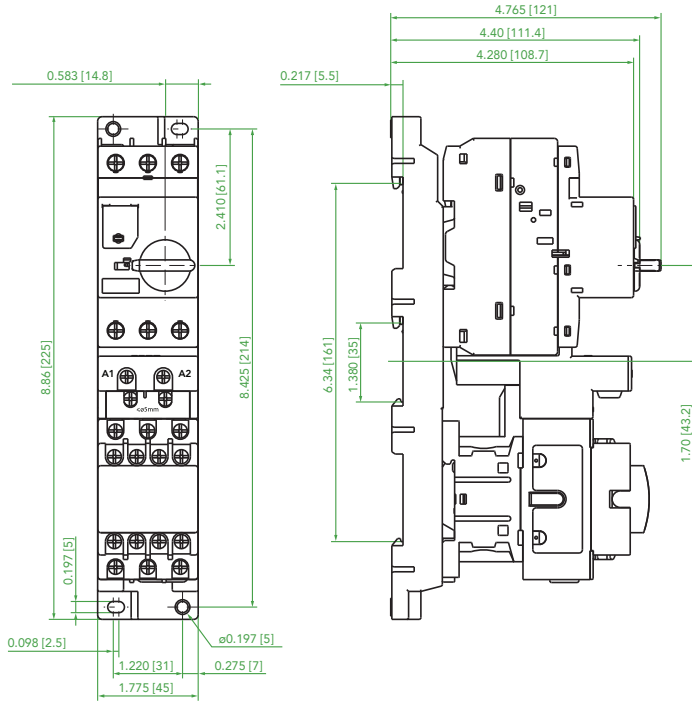


# Manual Motor Starters

## Ex9S ACCESSORY DIMENSIONS

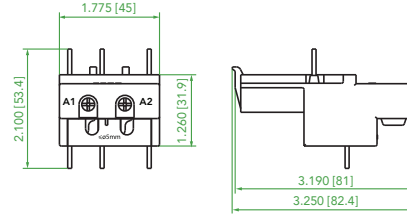
### Ex9S32 + CC52 + Ex9C09, 12, 18 + DRA51

Unit: in [mm]



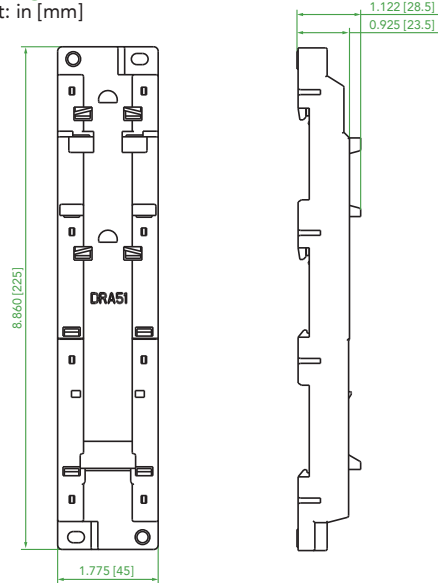
### CC52

Unit: in [mm]



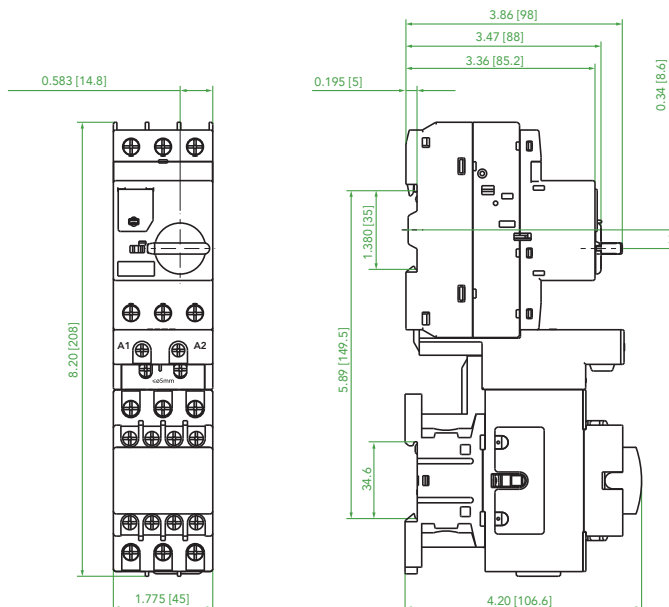
### DRA51

Unit: in [mm]



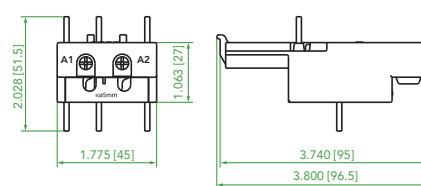
### Ex9S32 + CC53 + Ex9C25, 32, 38

Unit: in [mm]



### CC53

Unit: in [mm]



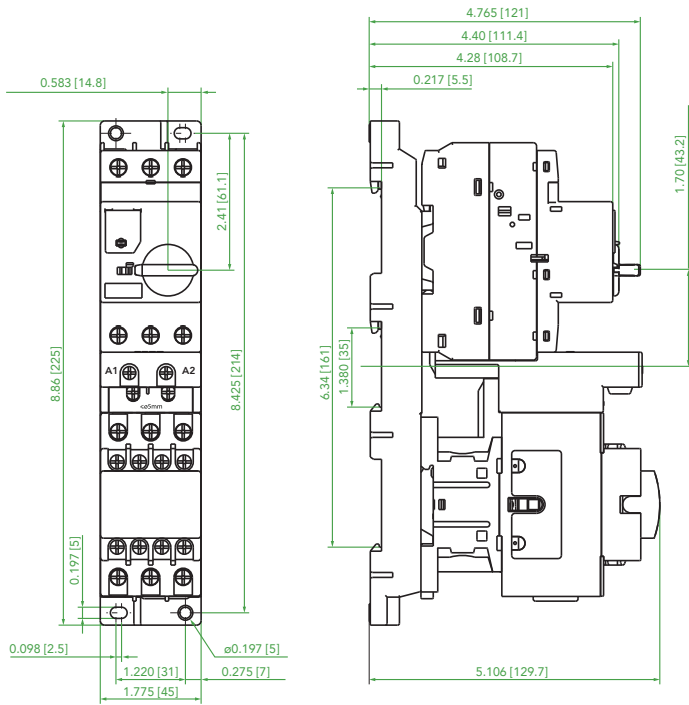


# Manual Motor Starters

## Ex9S ACCESSORY DIMENSIONS

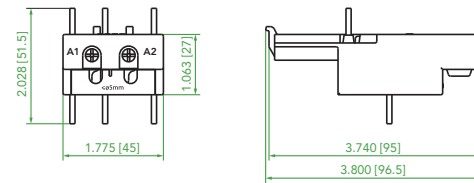
### Ex9S32 + CC53 + Ex9C25, 32, 38 + DRA51

Unit: in [mm]



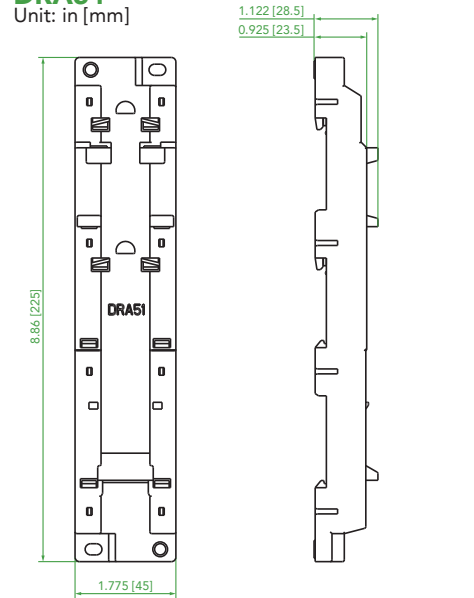
### CC53

Unit: in [mm]



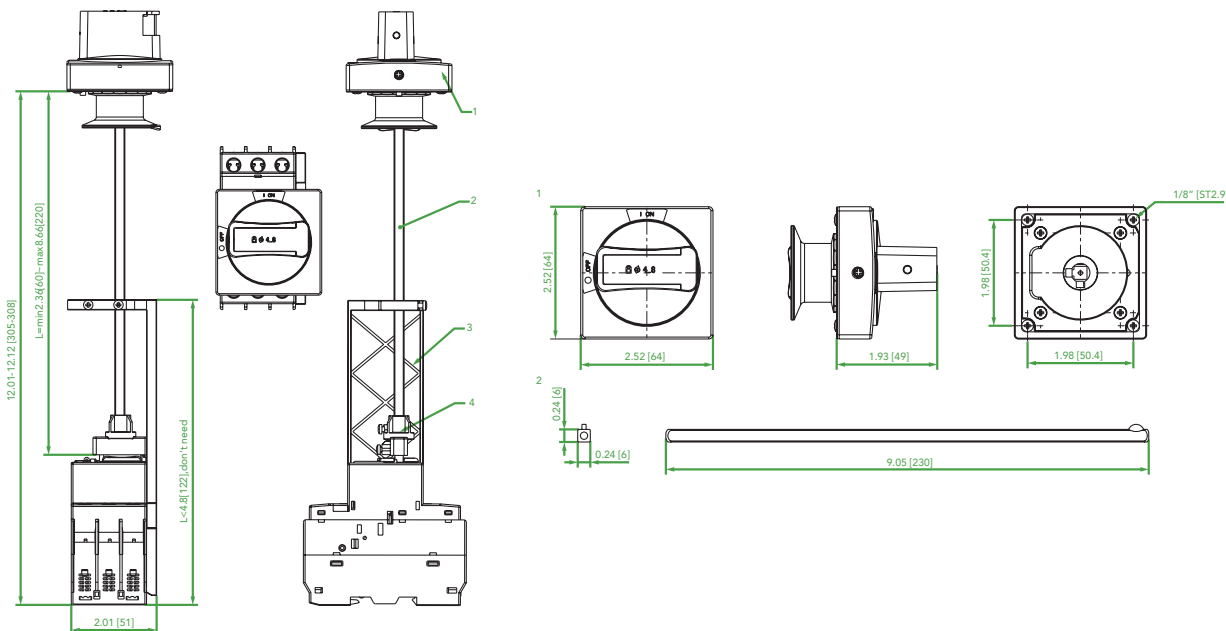
### DRA51

Unit: in [mm]



### ERH51

Unit: in [mm]



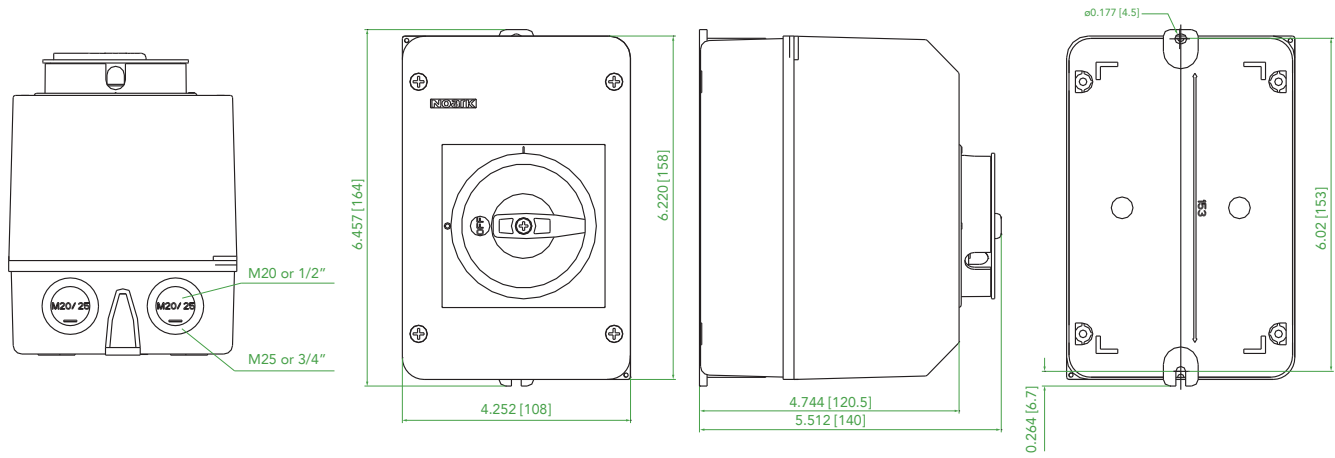


# Manual Motor Starters

## Ex9S ACCESSORY DIMENSIONS

### WPB51

Unit: in [mm]





# NOARK



📍 NOARK Electric USA  
2188 Pomona Blvd.  
Pomona, CA 91768  
☎️ (626) 330-7007  
✉️ [nasales@noark-electric.com](mailto:nasales@noark-electric.com)

📍 NOARK Electric Canada  
975 Bleams Rd. Unit 3  
Kitchener, ON N2E 3Z5  
☎️ 519-790-0605  
✉️ [casales@noark-electric.com](mailto:casales@noark-electric.com)

 [na.noark-electric.com](http://na.noark-electric.com)



Note: NOARK Electric reserves the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. NOARK Electric nor any of its affiliates or subsidiaries shall be responsible or liable for potential errors or possible lack of information in this document. NOARK Electric reserves all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of NOARK Electric.