

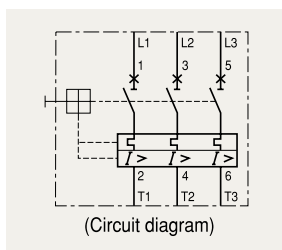


| 63AF | | | | | | | | | | 100AF | | | | | | | | | | | | | | | | | | | |
|--------------------------|------|------|------|------|--------------------------|------|------|------|------|--------------------------|------|------|------|------|--------------------------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| MMS-63S | | | | | MMS-63H | | | | | MMS-100S | | | | | MMS-100H | | | | | | | | | | | | | | |
| - | | | | | MMS-63HI | | | | | - | | | | | MMS-100HI | | | | | | | | | | | | | | |
| Standard | | | | | High breaking | | | | | Standard | | | | | High breaking | | | | | | | | | | | | | | |
| Rotary | | | | | Rotary | | | | | Rotary | | | | | Rotary | | | | | | | | | | | | | | |
| 3 | | | | | 3 | | | | | 3 | | | | | 3 | | | | | | | | | | | | | | |
| Up to 690V | | | | | Up to 690V | | | | | Up to 690V | | | | | Up to 690V | | | | | | | | | | | | | | |
| 50/60 Hz | | | | | 50/60 Hz | | | | | 50/60 Hz | | | | | 50/60 Hz | | | | | | | | | | | | | | |
| 1,000V | | | | | 1,000V | | | | | 1,000V | | | | | 1,000V | | | | | | | | | | | | | | |
| 8kV | | | | | 8kV | | | | | 8kV | | | | | 8kV | | | | | | | | | | | | | | |
| Cat. A | | | | | Cat. A | | | | | Cat. A | | | | | Cat. A | | | | | | | | | | | | | | |
| AC 3 | | | | | AC 3 | | | | | AC 3 | | | | | AC 3 | | | | | | | | | | | | | | |
| 50,000 | | | | | 50,000 | | | | | 50,000 | | | | | 50,000 | | | | | | | | | | | | | | |
| 25,000 | | | | | 25,000 | | | | | 25,000 | | | | | 25,000 | | | | | | | | | | | | | | |
| 25 | | | | | 25 | | | | | 25 | | | | | 25 | | | | | | | | | | | | | | |
| -20 ~ +60 °C | | | | | -20 ~ +60 °C | | | | | -20 ~ +60 °C | | | | | -20 ~ +60 °C | | | | | | | | | | | | | | |
| 13 × I _e max. | | | | | 13 × I _e max. | | | | | 13 × I _e max. | | | | | 13 × I _e max. | | | | | | | | | | | | | | |
| ○ | | | | | ○ | | | | | ○ | | | | | ○ | | | | | | | | | | | | | | |
| ○ | | | | | ○ | | | | | ○ | | | | | ○ | | | | | | | | | | | | | | |
| × | | | | | × | | | | | ○ | | | | | ○ | | | | | | | | | | | | | | |
| ○ | | | | | ○ | | | | | ○ | | | | | ○ | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | 22 | | | | | | | | | | | | | | | | | | | |
| 220V | 415V | 460V | 525V | 690V | 220V | 415V | 460V | 525V | 690V | 220V | 415V | 460V | 525V | 690V | 220V | 415V | 460V | 525V | 690V | | | | | | | | | | |
| 240V | 400V | 440V | 500V | 600V | 240V | 400V | 440V | 500V | 600V | 240V | 400V | 440V | 500V | 600V | 240V | 400V | 440V | 500V | 600V | | | | | | | | | | |
| 230V | | | | | 230V | | | | | 230V | | | | | 230V | | | | | | | | | | | | | | |
| Icu | Ics | Icu | Ics | Icu | Ics | Icu | Ics | Icu | Ics | Icu | Ics | Icu | Ics | Icu | Ics | Icu | Ics | Icu | Ics | Icu | Ics | Icu | Ics | Icu | Ics | Icu | Ics | Icu | Ics |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 100 | 100 | 100 | 100 | 15 | 12 | 10 | 8 | 4 | 3 | 100 | 100 | 100 | 100 | 50 | 38 | 50 | 38 | 6 | 5 | - | - | - | - | - | - | - | - | - | - |
| 100 | 100 | 50 | 38 | 10 | 8 | 6 | 5 | 4 | 3 | 100 | 100 | 100 | 100 | 50 | 38 | 42 | 32 | 6 | 5 | - | - | - | - | - | - | - | - | - | - |
| 100 | 100 | 25 | 19 | 10 | 8 | 6 | 5 | 4 | 3 | 100 | 100 | 50 | 50 | 50 | 38 | 12 | 9 | 5 | 5 | 100 | 100 | 50 | 38 | 40 | 30 | 25 | 19 | 10 | 8 |
| 50 | 38 | 25 | 19 | 10 | 8 | 6 | 5 | 4 | 3 | 100 | 100 | 50 | 50 | 50 | 38 | 12 | 9 | 5 | 5 | 100 | 100 | 50 | 38 | 40 | 30 | 25 | 19 | 10 | 8 |
| 50 | 38 | 25 | 19 | 10 | 8 | 6 | 5 | 4 | 3 | 100 | 100 | 50 | 50 | 35 | 27 | 12 | 9 | 5 | 5 | 100 | 100 | 50 | 38 | 40 | 30 | 25 | 19 | 10 | 8 |
| 50 | 38 | 25 | 19 | 10 | 8 | 6 | 5 | 4 | 3 | 100 | 100 | 50 | 50 | 35 | 27 | 10 | 8 | 5 | 5 | 100 | 100 | 50 | 38 | 40 | 30 | 15 | 11 | 10 | 8 |
| 50 | 38 | 25 | 19 | 10 | 8 | 6 | 5 | 4 | 3 | 100 | 100 | 50 | 50 | 35 | 27 | 10 | 8 | 5 | 5 | 100 | 100 | 50 | 38 | 40 | 30 | 15 | 11 | 6 | 5 |
| 50 | 38 | 25 | 19 | 10 | 8 | 6 | 5 | 4 | 3 | 100 | 100 | 50 | 50 | 35 | 27 | 10 | 8 | 5 | 5 | 100 | 100 | 50 | 38 | 40 | 30 | 12 | 9 | 6 | 5 |
| 50 | 38 | 25 | 19 | 10 | 8 | 6 | 5 | 4 | 3 | 100 | 100 | 50 | 50 | 35 | 27 | 10 | 8 | 5 | 5 | 100 | 100 | 50 | 38 | 40 | 30 | 12 | 9 | 6 | 5 |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 100 | 100 | 50 | 38 | 40 | 30 | 8 | 6 | 5 | 4 |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 100 | 100 | 50 | 38 | 40 | 30 | 8 | 6 | 5 | 4 |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 100 | 100 | 50 | 38 | 40 | 30 | 8 | 6 | 5 | 4 |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 100 | 100 | 50 | 38 | 40 | 30 | 8 | 6 | 5 | 4 |

Selection guide

Standard type

- Adjustable thermal release
- Magnetic release 13 I_e max.
- Trip class 10
- Ambient temperature compensation
- Protective function
 - phase-failure
 - short circuit
 - overload



MMS-32S

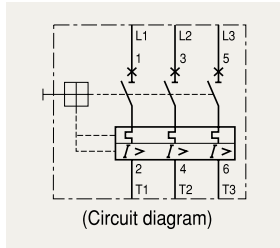
MMS-63S

MMS-100S

| Type | Rated operational current I _e [A] | Thermal release adjustment range [A] | Magnetic release operating current [A] | Switching of 3 phase AC motors, AC-2, AC-3 | | | | | | 400/415V | |
|----------|--|--------------------------------------|--|--|------|------|---------------------|------|------|----------------------|----------------------|
| | | | | 3-phase [kW] (50/60Hz) | | | 3-phase [HP] (60Hz) | | | I _{cu} [kA] | I _{cs} [kA] |
| | | | | 230V | 400V | 690V | 230V | 460V | 575V | | |
| MMS-32S | 0.16 | 0.1...0.16 | 2.1 | - | 0.02 | - | - | - | - | 100 | 100 |
| | 0.25 | 0.16...0.25 | 3.3 | 0.03 | 0.06 | - | - | - | - | 100 | 100 |
| | 0.4 | 0.25...0.4 | 5.2 | 0.06 | 0.09 | - | - | - | - | 100 | 100 |
| | 0.63 | 0.4...0.63 | 8.2 | 0.09 | 0.12 | 0.25 | - | - | - | 100 | 100 |
| | 1 | 0.63...1.0 | 13 | 0.12 | 0.25 | 0.55 | - | 1/2 | 1/2 | 100 | 100 |
| | 1.6 | 1.0...1.6 | 20.8 | 0.25 | 0.55 | 1.1 | 1/3 | 3/4 | 1 | 100 | 100 |
| | 2.5 | 1.6...2.5 | 32.5 | 0.37 | 0.75 | 1.5 | 1/2 | 1½ | 1½ | 100 | 100 |
| | 4 | 2.5...4.0 | 52 | 0.75 | 1.5 | 3 | 1 | 2 | 3 | 100 | 100 |
| | 6 | 4...6 | 78 | 1.5 | 2.2 | 4 | 1½ | 5 | 5 | 100 | 100 |
| | 8 | 5...8 | 104 | 1.5 | 3 | 5.5 | 2 | 5 | 5 | 100 | 100 |
| | 10 | 6...10 | 130 | 3 | 4 | 7.5 | 3 | 7½ | 10 | 50 | 38 |
| | 13 | 9...13 | 169 | 3 | 5.5 | 11 | 3 | 7½ | 10 | 50 | 38 |
| | 17 | 11...17 | 221 | 4 | 7.5 | 11 | 5 | 10 | 15 | 20 | 15 |
| | 22 | 14...22 | 286 | 4 | 7.5 | 15 | 7½ | 15 | 20 | 15 | 11 |
| MMS-63S | 26 | 18...26 | 338 | 5.5 | 11 | 18.5 | 7½ | 15 | 20 | 15 | 11 |
| | 32 | 22...32 | 416 | 7.5 | 15 | 22 | 10 | 20 | 30 | 15 | 11 |
| | 40 | 28~40 | 520 | 7.5 | 18.5 | 30 | 15 | 30 | 40 | 10 | 8 |
| | 10 | 6~10 | 130 | 3 | 4 | 7.5 | 3 | 7½ | 10 | 100 | 100 |
| | 13 | 9~13 | 169 | 3 | 5.5 | 11 | 3 | 7½ | 10 | 50 | 38 |
| | 17 | 11~17 | 221 | 4 | 7.5 | 11 | 5 | 10 | 15 | 25 | 19 |
| | 22 | 14~22 | 286 | 4 | 7.5 | 15 | 7½ | 15 | 20 | 25 | 19 |
| | 26 | 18~26 | 338 | 5.5 | 11 | 18.5 | 10 | 20 | 25 | 25 | 19 |
| | 32 | 22~32 | 416 | 7.5 | 15 | 22 | 10 | 25 | 30 | 25 | 19 |
| MMS-100S | 40 | 28~40 | 520 | 7.5 | 18.5 | 30 | 15 | 30 | 40 | 25 | 19 |
| | 50 | 34~50 | 650 | 11 | 22 | 45 | 15 | 40 | 50 | 25 | 19 |
| | 63 | 45~63 | 819 | 15 | 30 | 55 | 20 | 50 | 60 | 25 | 19 |
| | 65 | 47~65 | 845 | 15 | 30 | 55 | 20 | 50 | 60 | 25 | 19 |
| | 17 | 11~17 | 221 | 4 | 7.5 | 11 | 5 | 10 | 15 | 50 | 38 |
| | 22 | 14~22 | 286 | 4 | 7.5 | 15 | 7½ | 15 | 20 | 50 | 38 |
| | 26 | 18~26 | 338 | 5.5 | 11 | 18.5 | 10 | 20 | 25 | 50 | 38 |
| | 32 | 22~32 | 416 | 7.5 | 15 | 22 | 10 | 25 | 30 | 50 | 38 |
| | 40 | 28~40 | 520 | 7.5 | 18.5 | 30 | 15 | 30 | 40 | 50 | 38 |
| | 50 | 34~50 | 650 | 11 | 22 | 45 | 15 | 40 | 50 | 50 | 38 |
| 63 | 45~63 | 819 | 15 | 30 | 55 | 20 | 50 | 60 | 50 | 38 | |
| 75 | 55~75 | 975 | 22 | 37 | 63 | 25 | 60 | 75 | 50 | 38 | |
| 90 | 70~90 | 1170 | 30 | 45 | 75 | 30 | 75 | 100 | 50 | 38 | |
| 100 | 80~100 | 1300 | 30 | 45 | 90 | 40 | 75 | 100 | 50 | 38 | |

High breaking type

- Adjustable thermal release
- Magnetic release 13 I_e max.
- Trip class 10
- Ambient temperature compensation
- Protective function
 - phase-failure
 - short circuit
 - overload

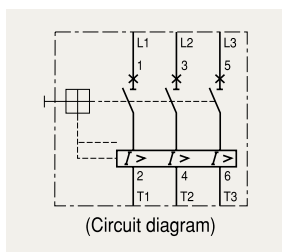


| Type | Rated operational current I _e [A] | Thermal release adjustment range [A] | Magnetic release operating current [A] | Switching of 3 phase AC motors, AC-2, AC-3 | | | | | | 400/415V | |
|----------|--|--------------------------------------|--|--|------|------|---------------------|-------|-------|----------------------|----------------------|
| | | | | 3-phase [kW] (50/60Hz) | | | 3-phase [HP] (60Hz) | | | I _{cu} [kA] | I _{cs} [kA] |
| | | | | 230V | 400V | 690V | 230V | 460V | 575V | | |
| MMS-32H | 0.16 | 0.1...0.16 | 2.1 | - | 0.02 | - | - | - | - | 100 | 100 |
| | 0.25 | 0.16...0.25 | 3.3 | 0.03 | 0.06 | - | - | - | - | 100 | 100 |
| | 0.4 | 0.25...0.4 | 5.2 | 0.06 | 0.09 | - | - | - | - | 100 | 100 |
| | 0.63 | 0.4...0.63 | 8.2 | 0.09 | 0.12 | 0.25 | - | - | - | 100 | 100 |
| | 1 | 0.63...1.0 | 13 | 0.12 | 0.25 | 0.55 | - | 1/2 | 1/2 | 100 | 100 |
| | 1.6 | 1.0...1.6 | 20.8 | 0.25 | 0.55 | 1.1 | 1/3 | 3/4 | 1 | 100 | 100 |
| | 2.5 | 1.6...2.5 | 32.5 | 0.37 | 0.75 | 1.5 | 1/2 | 1 1/2 | 1 1/2 | 100 | 100 |
| | 4 | 2.5...4.0 | 52 | 0.75 | 1.5 | 3 | 1 | 2 | 3 | 100 | 100 |
| | 6 | 4...6 | 78 | 1.5 | 2.2 | 4 | 1 1/2 | 5 | 5 | 100 | 100 |
| | 8 | 5...8 | 104 | 1.5 | 3 | 5.5 | 2 | 5 | 5 | 100 | 100 |
| | 10 | 6...10 | 130 | 3 | 4 | 7.5 | 3 | 7 1/2 | 10 | 100 | 100 |
| | 13 | 9...13 | 169 | 3 | 5.5 | 11 | 3 | 7 1/2 | 10 | 100 | 100 |
| | 17 | 11...17 | 221 | 4 | 7.5 | 11 | 5 | 10 | 15 | 50 | 38 |
| | 22 | 14...22 | 286 | 4 | 7.5 | 15 | 7 1/2 | 15 | 20 | 50 | 38 |
| MMS-63H | 26 | 18...26 | 338 | 5.5 | 11 | 18.5 | 7 1/2 | 15 | 20 | 50 | 38 |
| | 32 | 22...32 | 416 | 7.5 | 15 | 22 | 10 | 20 | 30 | 50 | 38 |
| | 40 | 28~40 | 520 | 7.5 | 18.5 | 30 | 15 | 30 | 40 | 40 | 30 |
| | 10 | 6~10 | 130 | 3 | 4 | 7.5 | 3 | 7 1/2 | 10 | 100 | 100 |
| | 13 | 9~13 | 169 | 3 | 5.5 | 11 | 3 | 7 1/2 | 10 | 100 | 100 |
| | 17 | 11~17 | 221 | 4 | 7.5 | 11 | 5 | 10 | 15 | 50 | 50 |
| | 22 | 14~22 | 286 | 4 | 7.5 | 15 | 7 1/2 | 15 | 20 | 50 | 50 |
| | 26 | 18~26 | 338 | 5.5 | 11 | 18.5 | 10 | 20 | 25 | 50 | 50 |
| | 32 | 22~32 | 416 | 7.5 | 15 | 22 | 10 | 25 | 30 | 50 | 50 |
| | 40 | 28~40 | 520 | 7.5 | 18.5 | 30 | 15 | 30 | 40 | 50 | 50 |
| MMS-100H | 50 | 34~50 | 650 | 11 | 22 | 45 | 15 | 40 | 50 | 50 | 50 |
| | 63 | 45~63 | 819 | 15 | 30 | 55 | 20 | 50 | 60 | 50 | 50 |
| | 75 | 55~75 | 975 | 22 | 37 | 63 | 25 | 60 | 75 | 75 | 50 |
| | 90 | 70~90 | 1170 | 30 | 45 | 75 | 30 | 75 | 100 | 75 | 50 |
| | 100 | 80~100 | 1300 | 30 | 45 | 90 | 40 | 75 | 100 | 75 | 50 |
| | 17 | 11~17 | 221 | 4 | 7.5 | 11 | 5 | 10 | 15 | 100 | 100 |
| | 22 | 14~22 | 286 | 4 | 7.5 | 15 | 7 1/2 | 15 | 20 | 100 | 50 |
| | 26 | 18~26 | 338 | 5.5 | 11 | 18.5 | 10 | 20 | 25 | 100 | 50 |
| | 32 | 22~32 | 416 | 7.5 | 15 | 22 | 10 | 25 | 30 | 100 | 50 |
| | 40 | 28~40 | 520 | 7.5 | 18.5 | 30 | 15 | 30 | 40 | 100 | 50 |

Selection guide

Instantaneous type

- Without thermal releases
- Magnetic release 13 I_e max.
- Protective function
 - short circuit



| Type | Rated operational current I _e [A] | Thermal release adjustment range [A] | Magnetic release operating current [A] | Switching of 3 phase AC motors, AC-2, AC-3 | | | | | | 400/415V | |
|-----------|--|--------------------------------------|--|--|------|------|---------------------|------|------|----------------------|----------------------|
| | | | | 3-phase [kW] (50/60Hz) | | | 3-phase [HP] (60Hz) | | | I _{cu} [kA] | I _{cs} [kA] |
| | | | | 230V | 400V | 690V | 230V | 460V | 575V | | |
| MMS-32HI | 0.16 | - | 2.1 | - | 0.02 | - | - | - | - | 100 | 100 |
| | 0.25 | - | 3.3 | 0.03 | 0.06 | - | - | - | - | 100 | 100 |
| | 0.4 | - | 5.2 | 0.06 | 0.09 | - | - | - | - | 100 | 100 |
| | 0.63 | - | 8.2 | 0.09 | 0.12 | 0.25 | - | - | - | 100 | 100 |
| | 1 | - | 13 | 0.12 | 0.25 | 0.55 | - | 1/2 | 1/2 | 100 | 100 |
| | 1.6 | - | 20.8 | 0.25 | 0.55 | 1.1 | 1/3 | 3/4 | 1 | 100 | 100 |
| | 2.5 | - | 32.5 | 0.37 | 0.75 | 1.5 | 1/2 | 1½ | 1½ | 100 | 100 |
| | 4 | - | 52 | 0.75 | 1.5 | 3 | 1 | 2 | 3 | 100 | 100 |
| | 6 | - | 78 | 1.5 | 2.2 | 4 | 1½ | 5 | 5 | 100 | 100 |
| | 8 | - | 104 | 1.5 | 3 | 5.5 | 2 | 5 | 5 | 100 | 100 |
| | 10 | - | 130 | 3 | 4 | 7.5 | 3 | 7½ | 10 | 100 | 100 |
| | 13 | - | 169 | 3 | 5.5 | 11 | 3 | 7½ | 10 | 100 | 100 |
| | 17 | - | 221 | 4 | 7.5 | 11 | 5 | 10 | 15 | 50 | 38 |
| | 22 | - | 286 | 4 | 7.5 | 15 | 7½ | 15 | 20 | 50 | 38 |
| 26 | - | 338 | 5.5 | 11 | 18.5 | 7½ | 15 | 20 | 50 | 38 | |
| 32 | - | 416 | 7.5 | 15 | 22 | 10 | 20 | 30 | 50 | 38 | |
| 40 | - | 28~40 | 7.5 | 18.5 | 30 | 15 | 30 | 40 | 40 | 30 | |
| MMS-63HI | 10 | - | 130 | 3 | 4 | 7.5 | 3 | 7½ | 10 | 100 | 100 |
| | 13 | - | 169 | 3 | 5.5 | 11 | 3 | 7½ | 10 | 100 | 100 |
| | 17 | - | 221 | 4 | 7.5 | 11 | 5 | 10 | 15 | 50 | 50 |
| | 22 | - | 286 | 4 | 7.5 | 15 | 7½ | 15 | 20 | 50 | 50 |
| | 26 | - | 338 | 5.5 | 11 | 18.5 | 10 | 20 | 25 | 50 | 50 |
| | 32 | - | 416 | 7.5 | 15 | 22 | 10 | 25 | 30 | 50 | 50 |
| | 40 | - | 520 | 7.5 | 18.5 | 30 | 15 | 30 | 40 | 50 | 50 |
| | 50 | - | 650 | 11 | 22 | 45 | 15 | 40 | 50 | 50 | 50 |
| | 63 | - | 819 | 15 | 30 | 55 | 20 | 50 | 60 | 50 | 50 |
| 65 | - | 47~65 | 15 | 30 | 55 | 20 | 50 | 60 | 35 | 27 | |
| MMS-100HI | 17 | - | 221 | 4 | 7.5 | 11 | 5 | 10 | 15 | 100 | 100 |
| | 22 | - | 286 | 4 | 7.5 | 15 | 7½ | 15 | 20 | 100 | 50 |
| | 26 | - | 338 | 5.5 | 11 | 18.5 | 10 | 20 | 25 | 100 | 50 |
| | 32 | - | 416 | 7.5 | 15 | 22 | 10 | 25 | 30 | 100 | 50 |
| | 40 | - | 520 | 7.5 | 18.5 | 30 | 15 | 30 | 40 | 100 | 50 |
| | 50 | - | 650 | 11 | 22 | 45 | 15 | 40 | 50 | 100 | 50 |
| | 63 | - | 819 | 15 | 30 | 55 | 20 | 50 | 60 | 100 | 50 |
| | 75 | - | 975 | 22 | 37 | 63 | 25 | 60 | 75 | 75 | 50 |
| | 90 | - | 1170 | 30 | 45 | 75 | 30 | 75 | 100 | 75 | 50 |
| | 100 | - | 1300 | 30 | 45 | 90 | 40 | 75 | 100 | 75 | 50 |