

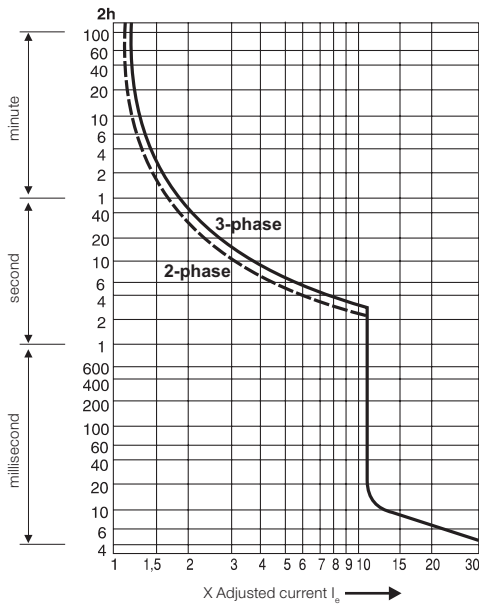
# Controls

## Manual Motor Protectors - Characteristics Curves

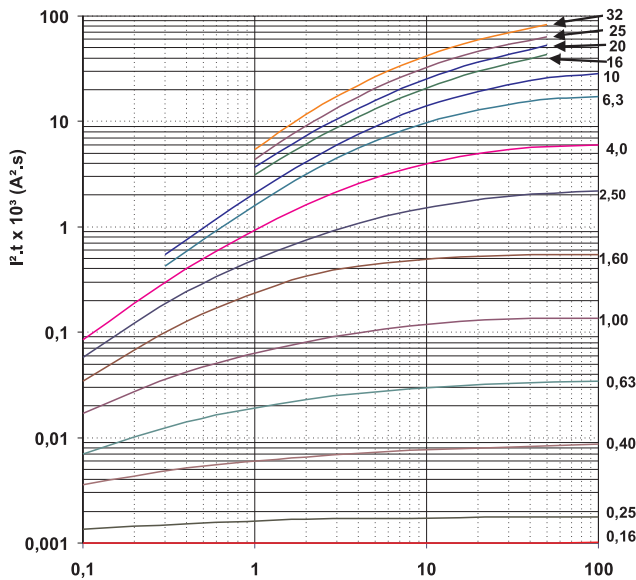
### Time Current Characteristic MPW25 Class 10

The tripping characteristic shows the manual motor protector trip time in relation to the rated current. The curves show average tolerance range values for an ambient temperature of 20°C (68°F), starting in cold state. Thermal trip time when working in operating temperature is reduced to around 25% of the presented values. Under normal operating conditions, all 3 manual motor protector phases must be conducting.

### MPW16/25/65



### Characteristic I²t at 460V - MPW25

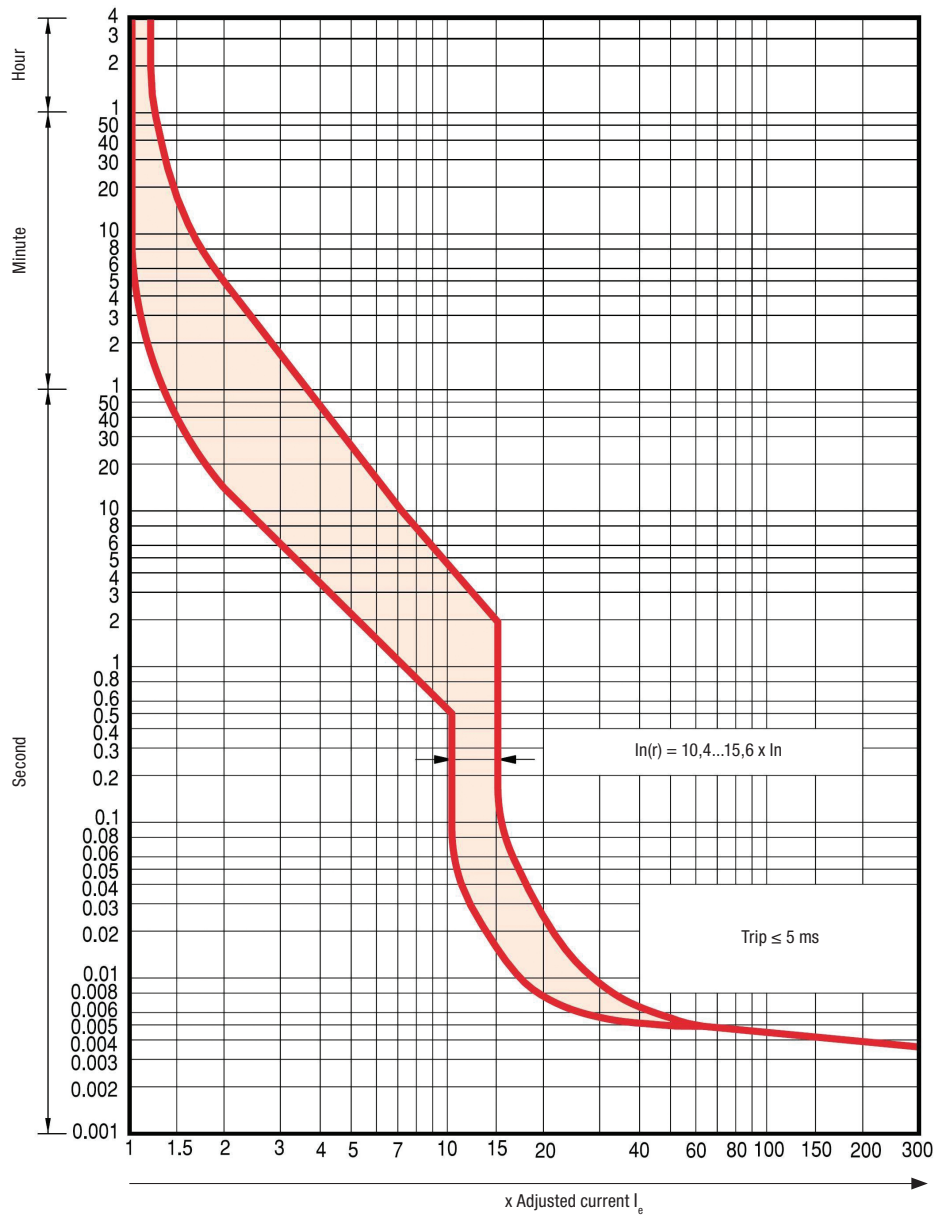


CONTROLS

# Controls

## Manual Motor Protectors - Characteristics Curves

### MPW100



Notes: 1) Thermal Tripping current: Curve presented for an ambient temperature of 20°C(68°F) starting from cold state.





# Controls

## Manual Motor Protectors

### Short Circuit Interruption Capacity UL/CSA for MPW16, MPW25, MPW65, MPW100

Catalog Number	Setting Overload Release (A)	Manual Motor Controller High Capacity				Combination Motor Controller (Type E/F) High Capacity				Combination Motor Controller (Type E/F) Extra High Capacity			
		240VAC	480VAC Y/277VAC	600VAC Y/347VAC	Max. Fuse or MCCB	240VAC	480VAC Y/277VAC	600VAC Y/347VAC	Max. Fuse or MCCB	240VAC	480VAC Y/277VAC	600VAC Y/347VAC	Max. Fuse or MCCB
		kA	kA	kA	A	kA	kA	kA	A	kA	kA	kA	A
MPW16	0.10 - 0.16	50	50	10	125	-	-	-	-	-	-	-	-
	0.16 - 0.25	50	50	10	125	-	-	-	-	-	-	-	-
	0.25 - 0.40	50	50	10	125	-	-	-	-	-	-	-	-
	0.40 - 0.63	50	50	10	125	-	-	-	-	-	-	-	-
	0.63 - 1.0	50	50	10	125	-	-	-	-	-	-	-	-
	1.0 - 1.6	50	50	10	125	-	-	-	-	-	-	-	-
	1.6 - 2.5	50	50	10	125	-	-	-	-	-	-	-	-
	2.5 - 4.0	50	50	10	125	-	-	-	-	-	-	-	-
	4.0 - 6.3	50	50	10	125	-	-	-	-	-	-	-	-
	6.3 - 10	50	50	5	125	-	-	-	-	-	-	-	-
10 - 16	30	30	5	160	-	-	-	-	-	-	-	-	
MPW25	0.10 - 0.16	50	50	25	125	50	50	25	-	100	100	50	-
	0.16 - 0.25	50	50	25	125	50	50	25	-	100	100	50	-
	0.25 - 0.40	50	50	25	125	50	50	25	-	100	100	50	-
	0.40 - 0.63	50	50	25	125	50	50	25	-	100	100	50	-
	0.63 - 1.0	50	50	25	125	50	50	25	-	100	100	50	-
	1.0 - 1.6	50	50	25	125	50	50	25	-	100	100	50	-
	1.6 - 2.5	50	50	25	125	50	50	25	-	100	100	50	-
	2.5 - 4.0	50	50	25	125	50	50	25	-	100	100	50	-
	4.0 - 6.3	50	50	25	125	50	50	25	-	100	100	50	-
	6.3 - 10	50	50	25	125	50	50	25	-	100	100	50	-
	10 - 16	50	50	25	160	50	50	25	-	100	100	50	-
	16 - 20	50	50	25	250	50	50	25	-	100	100	50	-
	20 - 25	50	50	25	250	50	50	25	-	100	100	50	-
25 - 32	42	42	25	500	42	42	25	-	100	100	50	-	
MPW65	10 ... 16	50	50	30	160	50	50	30	-	-	-	-	-
	16 ... 20	50	50	30	250	50	50	30	-	-	-	-	-
	20 ... 25	50	50	30	250	50	50	30	-	-	-	-	-
	25 ... 32	50	50	30	500	50	50	30	-	-	-	-	-
	32 ... 40	35	35	10	500	35	35	10	-	-	-	-	-
	40 ... 50	35	35	10	750	35	35	10	-	-	-	-	-
	50 ... 65	35	35	10	750	35	35	10	-	-	-	-	-
MPW100	55 ... 75	50	50	10	1250	50	50	10	-	-	-	-	-
	70 ... 90	50	50	10	1250	50	50	10	-	-	-	-	-
	80 ... 100	50	50	10	1250	50	50	10	-	-	-	-	-

Note: "-" Fuse or MCCB not required.

# Controls

## Manual Motor Protectors

### Short-Circuit Interruption Capacity (IEC 60947-2) for MPW16 , MPW25, MPW65, MPW100

Catalog Number	Setting Overload Release (A)	220-230VAC			380-415VAC			440VAC			460-500VAC			630-690VAC		
		$I_{cu}$	$I_{cs}$	Max. Fuse (gL/gG)	$I_{cu}$	$I_{cs}$	Max. Fuse (gL/gG) <sup>1)</sup>	$I_{cu}$	$I_{cs}$	Max. Fuse (gL/gG) <sup>1)</sup>	$I_{cu}$	$I_{cs}$	Max. Fuse (gL/gG) <sup>1)</sup>	$I_{cu}$	$I_{cs}$	Max. Fuse (gL/gG) <sup>1)</sup>
		kA	kA	A	kA	kA	A	kA	kA	A	kA	kA	A	kA	kA	A
MPW16	0.10...0.16	100	100	-	100	100	-	100	100	-	100	100	-	10	10	-
	0.16...0.25	100	100	-	100	100	-	100	100	-	100	100	-	10	10	-
	0.25...0.4	100	100	-	100	100	-	100	100	-	100	100	-	10	10	-
	0.4...0.63	100	100	-	100	100	-	100	100	-	100	100	-	10	10	-
	0.63...1	100	100	-	100	100	-	100	100	-	100	100	-	10	10	-
	1...1.6	100	100	-	100	100	-	100	100	-	100	100	-	10	10	-
	1.6...2.5	100	100	-	100	100	-	100	100	-	100	100	-	8	8	25
	2.5...4	100	100	-	100	100	-	100	100	-	100	100	-	8	8	35
	4...6.3	100	100	-	100	100	-	100	100	-	100	100	-	8	8	50
	6.3...10	100	100	-	50	10	100	50	10	80	10	10	63	5	5	50
10...16	100	100	-	10	10	100	10	10	80	10	10	80	4	3	63	
MPW25	0.10...0.16	100	100	-	100	100	-	100	100	-	100	100	-	100	100	-
	0.16...0.25	100	100	-	100	100	-	100	100	-	100	100	-	100	100	-
	0.25...0.4	100	100	-	100	100	-	100	100	-	100	100	-	100	100	-
	0.4...0.63	100	100	-	100	100	-	100	100	-	100	100	-	100	100	-
	0.63...1	100	100	-	100	100	-	100	100	-	100	100	-	100	100	-
	1...1.6	100	100	-	100	100	-	100	100	-	100	100	-	100	100	-
	1.6...2.5	100	100	-	100	100	-	100	100	-	100	100	-	8	8	25
	2.5...4	100	100	-	100	100	-	100	100	-	100	100	-	8	8	32
	4...6.3	100	100	-	100	100	-	100	100	-	100	100	-	8	8	50
	6.3...10	100	100	-	100	100	-	50	25	80	42	21	63	8	8	50
	10...16	100	100	-	50	25	100	50	15	80	10	8	80	5	5	63
	16...20	100	100	-	50	25	125	50	15	80	10	8	80	5	5	63
	20...25	100	100	-	50	25	125	50	15	100	10	8	80	5	5	63
25...32	100	100	-	50	25	125	25	15	100	10	8	80	5	5	63	
MPW65	10...16	100	100	-	50	50	100	50	50	80	15	15	80	8	8	63
	16...20	100	100	-	50	50	125	50	50	80	15	15	80	8	8	63
	20...25	100	100	-	50	50	125	50	50	100	15	15	80	8	8	63
	25...32	100	100	-	50	50	125	50	50	100	15	15	80	5	5	63
	32...40	100	100	-	50	50	160	50	50	125	15	10	100	5	5	63
	40...50	100	100	-	50	50	160	50	50	125	15	10	100	5	5	80
MPW100	55...75	100	100	-	75	50	-	50	38	200	12	9	160	6	6	125
	70...90	100	100	-	75	50	-	50	38	200	12	9	160	6	6	160
	80...100	100	100	-	75	50	-	50	38	200	12	9	160	6	6	160

Self protected against short-circuits up to 100kA

- Back-up fuse not required

1) Fuse amounts required for greater short-circuit currents.



# Controls Manual Motor Protectors

## Short-Circuit Interruption Capacity (IEC 60947-2) Limiter Function MPW25 + CLT25

Catalog Number	Setting Overload Release (A)	380-415VAC			440VAC			460-500VAC			630-690VAC		
		$I_{cu}$	$I_{cs}$	Max. Fuse (gL/gG)	$I_{cu}$	$I_{cs}$	Max. Fuse (gL/gG)	$I_{cu}$	$I_{cs}$	Max. Fuse (gL/gG)	$I_{cu}$	$I_{cs}$	Max. Fuse (gL/gG)
		kA	kA	A	kA	kA	A	kA	kA	A	kA	kA	A
MPW25 + CLT25	0.10...0.16	◆	◆	-	◆	◆	-	◆	◆	-	◆	◆	-
	0.16...0.25	◆	◆	-	◆	◆	-	◆	◆	-	◆	◆	-
	0.25...0.4	◆	◆	-	◆	◆	-	◆	◆	-	◆	◆	-
	0.4...0.63	◆	◆	-	◆	◆	-	◆	◆	-	◆	◆	-
	0.63...1	◆	◆	-	◆	◆	-	◆	◆	-	◆	◆	-
	1...1.6	◆	◆	-	◆	◆	-	◆	◆	-	◆	◆	-
	1.6...2.5	◆	◆	-	◆	◆	-	◆	◆	-	50	50	-
	2.5...4	◆	◆	-	◆	◆	-	◆	◆	-	50	50	-
	4...6.3	◆	◆	-	◆	◆	-	◆	◆	-	50	50	-
	6.3...10	◆	◆	-	100	100	-	100	100	-	50	50	-
	10...16	100	100	-	100	100	-	100	100	-	50	50	-
	16...20	100	100	-	100	100	-	100	100	-	50	50	-
20...25	100	100	-	100	100	-	100	100	-	10	10	-	
25...32	100	100	-	100	100	-	100	100	-	10	10	-	

- ◆ Self protected against short-circuits up to 100kA
- Back-up fuse not required
- 1) Fuse amounts required for higher short-circuit currents.
- ◆ Not applicable due to MPW25/already having 100 kA of  $I_{cu}$  /  $I_{cs}$  in referred ranges.