



MPW Series Manual Motor Protectors



MPW40-3-U001

Overview

The WEG MPW Series Manual Motor Protectors provide a very compact solution for operation and protection in motor control applications. The NEC requires four functions to be considered a combination motor starter: Motor Disconnect, Branch Circuit

Protection, Motor Controller and Motor Overload Protection. The WEG MPW meets all of these requirements, as well as the requirements of UL for Self-Protected Motor Controllers to be used in Type-E & F applications. With worldwide approvals, the WEG MPW can be used in a variety of applications all over the globe.

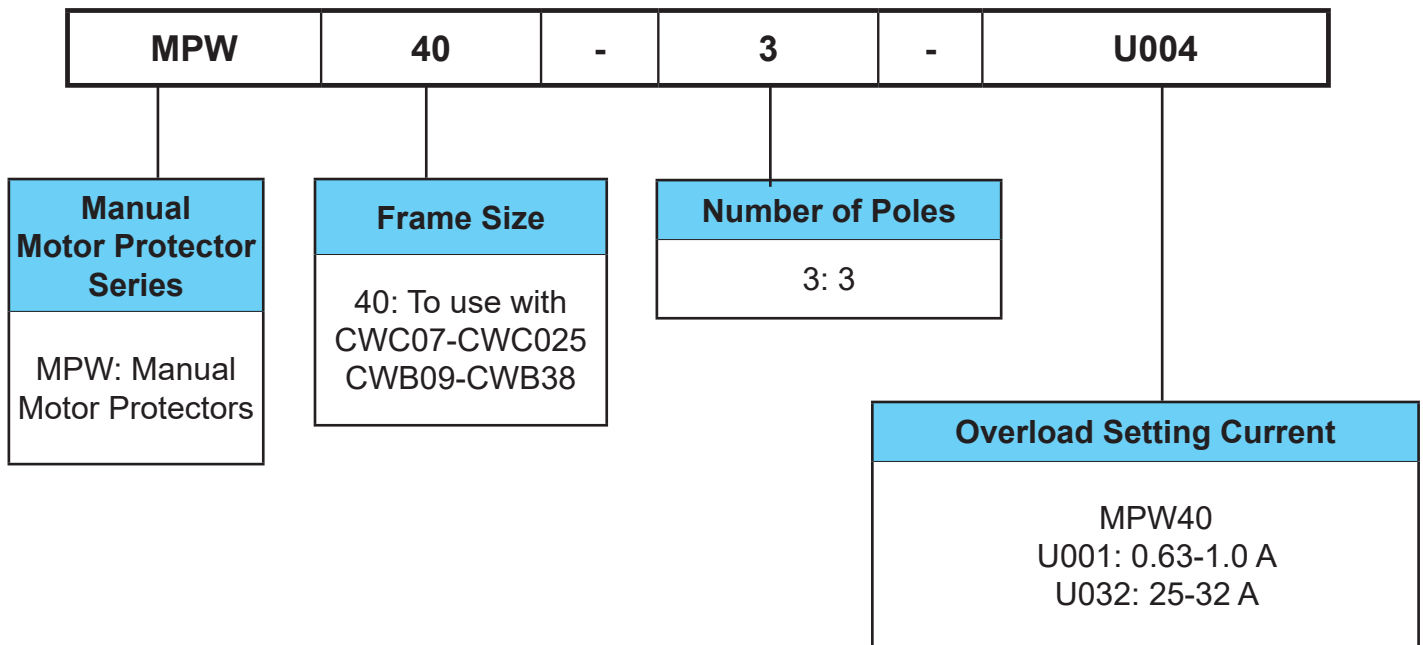
Features

- High short-circuit interrupting ratings (up to 65kA @480V)
- Phase-loss sensitivity protection
- UL Type-E self-protected combination starter
- Suitable for motor disconnect applications
- Group motor installations (per NEC Article 430)
- Wide variety of accessories
- Rated for DC applications



UL File No. E172121

MPW Manual Motor Protectors Catalog Number Sequence



For more details refer to selection table for each frame size

Table intended as reference only and not to create part numbers.



MPW Series Manual Motor Protectors



MPW40-3-U001

MPW40

- Suitable for manual motor controller, group installation, tap conductor and combination starters* Type E & Type F
- Built-in protection: disconnect means, short-circuit protection, motor control and overload protection
- Short-circuit interrupting capacity up to 50kA@480VAC (25kA@600VAC)
- Fixed short-circuit release $13 \times I_U$
- Phase-loss sensitivity
- Ambient temperature compensation -4 to +140°F (-20 to +60°C)

* When associated with line side terminal LST25 and trip indicator TSB

MPW Series Manual Motor Protectors Selection Guide

Part Number	Price	Maximum UL Horsepower						Thermal Setting (A)	Short-Circuit Ratings for Group Installation		Dimensional Drawing
		Single-Phase		Three-Phase					480V	600V	
		115V	230V	200V	230V	460V	575V				
MPW40-3-U001		-	-	-	-	1/2	1/2	0.63 - 1.0	50kA	25kA	PDF
MPW40-3-D016		-	1/10	1/4	1/3	3/4	1	1.0 - 1.6	50kA	25kA	PDF
MPW40-3-D025		-	1/6	1/2	1/2	1-1/2	1-1/2	1.6 - 2.5	50kA	25kA	PDF
MPW40-3-U004		1/8	1/3	3/4	1	2	3	2.5 - 4.0	50kA	25kA	PDF
MPW40-3-D063		-	3/4	1-1/2	1-1/2	5	5	4.0 - 6.3	50kA	25kA	PDF
MPW40-3-U010		1/2	1-1/2	3	3	7-1/2	10	6.3 - 10	50kA	25kA	PDF
MPW40-3-U016		1	3	5	5	10	15	10 - 16	50kA	25kA	PDF
MPW40-3-U020		1-1/2	3	5	7-1/2	15	20	16 - 20	50kA	25kA	PDF
MPW40-3-U025		2	3	7-1/2	7-1/2	15	20	20 - 25	50kA	25kA	PDF
MPW40-3-U032		-	5	10	10	20	25	25 - 32	42kA	25kA	PDF

Note: Horsepower ratings shown in the table are for reference only. Please refer to "Full Load Amps of the Motor" for final selection.



MPW Series Manual Motor Protectors

MPW40 With Current Limiter



CLT32MPW40



MPW40-3-U001

- Suitable for manual motor controller, group installation, tap conductor and combination starters* Type E & Type F
- Built-in protection: disconnect means, short-circuit protection, motor control and overload protection
- Short-circuit interrupting capacity up to 100kA@480VAC (50kA@600VAC)
- Fixed short-circuit release $13 \times I_U$
- Phase-loss sensitivity
- Ambient temperature compensation -4 to +140°F (-20 to +60°C)
- MPW motor protectors and CLT32MPW40 current limiter are ordered separately

* When associated with line side terminal LST25 and trip indicator TSB

MPW Series CLT32MPW40 Current Limiter Selection Guide

Current Limiter Part Number	Price	Dimensional Drawing	Use With MPW Motor Protector Part Number	Maximum UL Horsepower						Thermal Setting (A)	Short-Circuit Ratings for Group Installation	
				Single-Phase		Three-Phase					480V	600V
				115V	230V	200V	230V	460V	575V			
CLT32MPW40		PDF	MPW40-3-U001	-	-	-	-	1/2	1/2	0.63 - 1.0	100kA	50kA
			MPW40-3-D016	-	1/10	1/4	1/3	3/4	1	1.0 - 1.6	100kA	50kA
			MPW40-3-D025	-	1/6	1/2	1/2	1-1/2	1-1/2	1.6 - 2.5	100kA	50kA
			MPW40-3-U004	1/8	1/3	3/4	1	2	3	2.5 - 4.0	100kA	50kA
			MPW40-3-D063	1/4	3/4	1-1/2	1-1/2	5	5	4.0 - 6.3	100kA	50kA
			MPW40-3-U010	1/2	1-1/2	3	3	7-1/2	10	6.3 - 10	100kA	50kA
			MPW40-3-U016	1	3	5	5	10	15	10 - 16	100kA	50kA
			MPW40-3-U020	1-1/2	3	5	7-1/2	15	20	16 - 20	100kA	50kA
			MPW40-3-U025	2	3	7-1/2	7-1/2	15	20	20 - 25	100kA	50kA
			MPW40-3-U032	-	5	10	10	20	25	25 - 32	100kA	50kA

Note: Horsepower ratings shown in the table are for reference only. Please refer to "Full Load Amps of the Motor" for final selection.



MPW Series Manual Motor Protectors

Accessories

Accessories for MPW Series Manual Motor Protectors – Selection Guide			
Part Number	Price	Description	Dimensional Drawing
Auxiliary Contact Blocks			
ACBF-11		Field installable auxiliary contact, front mount, (1) N.O./ (1) N.C. contact(s), 2.5A @300 VAC/1A @ 300 VDC, screw terminal. For use with MPW40 series manual motor protectors.	PDF
ACBS-11		Field installable auxiliary contact, left side mount, (1) N.O./ (1) N.C. contact(s), 10A @ 600 VAC/2.5A @ 600 VDC, screw terminal. For use with MPW40 series manual motor protectors.	PDF
ACBS-20		Field installable auxiliary contact, left side mount, (2) N.O. contact(s), 10A @ 600 VAC/2.5A @ 600 VDC, screw terminal. For use with MPW40 series manual motor protectors.	PDF
ACBS-02		Field installable auxiliary contact, left side mount, (2) N.C. contact(s), 10A @ 600 VAC/2.5A @ 600 VDC, screw terminal. For use with MPW40 series manual motor protectors.	PDF
Accessories for Combination Type-E Construction			
LST25		Incoming power terminal block, 3-pole, maximum current 63A, 20-8 AWG. For use with MPW40 series manual motor protectors. Required when using a MPW40 in a UL Type E application 32A and less.	PDF
TSB		Field installable short circuit alarm contact, left side mount, (2) N.O./ (2) N.C. contact(s), 2.5A @300 VAC/1A @ 300 VDC, screw terminal. For use with MPW40 series manual motor protectors.	PDF
Current Limiter			
CLT32MPW40		Current limiter, 35mm DIN rail mount. For use with MPW40 series manual motor protectors.	PDF
Link Modules			
ECCMP-C0		Link module, for use with MPW40 protectors and CWC07 through CWC016 series miniature contactors with AC or DC coils. Not for use with 4-Pole CWC series miniature contactors.	PDF
ECCMP-C025		Link module, for use with MPW40 protectors and CWC025 series miniature contactors with AC coils. Not for use with 4-Pole CWC series miniature contactors.	PDF
ECCMP-40B38		Link module, for use with MPW40 protectors and CWB9 through CWB38 series contactors with AC coils.	PDF
ECCMP-40B38DC		Link module, for use with MPW40 protectors and CWB9 through CWB38 series contactors with DC coils.	PDF



ACBF-11



ACBS-11



ACBS-20



ACBS-02



LST25



TSB



CLT32MPW40



ECCMP-C0



ECCMP-C025



ECCMP-40B38



ECCMP-40B38DC



MPW Series Manual Motor Protectors

Accessories, continued

Accessories for MPW Series Manual Motor Protectors – Selection Guide

Part Number	Price	Description	Dimensional Drawing
Through-the-Door Rotary Mechanisms			
RMMP-130		Handle, rotary, 130mm length, black/gray, external front mount, 2-position, lockable in OFF only, NEMA 1/3R, IP55. For use with MPW40 series manual motor protectors.	PDF
RMMP-130E		Handle, rotary, 130mm length, red/yellow, external front mount, 2-position, lockable in OFF only, NEMA 1/3R, IP55. For use with MPW40 series manual motor protectors.	PDF
RMMP-330		Handle, rotary, 330mm length, black/gray, external front mount, 2-position, lockable in OFF only, NEMA 1/3R, IP55. For use with MPW40 series manual motor protectors.	PDF
RMMP-330E		Handle, rotary, 330mm length, red/yellow, external front mount, 2-position, lockable in OFF only, NEMA 1/3R, IP55. For use with MPW40 series manual motor protectors.	PDF
MRX-130		Handle, rotary, 130mm length, black/gray, external front mount, 2-position, lockable in OFF only, defeatable, NEMA 4/4X, IP65. For use with MPW40 series manual motor protectors.	PDF
MRX-130E		Handle, rotary, 130mm length, red/yellow, external front mount, 2-position, lockable in OFF only, defeatable, NEMA 4/4X, IP65. For use with MPW40 series manual motor protectors.	PDF
MRX-330		Handle, rotary, 330mm length, black/gray, external front mount, 2-position, lockable in OFF only, defeatable, NEMA 4/4X, IP65. For use with MPW40 series manual motor protectors.	PDF
MRX-330E		Handle, rotary, 330mm length, red/yellow, external front mount, 2-position, lockable in OFF only, defeatable, NEMA 4/4X, IP65. For use with MPW40 series manual motor protectors.	PDF
Under Voltage and Shunt Trip Releases			
SRMPD51		Field installable shunt trip, right side mount, 20-24 VAC (50/60Hz) coil voltage, screw terminal. For use with MPW40 series manual motor protectors.	PDF
SRMPD59		Field installable shunt trip, right side mount, 100-127 VAC (50/60Hz) coil voltage, screw terminal. For use with MPW40 series manual motor protectors.	PDF
SRMPD65		Field installable shunt trip, right side mount, 200-240 VAC (50/60Hz) coil voltage, screw terminal. For use with MPW40 series manual motor protectors.	PDF
URMPV18		Field installable undervoltage trip device, right side mount, 110 VAC (50Hz)/120 VAC (60Hz) sensing range, screw terminals. For use with MPW40 series manual motor protectors.	PDF
URMPV23		Field installable undervoltage trip device, right side mount, 180 VAC (50Hz)/208 VAC (60Hz) sensing range, screw terminals. For use with MPW40 series manual motor protectors.	PDF
URMPV30		Field installable undervoltage trip device, right side mount, 208 VAC (50Hz)/240 VAC (60Hz) sensing range, screw terminals. For use with MPW40 series manual motor protectors.	PDF
URMPV37		Field installable undervoltage trip device, right side mount, 230-240 VAC (50Hz)/240-277 VAC (60Hz) sensing range, screw terminals. For use with MPW40 series manual motor protectors.	PDF
URMPV47		Field installable undervoltage trip device, right side mount, 400-415 VAC (50Hz)/480 VAC (60Hz) sensing range, screw terminals. For use with MPW40 series manual motor protectors.	PDF
URMPD02		Field installable undervoltage trip device, right side mount, 24 VAC (50/60Hz) sensing range, screw terminals. For use with MPW40 series manual motor protectors.	PDF



RMMP-130



MRX-130



MRX-130E



SRMPD51



URMPV18



URMPD02



Self Protected Combination Type-E Motor Controller

Combination starters are the most common type of packaged motor controllers. They are called combination because of their construction and combined functions required by the US National Electric Code (NEC): Motor Disconnect, Motor Branch Circuit Protection, Motor Controller and Motor Overload Protection. UL currently recognizes six different types of combination starters that meet the requirements of a motor branch circuit.

Constructions Types A through D are traditional starters that use either a listed disconnect switch and fuses or a listed circuit breakers as the disconnect means and for short circuit protection. Each type uses a separate UL 508 listed motor controller and overload relay. Recently revisions on UL508 introduced the Type E and Type F starters.

WEG's self-protected combination Type E combines all of these functions within a single product for a manual operation or within a set of two products (with a listed contactor) for a remote operation. Both options must be associated with the accessories Line Side Terminal (LST25) and Tripping Signaling Block (TSB) to accomplish UL508/UL489 requirements for spacing (clearance and creepage) and short-circuit indication.

They are recommended for a wide range of applications where full voltage combination starters are required. Some examples are: Pumps, Industrial Washing Machines, Compressors, Blowers, Cutting Machines, Conveyors, Lumber Processing and many others.

The Manual Type E Starter is a stand-alone product – MPW series – that ranges from fractional up to 20Hp@460V motors (0.16 to 32A) with up to 100KA@480V and 50KA@600V interrupting short-circuit capability. Together with some accessories that complete this product line, the MPW series are a compact and reliable solution for starting and protecting motors.

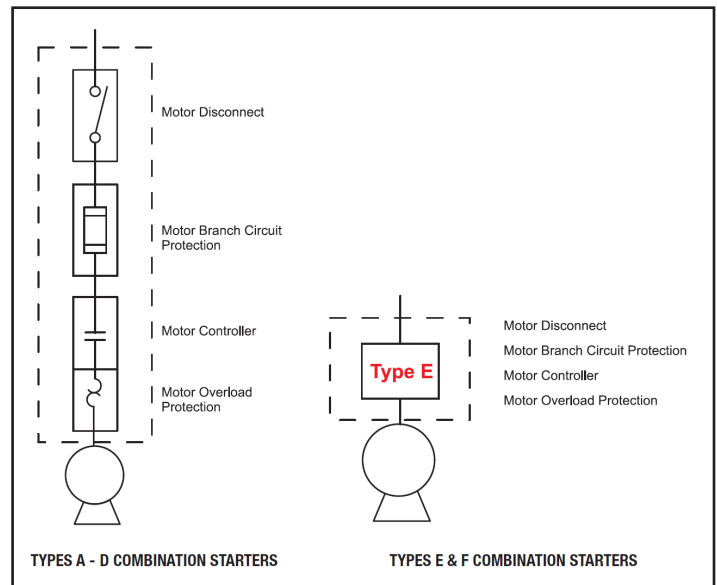
WEG also offers an option for a remote Type E & F Starter, combining the MPW series (as a manual type E) together with a contactor from the CWB Series. As this version undergoes the same tests, it has the same horse power ratings and short-circuit capabilities as the manual Type E. However, it provides remote operation and controlling of the application through the contactor's coil.

UL Combination Starter Type	Device Used for Component Function			
	Disconnected	Branch Circuit Protection	Motor Controller	Motor OL Relay
A		UL 248 Fuses	UL 508 Magnetic or Solid State Controller	UL 508 Motor Overload Relay
B	UL 98 Manual Disconnect	UL 508 Motor Short Circuit Protector		
C	UL 489 Inverse Time Circuit Breaker			
D	UL 489 Instantaneous Trip Circuit Breaker			
E	UL 508 Self-Protected Combination Controller			
F	UL 508 Manual Self-Protected Combination Controller		UL 508 Magnetic or Solid State Controller	UL 508 Manual Self-Protected Combination Controller

Type E starter is a self-protected combination motor controller that combines in a single device all the required functions of a combination starter and eliminates any additional requirements for upstream fuses or circuit breakers. These starters clear faults within their rating without sustaining damage to themselves or the rest of the system, being able to get back into operation. There are two arrangements for a Type E starter: manual (as stand-alone) and associated with a contactor. Both are submitted to the same tests sequences.

Type F starter consists of a listed manual Type E combined with a UL508 listed contactor. The difference between the two types is related to the absence of self-protected characteristic; hence, Type F has softened tests sequences allowing damages on the contactor after a fault.

Tests performed in order to fulfill the Type E requirements are considered the hardest in UL508, including short-circuit and endurance tests on the same sample. As a comparison, UL Type E exceeds the requirements for Type F and IEC60947-4-1 Coordination type 2.





Manual Self Protected Combination Type-E Motor Controllers



MPW40-3-U001

Manual Self-Protected Combination Type-E Motor Controllers

- No need for upstream protective devices such as UL489 MCCB or UL248 fuses
- Built-in protection: disconnect means, short-circuit protection, motor control and overload protection
- Short-circuit interrupting capacity up to 100kA@480VAC (50kA@600VAC)
- Compact combination starter
- Phase-loss sensitivity
- Ambient temperature compensation -4 to +140°F (-20 to +60°C)

Manual Self Protected Combination Type-E Motor Controllers (High Interruption Capacity) Selection Guide

Part Number			Maximum UL Horsepower						Thermal Setting (A)	Short-Circuit Interruption Capacity
Manual Motor Protector	Line Side Terminal	Tripping Indicator	Single-Phase		Three-Phase					
			115V	230V	200V	230V	460V	575V		
MPW40-3-U001	LST25	TSB	-	-	-	-	1/2	1/2	0.63 - 1.0	65kA
MPW40-3-D016			-	1/10	1/4	1/3	3/4	1	1.0 - 1.6	65kA
MPW40-3-D025			-	1/6	1/2	1/2	1-1/2	1-1/2	1.6 - 2.5	65kA
MPW40-3-U004			1/8	1/3	3/4	1	2	3	2.5 - 4.0	65kA
MPW40-3-D063			1/4	3/4	1-1/2	1-1/2	5	5	4.0 - 6.3	65kA
MPW40-3-U010			1/2	1-1/2	3	3	7-1/2	10	6.3 - 10	65kA
MPW40-3-U016			1	3	5	5	10	15	10 - 16	65kA
MPW40-3-U020			1-1/2	3	5	7-1/2	15	20	16 - 20	50kA
MPW40-3-U025			2	3	7-1/2	7-1/2	15	20	20 - 25	50kA
MPW40-3-U032			-	5	10	10	20	25	25 - 32	42kA

Note: Horsepower ratings shown in the table are for reference only. Please refer to "Full Load Amps of the Motor" for final selection.

Note: Individual component catalog numbers are ordered separately.

Manual Self Protected Combination Type-E Motor Controllers (Extra High Interruption Capacity) Selection Guide

Part Number				Maximum UL Horsepower						Thermal Setting (A)	Short-Circuit Interruption Capacity
Manual Motor Protector	Current Limiter	Line Side Terminal	Tripping Indicator	Single-Phase		Three-Phase					
				115V	230V	200V	230V	460V	575V		
MPW40-3-U001	CLT32MPW40	LST25	TSB	-	-	-	-	1/2	1/2	0.63 - 1.0	100kA
MPW40-3-D016				-	1/10	1/4	1/3	3/4	1	1.0 - 1.6	100kA
MPW40-3-D025				-	1/6	1/2	1/2	1-1/2	1-1/2	1.6 - 2.5	100kA
MPW40-3-U004				1/8	1/3	3/4	1	2	3	2.5 - 4.0	100kA
MPW40-3-D063				1/4	3/4	1-1/2	1-1/2	5	5	4.0 - 6.3	100kA
MPW40-3-U010				1/2	1-1/2	3	3	7-1/2	10	6.3 - 10	100kA
MPW40-3-U016				1	3	5	5	10	15	10 - 16	100kA
MPW40-3-U020				1-1/2	3	5	7-1/2	15	20	16 - 20	100kA
MPW40-3-U025				2	3	7-1/2	7-1/2	15	20	20 - 25	100kA
MPW40-3-U032				-	5	10	10	20	25	25 - 32	100kA

Note: Horsepower ratings shown in the table are for reference only. Please refer to "Full Load Amps of the Motor" for final selection.

Note: Individual component catalog numbers are ordered separately.



Combination Type-F Motor Controllers



MPW40-3-U001

Combination Type-F Motor Controllers

- No need for upstream protective devices such as UL489 MCCB or UL248 fuses
- Built-in protection: disconnect means, short-circuit protection, motor control and overload protection
- Short-circuit interrupting capacity up to 100kA@480VAC (50kA@600VAC)
- Compact combination starter
- Phase-loss sensitivity
- Ambient temperature compensation -4 to +140°F (-20 to +60°C)
- Remote operation

Combination Type-F Motor Controllers (High Interruption Capacity) Selection Guide

Part Number					Maximum UL Horsepower						Thermal Setting (A)	Short-Circuit Interruption Capacity
Manual Motor Protector	Line Side Terminal	Tripping Indicator	Link Module	Contactor	Single-Phase		Three-Phase					
					115V	230V	200V	230V	460V	575V		
MPW40-3-U001	LST25	TSB	ECCMP-40B38	CWB9	-	-	-	-	1/2	1/2	0.63 - 1.0	65kA
MPW40-3-D016				CWB9	-	1/10	1/4	1/3	3/4	1	1.0 - 1.6	65kA
MPW40-3-D025				CWB9	-	1/6	1/2	1/2	1-1/2	1-1/2	1.6 - 2.5	65kA
MPW40-3-U004				CWB9	1/8	1/3	3/4	1	2	3	2.5 - 4.0	65kA
MPW40-3-D063				CWB9	1/4	3/4	1-1/2	1-1/2	5	5	4.0 - 6.3	65kA
MPW40-3-U010				CWB9	1/2	1-1/2	3	3	7-1/2	10	6.3 - 10	65kA
MPW40-3-U016				CWB18	1	3	5	5	10	15	10 - 16	65kA
MPW40-3-U020				CWB18	1-1/2	3	5	7-1/2	15	20	16 - 20	50kA
MPW40-3-U025				CWB25	2	3	7-1/2	7-1/2	15	20	20 - 25	42kA

Notes: 1) Horsepower ratings shown in the table are for reference only. Please refer to "Full Load Amps of the Motor" for final selection.
 2) Individual component catalog numbers are ordered separately.

Combination Type-F Motor Controllers (Extra-High Interruption Capacity) Selection Guide

Part Number						Maximum UL Horsepower						Thermal Setting (A)	Short-Circuit Interruption Capacity
Manual Motor Protector	Line Side Terminal	Tripping Indicator	Link Module	Current Limiter	Contactor	Single-Phase		Three-Phase					
						115V	230V	200V	230V	460V	575V		
MPW40-3-U001	LST25	TSB	ECCMP-40B38	CLT32MPW40	CWB9	-	-	-	-	1/2	1/2	0.63 - 1.0	100kA
MPW40-3-D016					CWB9	-	1/10	1/4	1/3	3/4	1	1.0 - 1.6	100kA
MPW40-3-D025					CWB9	-	1/6	1/2	1/2	1-1/2	1-1/2	1.6 - 2.5	100kA
MPW40-3-U004					CWB9	1/8	1/3	3/4	1	2	3	2.5 - 4.0	100kA
MPW40-3-D063					CWB9	1/4	3/4	1-1/2	1-1/2	5	5	4.0 - 6.3	100kA
MPW40-3-U010					CWB9	1/2	1-1/2	3	3	7-1/2	10	6.3 - 10	100kA
MPW40-3-U016					CWB18	1	3	5	5	10	15	10 - 16	100kA
MPW40-3-U020					CWB18	1-1/2	3	5	7-1/2	15	20	16 - 20	100kA
MPW40-3-U025					CWB25	2	3	7-1/2	7-1/2	15	20	20 - 25	100kA
MPW40-3-U032					CWB32	-	5	10	10	20	25	25 - 32	100kA

Notes: 1) Horsepower ratings shown in the table are for reference only. Please refer to "Full Load Amps of the Motor" for final selection.
 2) Individual component catalog numbers are ordered separately.



Combination Type-F Motor Controllers

Accessories for MPW Series Manual Motor Protectors

Auxiliary Contact Block Accessories Selection Guide

Part Number	Price	Description	Auxiliary Contacts		Dimensional Drawing
			N.O.	N.C.	
Front Mounting Auxiliary Contact Block – CBF					
ACBF-11		For use with MPW40 ¹	1	1	PDF
Left Side Auxiliary Contact Block – ACBS					
ACBS-11		For use with MPW40 ¹	1	1	PDF
ACBS-20			2	–	PDF
ACBS-02			–	2	PDF



ACBF-11



ACBS-11

Trip Signalling Block (TSB) Accessory Selection Guide

Part Number	Price	For Use With	Description	Dimensional Drawing
TSB		MPW40 ¹	<ul style="list-style-type: none"> Equipped with 2 auxiliary contacts (1 N.O. + 1 N.C.) for overload trip signalling and 2 other auxiliary contacts (1 N.O. + 1 N.C.) for short-circuit trip signalling. To reset the MPW after a short-circuit, the blue flag must be manually reset after the cause of the failure has been solved. Left side auxiliary contacts can be assembled together with the trip signalling block. Left side assembly only. 	PDF



ACBS-20



ACBS-02

Undervoltage Release (URMP) Accessory Selection Guide

Part Number	Price	For Use With	Voltage	Dimensional Drawing
URMPV23		MPW40 ¹	208VAC 60Hz	PDF
URMPD02			24VAC 50/60Hz	PDF
URMPV47			400-415 VAC 50Hz / 480VAC 60Hz	PDF
URMPV18			110VAC50Hz / 120VAC 60Hz	PDF
URMPV30			240VAC 60Hz	PDF
URMPV37			230-240 VAC 50Hz / 277VAC 60Hz	PDF



TSB



URMPV18

Shunt Trip Releases Selection Guide

Part Number	Price	For Use With	Voltage	Dimensional Drawing
SRMPD51		MPW40 ¹	20-24 VAC 50/60 Hz	PDF
SRMPD59			100-127 VAC 50/60 Hz	PDF
SRMPD65			200-240 VAC 50/60 Hz	PDF



URMPD02

Link Modules for Manual Motor Protector Assembly + Contactors (ECCMP) Selection Guide

Part Number	Price	For Use With	Description	Contactors	Dimensional Drawing
ECCMP-C0		MPW40 ¹	For direct connection (electrical and mechanical) of motor protector to contactors.	CWC07 through CWC016, AC coils	PDF
ECCMP-C025				CWC025, AC coils	PDF



ECCMP-C0



ECCMP-C025

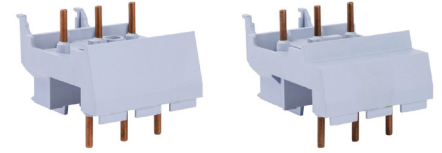
¹The following accessories can be assembled at the same time: 1 ACBF + 1 URMP/SRMP + 1 TSB or 1 ACBS + 1 URMP/SRMP + 1 TSB



Combination Type-F Motor Controllers

Accessories (continued)

Connector Links for MPW40 and CWB Contactors Selection Guide					
Part Number	Price	For Use With	Description	Contactors	Dimensional Drawing
ECCMP-40B38		MPW40	For direct connection (electrical and mechanical) of motor protector to contactors.	CWB9 through CWB38, AC coils	PDF
ECCMP-40B38DC				CWB9 through CWB38, DC coils	PDF



ECCMP-40B38

ECCMP-40B38DC

Through-the-Door Rotary Handle – RMMP and MRX Selection Guide							
Part Number	Price	For Use With	Description	Handle Color	Dimensional Drawing		
RMMP-130		MPW40	<ul style="list-style-type: none"> Degree of protection: IP55/NEMA1. Shows MPW position "1" (ON) or "0" (OFF). Panel door can only be opened in OFF position. Adjustable shaft length: 130-155 mm [5.12- 6.10 in] (Model 130) and 330-355 mm [12.99-13.98 in] (Model 330). To assemble the handle on the MPW, the shaft must have a length of at least 80mm [3.15 in] Up to three padlocks can be used in OFF position to block MPW operation and panel door opening Handle can be mounted on panels with thickness of 1-5 mm [0.04-0.20 in]. Handle can be assembled even with MPW turned in the 90° position. 	Gray/black	PDF		
RMMP-330					PDF		
RMMP-130E				Red/ yellow	PDF		
RMMP-330E					PDF		
MRX-130				Gray/black	<ul style="list-style-type: none"> Panel door can be opened in ON position (thermometry) by defeating mechanism, Degree of protection: IP65/NEMA 4X. Shows MPW position "1" (ON) or "0" (OFF). Panel door can only be opened in OFF position. Adjustable shaft length: 130-155 mm [5.12- 6.10 in] (Model 130) and 330-355 mm [12.99-13.98 in] (Model 330). To assemble the handle on the MPW, the shaft must have a length of at least 80mm [3.15 in] Up to three padlocks can be used in OFF position to block MPW operation and panel door opening Handle can be mounted on panels with thickness of 1-5 mm [0.04-0.20 in]. 	PDF	
MRX-330						PDF	
MRX-130E						Red/ yellow	PDF
MRX-330E							PDF



RMMP-130



MRX-130

Three-Phase Feeder Terminal – Selection Guide				
Part Number	Price	For Use With	Description	Dimensional Drawing
LST25		MPW40	<ul style="list-style-type: none"> Block module for "Type E" Combination Motor Controller" in accordance with UL (LST25+MPW+TSB) Rated insulation voltage: 690VAC. I_g: 63A Terminals: 8-20AWG 	PDF



LST25



MPW40 Technical Data

MPW40 – Specifications					
Type	MPW40-3-U001	MPW40-3-D016	MPW40-3-D025	MPW40-3-U004	MPW40-3-D063
Standards	Devices according to International Standards IEC 60947-1 / 60947-4-1; European Standards EN 60947-1 / 60947-4-1; Underwriters Laboratories - UL 508; CSA C.22.2/14; VDE 0660/102				
Current Setting Range	0.63-1.0 A	1.0 - 1.6 A	1.6 - 2.5 A	2.5-4.0 A	4.0-6.3 A
Rated Thermal Current I_{th}	1.0 A	1.6 A	2.5 A	4.0 A	6.3 A
Rated Insulation Voltage U_i					
Acc. IEC; VDE 0660	690V				
Acc. UL; CSA	600V				
Rated Operating Voltage U_e					
Acc. IEC; VDE 0660	690V				
Acc. UL; CSA	600V				
Rated Impulse Voltage U_{imp}					
Acc. IEC60947-1	6kV				
Rated Operating Frequency	50/60 Hz				
Overvoltage Category	III				
Pollution Degree	3				
Utilization Category					
IEC 60947-2 (Motor Protector)	A				
IEC 60947-4-1 (Motor Starter)	AC-3				
Lifespan					
Mechanical	100,000 operations				
Electrical (I_e max.)	100,000 operations				
Switching Rate (motor starts) AC-3	15 operations/hour				
Ambient Temperature					
Storage	-50°C to +80°C (-58°F to +176°F)				
Operating	-20°C to +60°C (-4°F to +140°F)				
Ambient Temperature Compensation	-20°C to +60°C (-4°F to +140°F)				
Climatic Proofing	IEC 60068-2-3 / IEC 60068-2-30				
Altitude					
Up to 2,000m (6,600ft)	Nominal values (for higher altitudes refer to Altitude Correction Factors table)				
Degree of protection	IP20				
Resistance to Shock					
Acc. IEC 60068-2-27	15g				
Resistance to Vibration	IEC 68-2				
Protection Against Direct Contact					
Acc. IEC 536; DIN VDE 0106 Part 100	Finger and back of hand proof				
Phase Failure Sensitivity Protection	Yes				
Overload Protection Characteristics ($x I_{th}$)	0.6 - 1 A				
Magnetic Release ($x I_{th}$)	13A				
Overload Trip Class	10				
Total Power Loss P_v					
At rated load operating temperature	6W	6W	6W	6W	6W
Weight	0.32 kg [0.71 lb]				
Type of Terminal	Flat type				
Screw Driver	Philips #2				
Terminal Capacity					
Solid-Stranded	1 or 2 x (0.5 to 2.5)				
Tightening Torque	1.2-1.7 N·m [11-16 lb·in]				
Mounting Position	Any position				



MPW40 Technical Data

MPW40 – Specifications (continued)					
Type	MPW40-3-U010	MPW40-3-U016	MPW40-3-U020	MPW40-3-U025	MPW40-3-U032
Standards	Devices according to International Standards IEC 60947-1 / 60947-4-1; European Standards EN 60947-1 / 60947-4-1; Underwriters Laboratories - UL 508; CSA C.22.2/14; VDE 0660/102				
Current Setting Range	6.3 - 10 A	10 - 16 A	16 - 20 A	20 - 25 A	25 - 32 A
Rated Thermal Current I_{th}	10A	16A	20A	25A	32A
Rated Insulation Voltage U_i					
Acc. IEC; VDE 0660	690V				
Acc. UL; CSA	600V				
Rated Operating Voltage U_e					
Acc. IEC; VDE 0660	690V				
Acc. UL; CSA	600V				
Rated Impulse Voltage U_{imp}					
Acc. IEC60947-1	6kV				
Rated Operating Frequency	50/60 Hz				
Overvoltage Category	III				
Pollution Degree	3				
Utilization Category					
IEC 60947-2 (Motor Protector)	A				
IEC 60947-4-1 (Motor Starter)	AC-3				
Lifespan					
Mechanical	100,000 operations				
Electrical (I_e max.)	100,000 operations				
Switching Rate (motor starts) AC-3	15 operations/hour				
Ambient Temperature					
Storage	-50°C to +80°C (-58°F to +176°F)				
Operating	-20°C to +60°C (-4°F to +140°F)				
Ambient Temperature Compensation	-20°C to +60°C (-4°F to +140°F)				
Climatic Proofing	IEC 60068-2-3 / IEC 60068-2-30				
Altitude					
Up to 2,000m (6,600ft)	Nominal values (for higher altitudes refer to Altitude Correction Factor tables)				
Degree of protection	IP20				
Resistance to Shock					
Acc. IEC 60068-2-27	15g				
Resistance to Vibration	IEC 68-2				
Protection Against Direct Contact					
Acc. IEC 536; DIN VDE 0106 Part 100	Finger and back of hand proof				
Phase Failure Sensitivity Protection	Yes				
Overload Protection Characteristics ($x I_U$)	0.6 - 1 A				
Magnetic Release ($x I_U$)	13A				
Overload Trip Class	10A				
Total Power Loss P_v					
At rated load operating temperature	6W	6W	8W	8W	8W
Weight	0.32 kg [0.71 lb]				
Type of Terminal	Flat type				
Screw Driver	Philips #2				
Terminal Capacity					
Solid-Stranded	1 or 2 x (0.5 to 2.5)				
Tightening Torque	1.2-1.7 N·m [11-16 lb·in]				
Mounting Position	Any position				



MPW40 Technical Data

MPW40 – Specifications – Power Contact Ratings					
Type	MPW40-3-U001	MPW40-3-D016	MPW40-3-D025	MPW40-3-U004	MPW40-3-D063
UL/CSA Data					
Rated Operational Current I_e	1.0 A	1.6 A	2.5 A	4.0 A	6.3 A
Magnetic Release Current	13A	21A	33A	52A	82A
Max. Short Circuit Current					
Without CLT32 (480V)	65kA	65kA	65kA	65kA	65kA
Without CLT32 (600V)	25kA	25kA	25kA	25kA	25kA
With CLT32 (480V)	100kA	100kA	100kA	100kA	100kA
With CLT32 (600V)	50kA	50kA	50kA	50kA	50kA
Motor Load, 1-phase (115V)	–	–	–	1/8 hp	1/4 hp
Motor Load, 1-phase (230V)	–	1/10 hp	1/6 hp	1/3 hp	3/4 hp
Motor Load, 3-phase (200V)	–	1/4 hp	1/2 hp	3/4 hp	1 1/2 hp
Motor Load, 3-phase (230V)	–	1/3 hp	1/2 hp	1 hp	1 1/2 hp
Motor Load, 3-phase (460V)	1/2	3/4 hp	1 1/2 hp	2 hp	5 hp
Motor Load, 3-phase (575V)	1/2	1 hp	1 1/2 hp	3 hp	5 hp
Max. Rated Current of Protection Device for Group Installation					
Fuse or MCCB	125A	125A	125A	125A	125A

MPW40 – Specifications – Power Contact Ratings					
Type	MPW40-3-U010	MPW40-3-U016	MPW40-3-U020	MPW40-3-U025	MPW40-3-U032
UL/CSA Data					
Rated Operational Current I_e	10A	16A	20A	25A	32A
Magnetic Release Current	130A	208A	260A	325A	416A
Max. Short Circuit Current					
Without CLT32 (480V)	65kA	50kA	50kA	50kA	50kA
Without CLT32 (600V)	25kA	25kA	25kA	25kA	25kA
With CLT32 (480V)	100kA	100kA	100kA	100kA	100kA
With CLT32 (600V)	50kA	50kA	50kA	50kA	50kA
Motor Load, 1-phase (115V)	1/2 hp	1 hp	1 1/2 hp	2 hp	–
Motor Load, 1-phase (230V)	1 1/2 hp	3 hp	3 hp	3 hp	5 hp
Motor Load, 3-phase (200V)	3 hp	5 hp	5 hp	7 1/2 hp	10 hp
Motor Load, 3-phase (230V)	3 hp	5 hp	7 1/2 hp	7 1/2 hp	10 hp
Motor Load, 3-phase (460V)	7 1/2 hp	10 hp	15 hp	15 hp	20 hp
Motor Load, 3-phase (575V)	10 hp	15 hp	20 hp	20 hp	25 hp
Max. Rated Current of Protection Device for Group Installation					
Fuse or MCCB	125A	160A	250A	250A	300A



MPW Technical Data

Auxiliary Contact Ratings						
Type	ACBF-11		ACBS-11		ACBS-20	ACBS-02
Rated Insulation Voltage U_i						
Acc. IEC; VDE 0660	300V		690V		690V	690V
Acc. UL; CSA	240V		600V		600V	600V
Rated Operating Voltage U_e						
Acc. IEC; VDE 0660	250V		690V		690V	690V
Acc. UL; CSA	240V		600V		600V	600V
Rated Impulse Voltage U_{imp}						
Acc. IEC60947-1	4kv		6kv		6kv	6kv
Overvoltage Category	III		III		III	III
Pollution Degree					3	
Life Span						
Mechanical					100,000 operations	
Electrical (I_e max.)					100,000 operations	
Rated Thermal Current I_{th}	2.5 A		10A		10A	10A
Rated Operating Current I_e						
Acc. IEC 60947-5-1 / AC-15	24V	2A	6A	6A	6A	6A
	110-127V	0.5 A	6A	6A	6A	6A
	220-240V	0.5 A	6A	6A	6A	6A
	380-400V	–	3A	3A	3A	3A
	415-450V	–	1A	1A	1A	1A
	500V	–	1A	1A	1A	1A
	660-690V	–	1A	1A	1A	1A
Acc. UL; CSA	C300		A600		A600	A600
Rated Operating Current I_e						
Acc. IEC 60947-5-1 / DC-13	24V	1A	2A	2A	2A	2A
	48V	0.3 A	0.8 A	0.8 A	0.8 A	0.8 A
	60V	0.15 A	0.5 A	0.5 A	0.5 A	0.5 A
	110V	–	0.5 A	0.5 A	0.5 A	0.5 A
	220V	–	0.25 A	0.25 A	0.25 A	0.25 A
	440V	–	0.1 A	0.1 A	0.1 A	0.1 A
Acc. UL; CSA	R300		Q600		Q600	Q600
Short Circuit Rating Without Welding						
RK5					10A	
MCB					6A	
Type of Terminal					Screwdriver; Philips #2	
Terminal Capacity						
Solid or Stranded					1 or 2 x (0.5 to 2.5 mm ²)	
Solid or Stranded					1 or 2 x (18 to 14 AWG)	
Tightening Torque					1.0-1.25 N•m [8.85-11.06 lb•in]	



MPW Technical Data

Trip Signalling Block Ratings		
Type	TSB	
Rated Insulation Voltage U_i		
Acc. IEC; VDE 0660	690V	
Acc. UL; CSA	600V	
Rated Operating Voltage U_e		
Acc. IEC; VDE 0660	690V	
Acc. UL; CSA	600V	
Rated Impulse Voltage U_{imp}		
Acc. IEC60947-1	6kv	
Overvoltage Category	III	
Pollution Degree	3	
Life Span		
Mechanical	100,000 operations	
Electrical (I_e max.)	100,000 operations	
Rated Thermal Current I_{th}	10A	
Rated Operating Current I_e		
Acc. IEC 60947-5-1 / AC-15	24V	6A
	110-127V	6A
	220-240V	6A
	380-400V	3A
	415-450V	3A
	500V	2A
	660-690V	1A
Acc. UL; CSA	A600	
Rated Operating Current I_e		
Acc. IEC 60947-5-1 / DC-13	24V	2A
	48V	0.5 A
	60V	0.5 A
	110V	0.5 A
	220V	0.25 A
	440V	0.1 A
Acc. UL; CSA	Q600	
Short Circuit Rating Without Welding		
Fuse RK5	6A	
MCB	6A	
Type of Terminal	Screwdriver; Philips #2	
Terminal Capacity		
Solid or Stranded	1 or 2 x (0.5 to 2.5 mm ²)	
Solid or Stranded	1 or 2 x (18 to 14 AWG)	
Tightening Torque	1.0-1.25 N•m [8.85-11.06 lb•in]	



MPW Technical Data

Shunt Trip Ratings	
Type	SRMP
Rated Insulation Voltage U_i	
Acc. IEC; VDE 0660	690V
Acc. UL; CSA	600V
Rated Operating Voltage U_e	
Acc. IEC; VDE 0660	690V
Acc. UL; CSA	600V
Rated Impulse Voltage U_{imp}	
Acc. IEC60947-1	6kv
Overvoltage Category	III
Pollution Degree	3
Life Span	
Mechanical	100,000 operations
Electrical (I_e max.)	100,000 operations
Actuating Voltage ($x U_S$)	0.7-1.1 V
Power Consumption	
Pull-In	20.2 VA [13W]
Hold	7.2 VA [2.4 W]
Maximum Opening Time	20ms
Short Circuit Rating Without Welding	
Fuse RK5	10A
MCB	6A
Type of Terminal	Screwdriver; Philips #2
Terminal Capacity	
Solid or Stranded	1 or 2 x (0.5 to 2.5 mm ²)
Solid or Stranded	1 or 2 x (18 to 14 AWG)
Tightening Torque	1.0-1.25 N•m [8.85-11.06 lb•in]

Undervoltage Trip Ratings	
Type	URMP
Rated Insulation Voltage U_i	
Acc. IEC; VDE 0660	690V
Acc. UL; CSA	600V
Rated Operating Voltage U_e	
Acc. IEC; VDE 0660	690V
Acc. UL; CSA	600V
Rated Impulse Voltage U_{imp}	
Acc. IEC60947-1	6kv
Overvoltage Category	III
Pollution Degree	3
Life Span	
Mechanical	100,000 operations
Electrical (I_e max.)	100,000 operations
Pick-Up Voltage ($x U_S$)	0.85-1.1 V
Drop-Out Voltage ($x U_S$)	0.7-0.35 V
Power Consumption	
Pull-In	20.2 VA [13W]
Hold	7.2 VA [2.4 W]
Maximum Opening Time	20ms
Short Circuit Rating Without Welding	
Fuse gL/gG	10A
MCB	6A
Type of Terminal	Screwdriver; Philips #2
Terminal Capacity	
Solid or Stranded	1 or 2 x (0.5 to 2.5 mm ²)
Solid or Stranded	1 or 2 x (18 to 14 AWG)
Tightening Torque	1.0-1.25 N•m [8.85-11.06 lb•in]

Main Terminal Capacity			
Part Number	Type	Number of Conductors	Cross-Section
MPW40	Rigid or flexible cable	1 or 2	1 to 2.5 mm ² 2.5 to 6 mm ² 14 to 8 AWG



MPW Technical Data

Altitude – Correction Factor

The MPW manual motor protectors do not undergo any change in their specified performance when used at an altitude of up to 2000 meters above sea level. However, as the altitude increases, the reduced atmospheric pressure results in decreasing dielectric properties. Therefore, current and voltage correction factors must be applied for altitudes exceeding 2000 meters, as shown in the table at right.

Altitude <i>h</i> (above sea level)	Rated operational voltage U_e	Current correction factor I_u
$h \leq 2000$ m	690V	$1 \times I_u$
$2000 < h \leq 3000$ m	550V	$0.96 \times I_u$
$3000 < h \leq 4000$ m	480V	$0.93 \times I_u$
$4000 < h \leq 5000$ m	420V	$0.90 \times I_u$

DC Operation

The MPW40 motor protective circuit breaker can also be used for operating DC loads. For such operation it is necessary to connect 2 or 3 poles in series. See recommended circuits and their voltage limits in the table at right.

Time constant $t = 5\text{ms}$

Short-circuit breaking capacity $I_{cu} = 10$ kA for all configurations

Circuits	Max. VDC	Notes
	150V	System not grounded 2 poles series connected
	300V	System grounded 2 poles series connected
	450V	System grounded 3 poles series connected



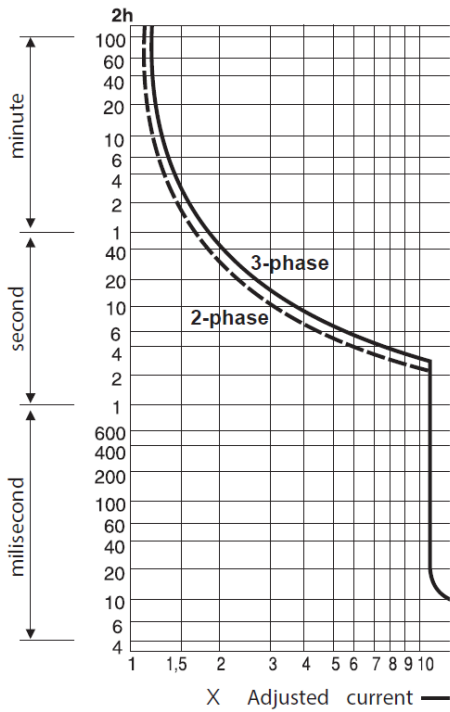
MPW Technical Data

Time Current Characteristic MPW40 Class 10

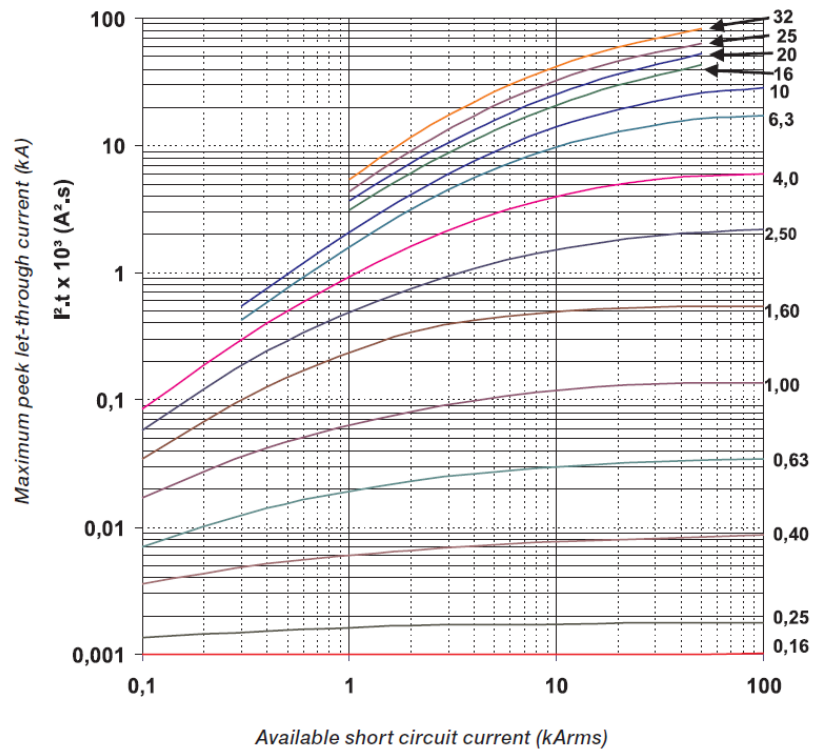
The tripping characteristic indicates the manual motor protector trip time in relation to the rated current.

The curves show average tolerance range values for an ambient temperature of 20°C [68°F], starting in a cold state. Thermal trip time when working in operating temperature is reduced to around 25% of the listed values. Under normal operating conditions, all three manual motor protector phases must be conducting.

MPW40



Characteristic I^2t at 460V – MPW40





MPW Technical Data

Short Circuit Interruption Capacity UL/CSA for MPW40

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	480Y 277VAC	600Y 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
0.63 - 1.0	50	65	25	125	50	50	25	–	100	100	50	–
1.0 - 1.6	50	65	25	125	50	50	25	–	100	100	50	–
1.6 - 2.5	50	65	25	125	50	50	25	–	100	100	50	–
2.5 - 4.0	50	65	25	125	50	50	25	–	100	100	50	–
4.0 - 6.3	50	65	25	125	50	50	25	–	100	100	50	–
6.3 - 10	50	65	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	50	25	500	42	42	25	–	100	100	50	–
32 - 40	20	20	5	520	–	–	–	–	–	–	–	–

Note: Fuse or MCCB not required.

Short-Circuit Interruption Capacity (IEC 60947-2) for MPW40

Setting Overload Release (A)	220-230 VAC			380-415 VAC			440VAC			460-500 VAC			630-690 VAC		
	I_{CU} (kA)	I_{CS} (kA)	Max. Fuse (RK5) (A)	I_{CU} (kA)	I_{CS} (kA)	Max. Fuse (RK5) (A)	I_{CU} (kA)	I_{CS} (kA)	Max. Fuse (RK5) (A)	I_{CU} (kA)	I_{CS} (kA)	Max. Fuse (RK5) (A)	I_{CU} (kA)	I_{CS} (kA)	Max. Fuse (RK5) (A)
0.63 - 1.0	100	100	–	100	100	–	100	100	–	100	100	–	100	100	–
1.0 - 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 - 4.0	100	100	–	100	100	–	100	100	–	100	100	–	8	8	32
4.0 - 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
32 - 40	100	100	–	50	25	125	25	15	100	10	8	80	5	2	63

Self-protected against short-circuits up to 100kA.

– Back-up fuse not required

1) Fuse required for greater short-circuit currents.



MPW Technical Data

Short-Circuit Interruption Capacity (IEC 60947-2) With Current Limiter (MPW40 + CLT32MPW40)

Setting Overload Release (A)	380-415 VAC			440VAC			460-500 VAC			630-690 VAC		
	I_{cu} (kA)	I_{cs} (kA)	Max. Fuse (RK5) (A)	I_{cu} (kA)	I_{cs} (kA)	Max. Fuse (RK5) (A)	I_{cu} (kA)	I_{cs} (kA)	Max. Fuse (RK5) (A)	I_{cu} (kA)	I_{cs} (kA)	Max. Fuse (RK5) (A)
0.63 - 1.0	•	•	–	•	•	–	•	•	–	•	•	–
1.0 - 1.6	•	•	–	•	•	–	•	•	–	•	•	–
1.6 - 2.5	•	•	–	•	•	–	•	•	–	50	50	–
2.5 - 4.0	•	•	–	•	•	–	•	•	–	50	50	–
4.0 - 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	–

Note: Self protected against short-circuits up to 100kA

- Back-up fuse not required
- Not applicable due to MPW40 already having 100 kA of I_{cu} / I_{cs} in referred ranges.

Mounting Position

