Motor Protectors

MPW

MPW18 Technical Data

General Ratings

Model	Units	MPW18-3-C016	MPW18-3-C025	MPW18-3-D004	MPW18-3-C063	MPW18-3-U001	MPW18-3-D016	MPW18-3-D025
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	[A]	0.10 - 0.16	0.16 - 0.25	0.25 - 0.40	0.40 - 0.63	0.63 - 1.0	1.0 - 1.6	1.6 - 2.5
Rated Thermal Current Ith	[A]	0.16	0.25	0.40	0.63	1.0	1.6	2.5
Rated Insulation Voltage Ui								
Acc. IEC; VDE 0660	[V]	690						
Acc. UL; CSA	[V]	600						
Rated Operating Voltage Ue								
Acc. IEC; VDE 0660	[V]	690						
Acc. UL; CSA	[V]	600						
Rated Impulse Voltage Uimp								
Acc. IEC60947-1	[kV]	6						
Rated Operating Frequency	[Hz]	50/60						
Overvoltage Category		III						
Pollution Degree		3						
Utilization Category								
IEC 60947-2 (Motor Protector)		A						
IEC 60947-4-1 (Motor Starter)		AC-3						
Lifespan								
Mechanical	[ops.]	100,000						
Electrical (Ie max.)	[ops.]	100,000						
Switching Rate (motor starts)	AC-3 [ops/hr]	15						
Ambient Temperature								
Storage	[°C (°F)]	-50 to +80 (-58 to +176)						
Operating	[°C (°F)]	-20 to +60 (-4 to +140)						
Ambient Temperature Compensation	[°C (°F)]	-20 to +60 (-4 to +140)						
Climatic Proofing		IEC 60068-2-3 / IEC 60068-2-30						
Altitude								
Up to 2,000m (6,600ft)		Nominal Values (for higher altitudes refer to page 122						
Degree of protection		IP20						
Resistance to Shock								
Acc. IEC 60068-2-27	[g]	15						
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 Iu [A]	0.6 - 1						
Magnetic Release	x Iu [A]	13						
Overload Trip Class		10						
Total Power Loss Pv								
At rated load operating temperature	[W]	6	6	6	6	6	6	6
Weight	[kg]	0.30						
	[lb]	0.70						
Type of Terminal		Flat Type						
Screw Driver		Philips #2						
Terminal Capacity								
Solid - Stranded	[mm2] [AWG]	Refer to table on page 121						
Tightening Torque	N.m) lb.in	1.2 - 1.7 (11 - 16)						
Mounting Position		Any Position						

UL File No. E172121

Data is subject to change without notice.

MPW18 Technical Data

General Ratings

TYPE	Units		MPW18-3-U004	MPW18-3-D063	MPW18-3-U010	MPW18-3-U016	MPW-3-U018
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		[A]	2.5 - 4.0	4.0 - 6.3	6.3 - 10	10 - 16	12-18
Rated Thermal Current Ith		[A]	4.0	6.3	10	16	18
Rated Insulation Voltage Ui							
Acc. IEC; VDE 0660		[V]	690				
Acc. UL; CSA		[V]	600				
Rated Operating Voltage Ue							
Acc. IEC; VDE 0660		[V]	690				
Acc. UL; CSA		[V]	600				
Rated Impulse Voltage Uimp							
Acc. IEC60947-1		[kV]	6				
Rated Operating Frequency		[Hz]	50/60				
Overvoltage Category			III				
Pollution Degree			3				
Utilization Category							
IEC 60947-2 (Motor Protector)			A				
IEC 60947-4-1 (Motor Starter)			AC-3				
Lifespan							
Mechanical		[ops.]	100,000				
Electrical (Ie max.)		[ops.]	100,000				
Switching Rate (motor starts)	AC-3	[ops/hr]	15				
Ambient Temperature							
Storage		[oC (oF)]	-50 to +80 (-58 to +176)				
Operating		[oC (oF)]	-20 to +60 (-4 to +140)				
Ambient Temperature Compensation		[oC (oF)]	-20 to +60 (-4 to +140)				
Climatic Proofing			IEC 60068-2-3 / IEC 60068-2-30				
Altitude							
Up to 2,000m (6,600ft)			Nominal Values (for higher altitudes refer to page 122				
Degree of protection			IP20				
Resistance to Shock							
Acc. IEC 60068-2-27		[g]	15				
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 Iu	[A]	0.6 - 1				
Magnetic Release	x Iu	[A]	12				
Overload Trip Class			10				
Total Power Loss Pv							
At rated load operating temperature		[W]	6	6	6	6	6
Weight		[kg]	0.3				
		[lb]	0.7				
Type of Terminal			Flat Type				
Screw Driver			Philips #2				
Terminal Capacity							
Solid - Stranded	[mm2]	[AWG]	Refer to table on page 121				
Tightening Torque	N.m)	lb.in	1.2 - 1.7 (11 - 16)				
Mounting Position			Any Position				

MPW18 Technical Data

Power Contact Ratings

TYPE UL/CSA DATA	Voltage	Units	MPW18-3-C016	MPW18-3-C025	MPW18-3-D004	MPW18-3-C063	MPW18-3-U001	MPW18-3-D016	MPW18-3-D025
Rated Operational Current Ie		[A]	0.16	0.25	0.40	0.63	1.0	1.6	2.5
Magnetic Release Current		[A]	2	3	5	8	13	21	33
Max. Short Circuit Current									
	480V	[kA]	50						
	600V	[kA]	10						
Motor Load, 1-phase									
	115V	[HP]	-	-	-	-	-	-	-
	230V	[HP]	-	-	-	-	-	1/10	1/6
Motor Load, 3-phase									
	200V	[HP]	-	-	-	-	-	1/4	1/2
	230V	[HP]	-	-	-	-	-	1/3	1/2
	460V	[HP]	-	-	-	-	1/2	3/4	1 1/2
	575V	[HP]	-	-	-	1/4	1/2	1	1 1/2
Max. Rated Current of Protection Device for Group Installation									
	Fuse or MCCB	[A]	125	125	125	125	125	125	125

IEC DATA

TYPE UL/CSA DATA	Voltage	Units	MPW18-3-C016	MPW18-3-C025	MPW18-3-D004	MPW18-3-C063	MPW18-3-U001	MPW18-3-D016	MPW18-3-D025
Rated Operational Current Ie		[A]	0.16	0.25	0.4	0.63	1	1.6	2.5
Magnetic Release Current		[A]	2	3	5	8	13	21	33
Back-Up Fuses									
gL/gG	220/240V	[A]	-	-	-	-	-	-	-
	380/400V	[A]	-	-	-	-	-	-	-
	415/440V	[A]	-	-	-	-	-	-	-
	500V	[A]	-	-	-	-	-	-	-
	660/690V	[A]	-	-	-	-	-	-	25
Ultimate Short Circuit Breaking Capacity									
Icu	220/240V	[kA]	100	100	100	100	100	100	100
	380/400V	[kA]	100	100	100	100	100	100	100
	415/440V	[kA]	100	100	100	100	100	100	100
	500V	[kA]	100	100	100	100	100	100	100
	660/690V	[kA]	100	100	100	100	100	100	8
Rated Service Short Circuit Breaking Capacity									
Ics	220/240V	[kA]	100	100	100	100	100	100	100
	380/400V	[kA]	100	100	100	100	100	100	100
	415/440V	[kA]	100	100	100	100	100	100	100
	500V	[kA]	100	100	100	100	100	100	100
	660/690V	[kA]	100	100	100	100	100	100	8

Data is subject to change without notice.

MPW18 Technical Data

Power Contact Ratings

TYPE UL/CSA DATA	Voltage	Units	MPW18-3-U004	MPW18-3-D063	MPW18-3-U010	MPW18-3-U016	MPW18-3-U018
Rated Operational Current Ie		[A]	4.0	6.3	10	16	18
Magnetic Release Current		[A]	52	82	130	208	-
Max. Short Circuit Current							
	480V	[kA]	50	50	50	30	30
	600V	[kA]	10	10	5	5	5
Motor Load, 1-phase							
	115V	[HP]	1/8	1/4	1/2	1	1
	230V	[HP]	1/3	3/4	1 1/2	3	3
Motor Load, 3-phase							
	200V	[HP]	3/4	1 1/2	3	3	5
	230V	[HP]	1	1 1/2	3	5	5
	460V	[HP]	2	5	7 1/2	10	10
	575V	[HP]	3	5	10	15	15
Max. Rated Current of Protection Device for Group Installation							
	Fuse or MCCB	[A]	125	125	125	160	160

IEC DATA

TYPE UL/CSA DATA	Voltage	Units	MPW18-3-U004	MPW18-3-D063	MPW18-3-U010	MPW18-3-U016	MPW18-3-U018
Rated Operational Current Ie		[A]	4	6.3	10	16	18
Magnetic Release Current		[A]	52	82	130	208	234
Back-Up Fuses							
gL/gG	220/240V	[A]	-	-	-	-	-
	380/400V	[A]	-	-	100	100	100
	415/440V	[A]	-	-	80	80	80
	500V	[A]	-	-	63	80	80
	660/690V	[A]	35	50	50	63	80
Ultimate Short Circuit Breaking Capacity							
Icu	220/240V	[kA]	100	100	100	100	100
	380/400V	[kA]	100	100	50	10	10
	415/440V	[kA]	100	100	50	10	10
	500V	[kA]	100	100	10	10	10
	660/690V	[kA]	8	8	5	4	4
Rated Service Short Circuit Breaking Capacity							
Ics	220/240V	[kA]	100	100	100	100	100
	380/400V	[kA]	100	100	10	10	10
	415/440V	[kA]	100	100	10	10	10
	500V	[kA]	100	100	10	10	8
	660/690V	[kA]	8	8	5	3	3

MPW40 Technical Data

General Ratings

TYPE	Units	MPW40-3-C016	MPW40-3-C025	MPW40-3-D004	MPW40-3-C063	MPW40-3-U001	MPW40-3-D016	MPW40-3-D025
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	[A]	0.10 - 0.16	0.16 - 0.25	0.25 - 0.40	0.40 - 0.63	0.63 - 1.0	1.0 - 1.6	1.6 - 2.5
Rated Thermal Current Ith	[A]	0.16	0.25	0.40	0.63	1.0	1.6	2.5
Rated Insulation Voltage Ui								
Acc. IEC; VDE 0660	[V]	690						
Acc. UL; CSA	[V]	600						
Rated Operating Voltage Ue								
Acc. IEC; VDE 0660	[V]	690						
Acc. UL; CSA	[V]	600						
Rated Impulse Voltage Uimp								
Acc. IEC60947-1	[kV]	6						
Rated Operating Frequency	[Hz]	50/60						
Overvoltage Category		III						
Pollution Degree		3						
Utilization Category								
IEC 60947-2 (Motor Protector)		A						
IEC 60947-4-1 (Motor Starter)		AC-3						
Lifespan								
Mechanical	[ops.]	100,000						
Electrical (Ie max.)	[ops.]	100,000						
Switching Rate (motor starts)	AC-3 [ops/hr]	15						
Ambient Temperature								
Storage	[°C (°F)]	-50 to +80 (-58 to +176)						
Operating	[°C (°F)]	-20 to +60 (-4 to +140)						
Ambient Temperature Compensation	[°C (°F)]	-20 to +60 (-4 to +140)						
Climatic Proofing		IEC 60068-2-3 / IEC 60068-2-30						
Altitude								
Up to 2,000m (6,600ft)		Nominal Values (for higher altitudes refer to page 122						
Degree of protection		IP20						
Resistance to Shock								
Acc. IEC 60068-2-27	[g]	15						
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 Iu [A]	0.6 - 1						
Magnetic Release	x Iu [A]	13						
Overload Trip Class		10						
Total Power Loss Pv								
At rated load operating temperature	[W]	6	6	6	6	6	6	6
Weight	[kg]	0.32						
	[lb]	0.71						
Type of Terminal		Flat Type						
Screw Driver		Philips #2						
Terminal Capacity								
Solid - Stranded	[mm2] [AWG]	Refer to table on page 121						
Tightening Torque	N.m) lb.in	1.2 - 1.7 (11 - 16)						
Mounting Position		Any Position						

UL File No. E172121

Data is subject to change without notice.

MPW40 Technical Data

General Ratings

TYPE	Units	MPW40-3-U004	MPW40-3-D063	MPW40-3-U010	MPW40-3-U016	MPW40-3-U020	MPW40-3-U025	MPW40-3-U032	MPW40-3-U040
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	[A]	2.5 - 4.0	4.0 - 6.3	6.3 - 10	10 - 16	16 - 20	20 - 25	25 - 32	32 - 40
Rated Thermal Current Ith	[A]	4.0	6.3	10	16	20	25	32	40
Rated Insulation Voltage Ui									
Acc. IEC; VDE 0660	[V]	690							
Acc. UL; CSA	[V]	600							
Rated Operating Voltage Ue									
Acc. IEC; VDE 0660	[V]	690							
Acc. UL; CSA	[V]	600							
Rated Impulse Voltage Uimp									
Acc. IEC60947-1	[kV]	6							
Rated Operating Frequency	[Hz]	50/60							
Overvoltage Category		III							
Pollution Degree		3							
Utilization Category									
IEC 60947-2 (Motor Protector)		A							
IEC 60947-4-1 (Motor Starter)		AC-3							
Lifespan									
Mechanical	[ops.]	100,000							
Electrical (Ie max.)	[ops.]	100,000							
Switching Rate (motor starts)	AC-3 [ops/hr]	15							
Ambient Temperature									
Storage	[oC (oF)]	-50 to +80 (-58 to +176)							
Operating	[oC (oF)]	-20 to +60 (-4 to +140)							
Ambient Temperature Compensation	[oC (oF)]	-20 to +60 (-4 to +140)							
Climatic Proofing		IEC 60068-2-3 / IEC 60068-2-30							
Altitude									
Up to 2,000m (6,600ft)		Nominal Values (for higher altitudes refer to page 122							
Degree of protection		IP20							
Resistance to Shock									
Acc. IEC 60068-2-27	[g]	15							
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 Iu [A]	0.6 - 1							
Magnetic Release	x Iu [A]	13							
Overload Trip Class		10							
Total Power Loss Pv									
At rated load operating temperature	[W]	6	6	6	6	8	8	8	8
Weight	[kg]	0.32							
	[lb]	0.71							
Type of Terminal		Flat Type							
Screw Driver		Philips #2							
Terminal Capacity									
Solid - Stranded	[mm2] [AWG]	Refer to table on page 121							
Tightening Torque	N.m) lb.in	1.2 - 1.7 (11 - 16)							
Mounting Position		Any Position							

MPW40 Technical Data

Power Contact Ratings

TYPE	Voltage	Units	MPW40-3-C016	MPW40-3-C025	MPW40-3-C040	MPW40-3-C063	MPW40-3-U001	MPW40-3-D016	MPW40-3-D025
UL/CSA DATA									
Rated Operational Current Ie		[A]	0.16	0.25	0.40	0.63	1.0	1.6	2.5
Magnetic Release Current		[A]	2	3	5	8	13	21	33
Max. Short Circuit Current									
without CLT25									
	480V	[kA]	65						
	600V	[kA]	25						
with CLT25									
	480V	[kA]	100						
	600V	[kA]	50						
Motor Load, 1-phase									
	115V	[HP]	-	-	-	-	-	-	-
	230V	[HP]	-	-	-	-	-	1/10	1/6
Motor Load, 3-phase									
	200V	[HP]	-	-	-	-	-	1/4	1/2
	230V	[HP]	-	-	-	-	-	1/3	1/2
	460V	[HP]	-	-	-	-	1/2	3/4	1 1/2
	575V	[HP]	-	-	-	1/4	1/2	1	1 1/2
Max. Rated Current of Protection Device for Group Installation									
	Fuse or MCCB	[A]	125	125	125	125	125	125	125
IEC DATA									
Rated Operational Current Ie		[A]	0.16	0.25	0.4	0.63	1	1.6	2.5
Magnetic Release Current		[A]	2	3	5	8	13	21	33
Back-Up Fuses									
gL/gG	220/240V	[A]	-	-	-	-	-	-	-
	380/400V	[A]	-	-	-	-	-	-	-
	415/440V	[A]	-	-	-	-	-	-	-
	500V	[A]	-	-	-	-	-	-	-
	660/690V	[A]	-	-	-	-	-	-	25
Ultimate Short Circuit Breaking Capacity									
Icu	220/240V	[kA]	100	100	100	100	100	100	100
	380/400V	[kA]	100	100	100	100	100	100	100
	415/440V	[kA]	100	100	100	100	100	100	100
	500V	[kA]	100	100	100	100	100	100	100
	660/690V	[kA]	100	100	100	100	100	100	8
Rated Service Short Circuit Breaking Capacity									
Ics	220/240V	[kA]	100	100	100	100	100	100	100
	380/400V	[kA]	100	100	100	100	100	100	100
	415/440V	[kA]	100	100	100	100	100	100	100
	500V	[kA]	100	100	100	100	100	100	100
	660/690V	[kA]	100	100	100	100	100	100	8

Data is subject to change without notice.

MPW40 Technical Data

Power Contact Ratings

TYPE	Voltage	Units	MPW40-3-U004	MPW40-3-D063	MPW40-3-U010	MPW40-3-U016	MPW40-3-U020	MPW40-3-U025	MPW40-3-U032	MPW40-3-U040
UL/CSA DATA										
Rated Operational Current Ie		[A]	4.0	6.3	10	16	20	25	32	40
Magnetic Release Current		[A]	52	82	130	208	260	325	416	520
Max. Short Circuit Current										
without CLT25										
	480V	[kA]	65			50				20
	600V	[kA]	25						25	5
with CLT25										
	480V	[kA]	100							
	600V	[kA]	50							
Motor Load, 1-phase										
	115V	[HP]	1/8	1/4	1/2	1	1 1/2	2	-	-
	230V	[HP]	1/3	3/4	1 1/2	3	3	3	5	5
Motor Load, 3-phase										
	200V	[HP]	3/4	1 1/2	3	5	5	7 1/2	10	10
	230V	[HP]	1	1 1/2	3	5	7 1/2	7 1/2	10	10
	460V	[HP]	2	5	7 1/2	10	15	15	20	25
	575V	[HP]	3	5	10	15	20	20	25	30
Max. Rated Current of Protection Device for Group Installation										
	Fuse or MCCB	[A]	125	125	125	160	250	250	300	300
IEC DATA										
Rated Operational Current Ie		[A]	4	6.3	10	16	20	25	32	40
Magnetic Release Current		[A]	52	82	130	208	260	325	416	520
Back-Up Fuses										
gL/gG	220/240V	[A]	-	-	-	-	-	-	-	-
	380/400V	[A]	-	-	-	100	125	125	125	125
	415/440V	[A]	-	-	80	80	80	100	100	125
	500V	[A]	-	-	63	80	80	80	80	125
	660/690V	[A]	35	50	50	63	63	63	63	125
Ultimate Short Circuit Breaking Capacity										
Icu	220/240V	[kA]	100	100	100	100	100	100	100	100
	380/400V	[kA]	100	100	100	50	50	50	50	30
	415/440V	[kA]	100	100	50	50	50	50	25	20
	500V	[kA]	100	100	42	10	10	10	10	10
	660/690V	[kA]	8	8	8	5	5	5	5	5
Rated Service Short Circuit Breaking Capacity										
Ics	220/240V	[kA]	100	100	100	100	100	100	100	100
	380/400V	[kA]	100	100	100	25	25	25	25	15
	415/440V	[kA]	100	100	25	15	15	15	15	10
	500V	[kA]	100	100	21	8	8	8	8	5
	660/690V	[kA]	8	8	8	5	5	5	5	2

MPW65 Technical Data

General Rating

TYPE	Units		MPW65-3-U016	MPW65-3-U020	MPW65-3-U025	MPW65-3-U032	MPW65-3-U040	MPW65-3-U050	MPW65-3-U065
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		[A]	10 - 16	16 - 20	20 - 25	25 - 32	32 - 40	40 - 50	50 - 65
Rated Thermal Current Ith		[A]	16	20	25.00	32	40.0	50	65
Rated Insulation Voltage Ui									
Acc. IEC; VDE 0660		[V]	690						
Acc. UL; CSA		[V]	600						
Rated Operating Voltage Ue									
Acc. IEC; VDE 0660		[V]	690						
Acc. UL; CSA		[V]	600						
Rated Impulse Voltage Uimp									
Acc. IEC60947-1		[kV]	6						
Rated Operating Frequency		[Hz]	50/60						
Overvoltage Category			III						
Pollution Degree			3						
Utilization Category									
IEC 60947-2 (Motor Protector)			A						
IEC 60947-4-1 (Motor Starter)			AC-3						
Lifespan									
Mechanical		[ops.]	50,000						
Electrical (Ie max.)		[ops.]	25,000						
Switching Rate (motor starts)	AC-3	[ops/hr]	15						
Ambient Temperature									
Storage		[°C (°F)]	-50 to +80 (-58 to +176)						
Operating		[°C (°F)]	-20 to +60 (-4 to +140)						
Ambient Temperature Compensation		[°C (°F)]	-20 to +60 (-4 to +140)						
Climatic Proofing			IEC 60068-2-3 / IEC 60068-2-30						
Altitude									
Up to 2,000m (6,600ft)			Nominal Values (for higher altitudes refer to page 122						
Degree of protection			IP20						
Resistance to Shock									
Acc. IEC 60068-2-27		[g]	15						
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 Iu	[A]	0.6 - 1						
Magnetic Release	x Iu	[A]	13						
Overload Trip Class			10						
Total Power Loss Pv									
At rated load operating temperature		[W]	8						
Weight		[kg]	0.60						
		[lb]	1.42						
Type of Terminal			Flat Type						
Screw Driver			Allen #4						
Terminal Capacity									
Solid - Stranded	[mm2]	[AWG]	Refer to table on page 121						
Tightening Torque	N.m)	lb.in	1.2 - 1.7 (11 - 16)						
Mounting Position			Any Position						

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Data is subject to change without notice.

MPW65 Technical Data

Power Contact Ratings

TYPE	Voltage	Units	MPW65-3-U016	MPW65-3-U020	MPW65-3-U025	MPW65-3-U032	MPW65-3-U040	MPW65-3-U050	MPW65-3-U065
UL/CSA DATA									
Rated Operational Current Ie		[A]	16	20	25	32	40	50	65
Magnetic Release Current		[A]	208	260	325	416	520	650	845
Max. Short Circuit Current									
	480V	[kA]	50				35		
	600V	[kA]	30				10		
Motor Load, 1-phase									
	115V	[HP]					3	-	5
	230V	[HP]					71/2	10	10
Motor Load, 3-phase									
	200V	[HP]					-	15	20
	230V	[HP]					15	15	20
	460V	[HP]					25	30	50
	575V	[HP]					30	40	60
Max. Rated Current of Protection Device for Group Installation									
	Fuse or MCCB	[A]							
IEC DATA									
Rated Operational Current Ie		[A]	16	20	25	32	40	50	65
Magnetic Release Current		[A]	208	260	325	416	520	650	845
Back-Up Fuses									
gL/gG	220/240V	[A]	-	-	-	-	-	-	-
	380/400V	[A]	100	125	125	125	160	160	160
	415/440V	[A]	80	80	80	100	125	125	125
	500V	[A]	80	80	100	80	100	100	100
	660/690V	[A]	63	63	63	63	63	80	80
Ultimate Short Circuit Breaking Capacity									
Icu	220/240V	[kA]	100	100	100	100	100	100	100
	380/400V	[kA]	50	50	50	50	50	50	50
	415/440V	[kA]	50	50	50	50	50	50	50
	500V	[kA]	15	15	15	15	15	15	15
	660/690V	[kA]	8	8	8	5	5	5	5
Rated Service Short Circuit Breaking Capacity									
Ics	220/240V	[kA]	100	100	100	100	100	100	100
	380/400V	[kA]	50	50	50	50	50	50	50
	415/440V	[kA]	50	50	50	50	50	50	50
	500V	[kA]	15	15	15	15	10	10	10
	660/690V	[kA]	8	8	8	5	5	5	5

Motor Protectors

MPW

MPW100 Technical Data

General Contact Ratings

TYPE	Units	MPW100-3-U075	MPW100-3-U090	MPW100-3-U100
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	[A]	55 - 75	70 - 90	80 - 100
Rated Thermal Current Ith	[A]	75	90	100.00
Rated Insulation Voltage Ui				
Acc. IEC; VDE 0660	[V]	690		
Acc. UL; CSA	[V]	600		
Rated Operating Voltage Ue				
Acc. IEC; VDE 0660	[V]	690		
Acc. UL; CSA	[V]	600		
Rated Impulse Voltage Uimp				
Acc. IEC60947-1	[kV]	6		
Rated Operating Frequency	[Hz]	50/60		
Overvoltage Category		III		
Pollution Degree		3		
Utilization Category				
IEC 60947-2 (Motor Protector)		A		
IEC 60947-4-1 (Motor Starter)		AC-3		
Lifespan				
Mechanical	[ops.]	50,000		
Electrical (Ie max.)	[ops.]	25,000		
Switching Rate (motor starts)	AC-3 [ops/hr]	15		
Ambient Temperature				
Storage	[°C (°F)]	-50 to +80 (-58 to +176)		
Operating	[°C (°F)]	-20 to +60 (-4 to +140)		
Ambient Temperature Compensation	[°C (°F)]	-20 to +60 (-4 to +140)		
Climatic Proofing		IEC 60068-2-3 / IEC 60068-2-30		
Altitude				
Up to 2,000m (6,600ft)		Nominal Values (for higher altitudes refer to page 122		
Degree of protection		IP20		
Resistance to Shock				
Acc. IEC 60068-2-27	[g]	15		
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 Iu [A]	0.6 - 1		
Magnetic Release	x Iu [A]	13		
Overload Trip Class		10		
Total Power Loss Pv				
At rated load operating temperature	[W]	10		
Weight	[kg]	1.20		
	[lb]	3.00		
Type of Terminal		Flat Type		
Screw Driver		Allen #4		
Terminal Capacity				
Solid	[mm2]	Refer to table on page 121		
Stranded	[mm2]			
Solid or Stranded	[AWG]			
Tightening Torque	[N.m (lb.in)]	4.0 - 4.6 (35 - 55)		
Mounting Position		Any Position		

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Data is subject to change without notice.

MPW100 Technical Data

Power Contact Ratings

TYPE	Voltage	Units	MPW100-3-U075	MPW100-3-U090	MPW100-3-U100
UL/CSA DATA					
Rated Operational Current Ie		[A]	75	90	100
Magnetic Release Current		[A]	975	1170	1300
Max. Short Circuit Current					
	480V	[kA]	50		
	600V	[kA]	10		
Motor Load, 1-phase					
	115V	[HP]	5	71/2	10
	230V	[HP]	15	20	20
Motor Load, 3-phase					
	200V	[HP]	20	25	30
	230V	[HP]	25	30	30
	460V	[HP]	50	60	75
	575V	[HP]	60	75	100
Max. Rated Current of Protection Device for Group Installation					
	Fuse or MCCB	[A]			
IEC DATA					
Rated Operational Current Ie		[A]	75	90	100
Magnetic Release Current		[A]	975	1170	1300
Back-Up Fuses					
gL/gG	220/240V	[A]	-	-	-
	380/400V	[A]	-	-	-
	415/440V	[A]	200	200	200
	500V	[A]	160	160	160
	660/690V	[A]	125	160	160
Ultimate Short Circuit Breaking Capacity					
Icu	220/240V	[kA]	100	100	100
	380/400V	[kA]	75	75	75
	415/440V	[kA]	50	50	50
	500V	[kA]	12	12	12
	660/690V	[kA]	6	6	6
Rated Service Short Circuit Breaking Capacity					
Ics	220/240V	[kA]	100	100	100
	380/400V	[kA]	50	50	50
	415/440V	[kA]	38	38	38
	500V	[kA]	9	9	9
	660/690V	[kA]	6	6	6

MPW Technical Data

Auxiliary Contact Block Ratings

TYPE	Voltage	Units	ACBF-11	ACBF-11 MPW100	ACBS-11	ACBS-20	ACBS-02	ACBS-11 MPW100	ACBS-20 MPW100	ACBS-02 MPW100
Rated Insulation Voltage Ui										
Acc. IEC; VDE 0660		[V]	300		690					
Acc. UL; CSA		[V]	240		600					
Rated Operating Voltage Ue										
Acc. IEC; VDE 0660		[V]	250		690					
Acc. UL; CSA		[V]	240		600					
Rated Impulse Voltage Uimp										
Acc. IEC60947-1		[kV]	4		6					
Overvoltage Category			III							
Pollution Degree			3							
Life Span										
Mechanical		[ops.]	100,000							
Electrical (Ie max.)		[ops.]	100,000							
Rated Thermal Current Ith		[A]	2.5		10					
Rated Operating Current Ie										
Acc. IEC 60947-5-1 / AC-15	24V	[A]	2		6					
	110-127V	[A]	0.5		6					
	220-240V	[A]	0.5		6					
	380-400V	[A]	-		3					
	415-450V	[A]	-		1					
	500V	[A]	-		1					
	660-690V	[A]	-		1					
Acc. UL; CSA			C300		A600					
Rated Operating Current Ie										
Acc. IEC 60947-5-1 / DC-13	24V	[A]	1		2					
	48V	[A]	0.3		0.8					
	60V	[A]	0.15		0.5					
	110V	[A]	-		0.5					
	220V	[A]	-		0.25 0.25					
	440V	[A]	-		0.1 0.1					
Acc. UL; CSA			R300		Q600					
Short Circuit rating without welding										
gL/gG		[A]	10							
MCB		[A]	6							
Type of Terminal			Screwdriver; Philips #2							
Terminal Capacity										
Solid or Stranded		[mm2]	1 or 2 x (0.5 to 2.5)							
Solid or Stranded		[AWG]	1 or 2 x (18 to 14)							
Tightening Torque		[N.m (lb.in)]	1.0 - 1.25 (8.85 - 11.06)							

Data is subject to change without notice.

MPW Technical Data

Trip Signalling Block

TYPE	Voltage	Units	TSB-22	TSB-11 MPW100
Rated Insulation Voltage Ui				
Acc. IEC; VDE 0660		[V]	690	
Acc. UL; CSA		[V]	600	
Rated Operating Voltage Ue				
Acc. IEC; VDE 0660		[V]	690	
Acc. UL; CSA		[V]	600	
Rated Impulse Voltage Uimp				
Acc. IEC60947-1		[kV]	6	
Overvoltage Category			III	
Pollution Degree			3	
Life Span				
Mechanical		[ops.]	100000	
Electrical (Ie max.)		[ops.]	100000	
Rated Thermal Current Ith		[A]	10	
Rated Operating Current Ie				
Acc. IEC 60947-5-1 / AC-15	24V	[A]	6	
	110-127V	[A]	6	
	220-240V	[A]	6	
	380-400V	[A]	3	
	415-450V	[A]	3	
	500V	[A]	2	
	660-690V	[A]	1	
Acc. UL; CSA			A600	
Rated Operating Current Ie				
Acc. IEC 60947-5-1 / DC-13	24V	[A]	2	
	48V	[A]	0.5	
	60V	[A]	0.5	
	110V	[A]	0.5	
	220V	[A]	0.25	
	440V	[A]	0.1	
Acc. UL; CSA			Q600	
Short Circuit rating without welding				
gL/gG		[A]	6	
MCB		[A]	6	
Type of Terminal	Screw Driver - Philips #2			
Terminal Capacity				
Solid or Stranded		[mm2]	1 or 2 x (0.5 to 2.5)	
Solid or Stranded		AWG	1 or 2 x (18 to 14)	
Tightening Torque		N.m (lb.in)	1.0 - 1.25 8.85 - 11.06)	

MPW Technical Data

Shunt Release Block

TYPE	Units		SRMP	SRMP MPW100
Rated Insulation Voltage Ui				
Acc. IEC; VDE 0660		[V]	690	
Acc. UL; CSA		[V]	600	
Rated Operating Voltage Ue				
Acc. IEC; VDE 0660		[V]	690	
Acc. UL; CSA		[V]	600	
Rated Impulse Voltage Uimp				
Acc. IEC60947-1		[kV]	6	
Overvoltage Category			III	
Pollution Degree			3	
Life Span				
Mechanical		[ops.]	100000	
Electrical (Ie max.)		[ops.]	100000	
Actuating Voltage	x Us	[V]	0.7 - 1.1	
Power Consumption				
Pull-In		[VA (W)]	20.2 (13)	8.5 (6)
Hold		[VA (W)]	7.2 (2.4)	3 (1.2)
Maximum Opening Time		[ms]	20	
Short Circuit Rating without Welding				
Fuse gL/gG		[A]	10	
MCB		[A]	6	
Type of Terminal			Screw Driver - Philips #2	
Terminal Capacity				
Solid or Stranded		[mm2]	1 or 2 x (0.5 to 2.5)	
Solid or Stranded		AWG	1 or 2 x (18 to 14)	
Tightening Torque		[N.m (lb.in)]	1.0 - 1.25 (8.85 - 11.06)	

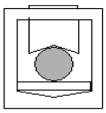
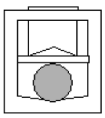
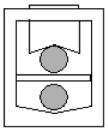
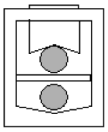
Under Voltage Release Block

TYPE	Units		URMP	URMP MPW100
Rated Insulation Voltage Ui				
Acc. IEC; VDE 0660		[V]	690	
Acc. UL; CSA		[V]	600	
Rated Operating Voltage Ue				
Acc. IEC; VDE 0660		[V]	690	
Acc. UL; CSA		[V]	600	
Rated Impulse Voltage Uimp				
Acc. IEC60947-1		[kV]	6	
Overvoltage Category			III	
Pollution Degree			3	
Life Span				
Mechanical		[ops.]	100000	
Electrical (Ie max.)		[ops.]	100000	
Pick-Up Voltage	x Us	[V]	0.85 - 1.1	
Drop-Out Voltage	x Us	[V]	0.7 - 0.35	
Power Consumption				
Pull-In		[VA (W)]	20.2 (13)	8.5 (6)
Hold		[VA (W)]	7.2 (2.4)	3 (1.2)
Maximum Opening Time		[ms]	20	
Short Circuit Rating without Welding				
Fuse gL/gG		[A]	10	
MCB		[A]	6	
Type of Terminal			Screw Driver - Philips #2	
Terminal Capacity				
Solid or Stranded		[mm2]	1 or 2 x (0.5 to 2.5)	
Solid or Stranded		AWG	1 or 2 x (18 to 14)	
Tightening Torque		[lb. in]	1.0 - 1.25 (8.85 - 11.06)	

Data is subject to change without notice.

MPW Technical Data

Main Terminal Capacity

Catalog Number	Type	Number of conductors	Cross-Section
MPW18	Rigid or flexible cable	1 or 2	1...4 mm² 18...12 AWG
MPW40	Rigid or flexible cable	1 or 2	1...2.5 mm² 2.5...6 mm² 14...8 AWG 1)
MPW65	Type	1 conductor connection in upper part only	Cross-Section
	Rigid cable		1...35 mm²
	Cable without terminal		1.5...35 mm²
	Cable with terminal		1...35 mm²
	Flexible cable		1.5...35 mm²
			16...2 AWG
	Type	1 conductor connection in lower part only	Cross-Section
	Rigid cable		2.5...35mm²
	Cable without terminal		6...35mm²
	Cable with terminal		2.5...35mm²
	Flexible cable		6...35mm²
			12...2 AWG
	Type	Connection of 2 condutors - Conductor in upper part	Cross-Section
	Rigid cable		1...35mm²
	Cable without terminal		1.5...35mm²
	Cable with terminal		1...35mm²
	Flexible cable		1.5...35mm²
			16...2 AWG
	Type	Conductor in lower part	Cross-Section
	Rigid cable		2.5...35mm²
	Cable without terminal		6...35mm²
	Cable with terminal		2.5...35mm²
	Flexible cable		6...35mm²
			12...2 AWG
MPW100	Type	Number of conductors	Cross-Section
	Rigid cable	1	2.5...70 mm²
			12...2/0 AWG
		2	2.5...50 mm²
			12...1/0 AWG
	Flexible cable	1	2.5...50 mm²
			12...1/0 AWG
		2	2.5...35 mm²
			10...2 AWG

Note: 1) 8 AWG for flexible cable only

MPW Technical Data

Altitude - Correction factor

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

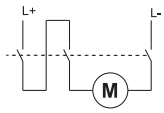
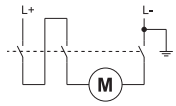
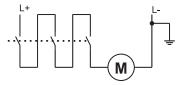
Altitude (above sea level) - h	Rated operational voltage U_e	Current correction factor I_u
h ≤ 2000 m	690 V	1 x I_u
2000 < h ≤ 3000 m	550 V	0,96 x I_u
3000 < h ≤ 4000 m	480 V	0,93 x I_u
4000 < h ≤ 5000 m	420 V	0,90 x I_u

DC operation

The MPW18, MPW40 and MPW65 motor protective circuit breakers 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 on the right.

Time constant t = 5 ms

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

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

Data is subject to change without notice.