

## Controls Manual Motor Protectors

### **Connection Diagrams and Typical Cirrcuits**









#### **Typical Circuits**



CONTROLS

# Controls Manual Motor Protectors - MPW Technical Data

#### **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 atmospheric properties vary in terms of dielectric rigidness and pressure. 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 <sub>e</sub>	Current correction factor $I_{_{\rm U}}$
h ≤ 2000 m	690 V	1 x l <sub>u</sub>
2000 < h ≤ 3000 m	550 V	0,96 x l <sub>u</sub>
3000 < h ≤ 4000 m	480 V	0,93 x I <sub>u</sub>
4000 < h ≤ 5000 m	420 V	0,90 x l <sub>u</sub>

#### **DC** operation

The MPW16, MPW25 and MPW65 motor protective circuit breakers can also be used for operating continuous current 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  $I_{cu} = 10 \text{ kA}$  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



шец

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### **Main Terminal Capacity**

Catalog Number	Туре	Number of conductors	Cross-Section
MPW16	Rigid or flexible cable	1 or 2	14 mm² 1812 AWG
MPW25	Rigid or flexible cable	1 or 2	12.5 mm <sup>2</sup> 2.56 mm <sup>2</sup> 148 AWG <sup>1)</sup>
	Туре	1 conductor connection in upper part only	Cross-Section
	Rigid cable		135 mm <sup>2</sup>
	Cable without terminal		1.535 mm <sup>2</sup>
	Cable with terminal		135 mm2
	Flexible cable		1.535 mm <sup>2</sup>
			162 AWG
	Туре	1 conductor connection in lower part only	Cross-Section
	Rigid cable		2.535mm <sup>2</sup>
	Cable without terminal		635mm <sup>2</sup>
	Cable with terminal		2.535mm <sup>2</sup>
	<b>E 1 1</b>		635mm <sup>2</sup>
MDWGE	Flexible cable		122 AWG
MPW65	Туре	Connection of 2 condutors - Conductor in upper part	Cross-Section
	Rigid cable		135mm <sup>2</sup>
	Cable without terminal		1.535mm <sup>2</sup>
	Cable with terminal		135mm <sup>2</sup>
	Flexible cable		1.535mm <sup>2</sup>
			162 AWG
	Туре	Conductor in lower part	Cross-Section
	Rigid cable		2.535mm <sup>2</sup>
	Cable without terminal		635mm <sup>2</sup>
	Cable with terminal		2.535mm <sup>2</sup>
	Flexible cable		635mm <sup>2</sup>
			122 AWG
	Туре	Number of conductors	Cross-Section
	Rigid cable	1	2.570 mm <sup>2</sup>
		I	122/0 AWG
MPW100		2	2.550 mm <sup>2</sup>
			121/0 AWG
	Flexible cable	1	2.550 mm <sup>2</sup>
		1	121/0 AWG
		2	2.535 mm <sup>2</sup>
		۷۲	102 AWG

Note: 1) 8 AWG for flexible cable only