

MSM

Functional characteristics



Dimensional class:
medium



Standard colour:
green



Height:
15.2 mm (.598 in)



Max approved wire sections:
solid: 2.5 mm² (VDE); 12 AWG (UL)
stranded: 2.5 mm² (VDE); 12 AWG (UL)
Clamp opening size:
2.5 x 2.3 mm (.098 x .087 in)



Versions:
modular
Single mould poles:
from 2 to 25



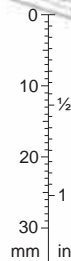
Pitches:
metric 5 mm, 7.5 mm, 10 mm
(.197 in, .295 in, .394 in)



imperial 5.08 mm, 7.62 mm, 10.16 mm
(.200 in, .300 in, .400 in)



RoHS
2011/65/EU



pitch 5/5.08 mm
straight, modular



pitch 7.5/7.62 mm
straight, modular



pitch 10/10.16 mm
straight, modular



35° version, modular



90° version, modular

Pat.



available accessories:
BSC_00_0R from 2 to 9 poles
BSC for rising clamp



270° version, modular

Brief description

With the **MSM** modular series terminal blocks for PCBs, wires up to 2.5 mm² (12 AWG) can be used and consequently a current range of 24A certified can be reached.

It is available in 5 mm (.197 in), 7.5 mm (.294 in) and 10 mm (.394 in) metric pitches, and in 5.08 mm (.200 in), 7.62 mm (.300 in) and 10.16 mm (.400 in) Imperial pitches, in monolithic blocks from 2 to 25 poles, with insertion of the wire parallel, inclined at 45° or vertical in relation to the PCB.

All the housings are modular, therefore it is possible to compose the monolithic terminal blocks from 2 to 25 poles separately, or to

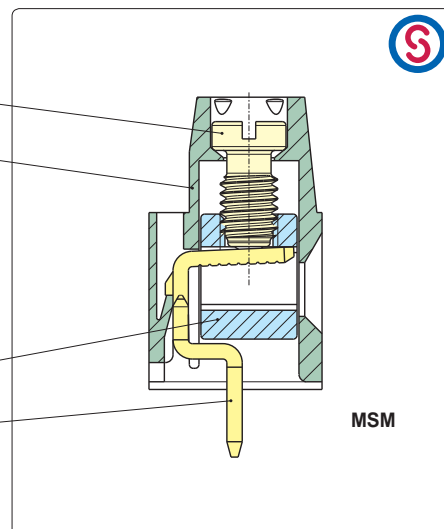
compose the basic terminal blocks until any number of poles is obtained. By taking advantage of this particular characteristic a minimum stock of basic terminal blocks can be kept.

It is simple to manage the product, the warehouse and the assembly with the Kit packages because several versions can be received with only one code, the part-numbers are significantly reduced and the risk of making mistakes is also reduced.



Components features

- M3 nickel plated copper alloy screw.
- Polyamide housing.
Standard colour: GREEN.
V0 self-extinguishing according to UL 94.
Chlorinated solvents resistant,
with no phosphor, dioxin or detrimental to health halogens.
Material Group I (CTI ≥ 600 V)
- Nickel plated copper alloy clamp
- Easy to solder lead-free
tin-plated copper alloy pin.



Mechanical features

| | |
|---------------------------------------|-------------------------------------|
| Recommended/highest tightening torque | 0.5/0.6 Nm (4.42/5.31 lbf-in) |
| PCB thickness: | max. 2.4 mm (.094 in) |
| PCB hole diameter: | min. 1.4 mm (.055 in) |
| Stripping length | 5.5 ÷ 6.5 mm (.22 ÷ .26 in) |
| Operating temperature range | -40 °C ÷ +110 °C (-40 °F ÷ +230 °F) |
| Climatic category | 40/110/21 according to EN 60068-1 |

Electric features*

| | |
|--|---|
| Solid wire section | 30÷12 AWG (UL)* 0.05÷2.5 mm ² (VDE)* |
| Stranded wire section | 30÷12 AWG (UL)* 0.05÷2.5 mm ² (VDE)* |
| Rated voltage for 5 mm (.197 in) and 5.08 mm (.200 in) | 300 V (UL)* |
| Rated voltage for 7.5 mm (.295 in) and 7.62 mm (.300 in) | 750 V (IMQ)* |
| Rated voltage for 10 mm (.394 in) and 10.16 mm (.400 in) | 750 V (IMQ)* |
| Rated current | 24 A (VDE)* |
| Contact resistance | <15 mΩ |
| Insulation resistance | >10 ⁹ Ω (500V DC) |

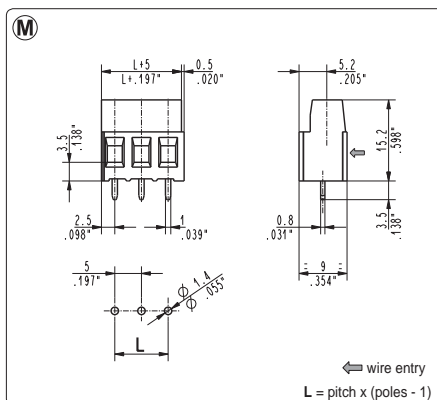
*All the above mentioned data refer to the highest values amongst the certificated ones.

V voltage, I current values and tightening torque are related to the norms to be applied to the product and to its use.

Approvals

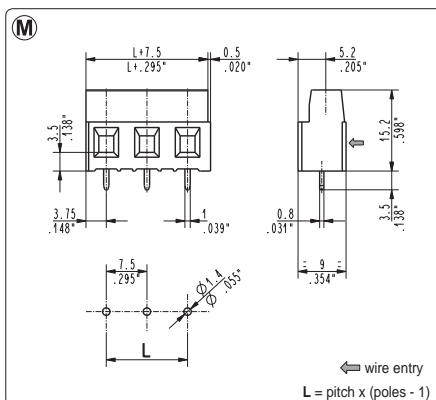
| | | |
|--|------------------|---|
| | IEC: | 250 V - 24 A - 2.5 mm ² - T 110 for 5 mm and 5.08 mm pitch |
| | EN 60998 | 750 V - 24 A - 2.5 mm ² - T 110 for 7.5 mm, 7.62 mm, 10 mm and 10.16 mm pitch |
| | UL: | 300 V - 17.5 A - 30÷12 AWG - 7 lbf-in for 5 mm, 5.08 mm, 7.5 mm and 7.62 mm pitch |
| | File E167473 | 600 V - 17.5 A - 30÷12 AWG - 7 lbf-in for 10 mm and 10.16 mm pitch Application values for end-use equipment have to be in accordance to UL norms and applicable to it. |
| | VDE: | 250 V - 24 A - T 110 - 2.5 mm ² for 5 mm and 5.08 mm pitch |
| | Reg. n. 40022741 | 450 V - 24 A - T 110 - 2.5 mm ² for 7.5 mm and 7.62 mm pitch |
| | | 750 V - 24 A - T 110 - 2.5 mm ² for 10 mm and 10.16 mm pitch |
| | IMQ: | 250 V - 24 A - 2.5 mm ² - T 110 for 5 mm and 5.08 mm pitch |
| | File: EA022 | 750 V - 24 A - 2.5 mm ² - T 110 for 7.5 mm, 7.62 mm, 10 mm and 10.16 mm pitch |
| | CSA: | 300 V - 17.5 A - 30÷12 AWG for 5 mm, 5.08 mm, 7.5 mm and 7.62 mm pitch |
| | File LR102896 | 600 V - 17.5 A - 30÷12 AWG for 10 mm and 10.16 mm pitch |

See also "Certifications", page 8

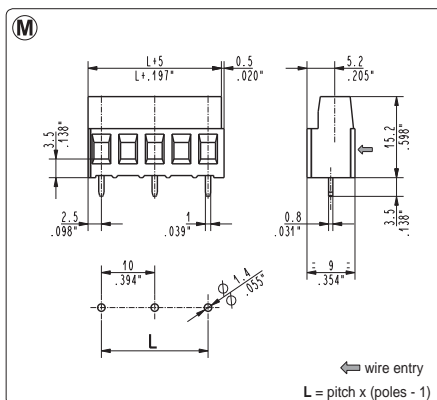


| | |
|---------|-------------------|
| MSM_001 | straight, modular |
|---------|-------------------|

| 5 mm / .197" pitch | | | | |
|--------------------|----------|-----------|---------|--------------------|
| Poles | Code | Pcs/pack. | W [kg]* | Pcs/Ind.** W [kg]* |
| 02 | MSM02001 | 900 | 2,70 | 2000 6,00 |
| 03 | MSM03001 | 600 | 2,70 | 1750 7,88 |
| 04 | MSM04001 | 400 | 2,40 | 1500 9,00 |
| 05 | MSM05001 | 350 | 2,63 | 1000 7,50 |
| 06 | MSM06001 | 300 | 2,70 | 750 6,75 |
| 07 | MSM07001 | 250 | 2,63 | 750 7,88 |
| 08 | MSM08001 | 200 | 2,40 | 750 9,00 |
| 09 | MSM09001 | 175 | 2,36 | 500 6,75 |
| 10 | MSM10001 | 175 | 2,63 | 500 7,50 |
| 11 | MSM11001 | 150 | 2,48 | 500 8,25 |
| 12 | MSM12001 | 150 | 2,70 | 500 9,00 |
| 13 | MSM13001 | 75 | 1,46 | 500 9,75 |
| 14 | MSM14001 | 75 | 1,58 | 250 5,25 |
| 15 | MSM15001 | 75 | 1,69 | 250 5,63 |
| 16 | MSM16001 | 75 | 1,80 | 250 6,00 |
| 17 | MSM17001 | 75 | 1,91 | 250 6,38 |
| 18 | MSM18001 | 75 | 2,03 | 250 6,75 |
| 19 | MSM19001 | 50 | 1,43 | 250 7,13 |
| 20 | MSM20001 | 50 | 1,50 | 250 7,50 |
| 21 | MSM21001 | 50 | 1,58 | 250 7,88 |
| 22 | MSM22001 | 50 | 1,65 | 250 8,25 |
| 23 | MSM23001 | 50 | 1,73 | 250 8,63 |
| 24 | MSM24001 | 50 | 1,80 | 250 9,00 |
| 25 | MSM25001 | 50 | 1,88 | 250 9,38 |

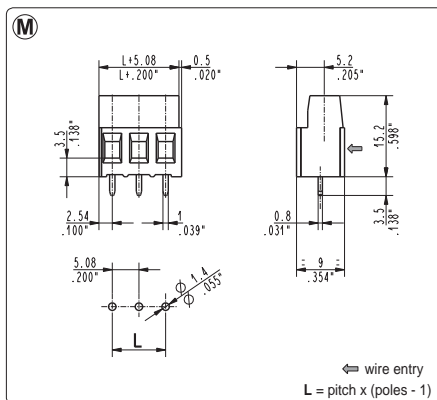


MSM_003 straight, modular

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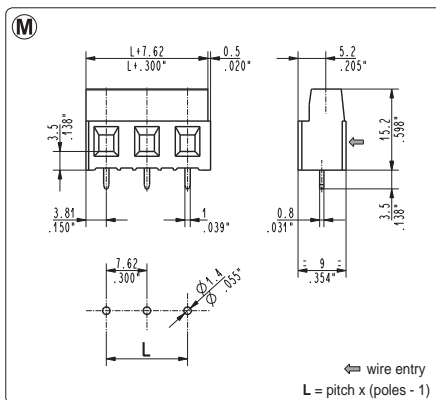
MSM_002 straight, modular

| 10 mm / .394" pitch | | | | | |
|---------------------|----------|-----------|---------|--------------------|------|
| Poles | Code | Pcs/pack. | W [kg]* | Pcs/Ind.** W [kg]* | |
| 01 | MSM01002 | 450 | 0,80 | 2000 | 3,54 |
| 02 | MSM02002 | 300 | 1,06 | 1750 | 6,20 |
| 03 | MSM03002 | 175 | 0,93 | 1000 | 5,31 |
| 04 | MSM04002 | 125 | 0,89 | 750 | 5,31 |
| 05 | MSM05002 | 100 | 0,89 | 500 | 4,43 |
| 06 | MSM06002 | 75 | 0,80 | 500 | 5,31 |
| 07 | MSM07002 | 75 | 0,93 | 500 | 6,20 |
| 08 | MSM08002 | 75 | 1,06 | 500 | 7,08 |
| 09 | MSM09002 | 75 | 1.19 | 250 | 3,98 |
| 10 | MSM10002 | 50 | 0,89 | 250 | 4,43 |
| 11 | MSM11002 | 50 | 0,97 | 250 | 4,87 |
| 12 | MSM12002 | 50 | 1,06 | 250 | 5,31 |
| 13 | MSM13002 | 50 | 1,15 | 250 | 5,75 |

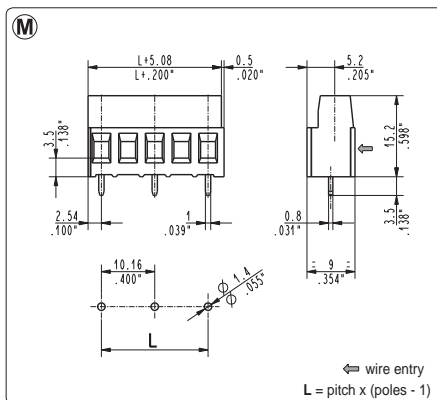


MSM_005 straight, modular

| 5.08 mm / .200" pitch | | | | |
|-----------------------|----------|-----------|---------|--------------------|
| Poles | Code | Pcs/pack. | W [kg]* | Pcs/Ind.** W [kg]* |
| 02 | MSM02005 | 900 | 2,70 | 2000 6,00 |
| 03 | MSM03005 | 600 | 2,70 | 1750 7,88 |
| 04 | MSM04005 | 400 | 2,40 | 1500 9,00 |
| 05 | MSM05005 | 350 | 2,63 | 1000 7,50 |
| 06 | MSM06005 | 300 | 2,70 | 750 6,75 |
| 07 | MSM07005 | 250 | 2,63 | 750 7,88 |
| 08 | MSM08005 | 200 | 2,40 | 750 9,00 |
| 09 | MSM09005 | 175 | 2,36 | 500 6,75 |
| 10 | MSM10005 | 175 | 2,63 | 500 7,50 |
| 11 | MSM11005 | 150 | 2,48 | 500 8,25 |
| 12 | MSM12005 | 150 | 2,70 | 500 9,00 |
| 13 | MSM13005 | 75 | 1,46 | 500 9,75 |
| 14 | MSM14005 | 75 | 1,58 | 250 5,25 |
| 15 | MSM15005 | 75 | 1,69 | 250 5,63 |
| 16 | MSM16005 | 75 | 1,80 | 250 6,00 |
| 17 | MSM17005 | 75 | 1,91 | 250 6,38 |
| 18 | MSM18005 | 75 | 2,03 | 250 6,75 |
| 19 | MSM19005 | 50 | 1,43 | 250 7,13 |
| 20 | MSM20005 | 50 | 1,50 | 250 7,50 |
| 21 | MSM21005 | 50 | 1,58 | 250 7,88 |
| 22 | MSM22005 | 50 | 1,65 | 250 8,25 |
| 23 | MSM23005 | 50 | 1,73 | 250 8,63 |
| 24 | MSM24005 | 50 | 1,80 | 250 9,00 |
| 25 | MSM25005 | 50 | 1,88 | 250 9,38 |



MSM_007 straight, modular

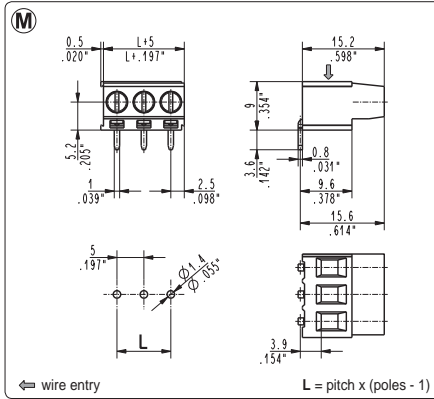
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| | |
|---------|-------------------|
| MSM_006 | straight, modular |
|---------|-------------------|

| Poles | Code | Pcs/pack. | W [kg]* | Pcs/lnd.** W [kg]* |
|-------|----------|-----------|---------|--------------------|
| 01 | MSM01006 | 450 | 0,80 | 2000 3,54 |
| 02 | MSM02006 | 300 | 1,06 | 1750 6,20 |
| 03 | MSM03006 | 175 | 0,93 | 1000 5,31 |
| 04 | MSM04006 | 125 | 0,89 | 750 5,31 |
| 05 | MSM05006 | 100 | 0,89 | 500 4,43 |
| 06 | MSM06006 | 75 | 0,80 | 500 5,31 |
| 07 | MSM07006 | 75 | 0,93 | 500 6,20 |
| 08 | MSM08006 | 75 | 1,06 | 500 7,08 |
| 09 | MSM09006 | 75 | 1.19 | 250 3,98 |
| 10 | MSM10006 | 50 | 0,89 | 250 4,43 |
| 11 | MSM11006 | 50 | 0,97 | 250 4,87 |
| 12 | MSM12006 | 50 | 1,06 | 250 5,31 |
| 13 | MSM13006 | 50 | 1,15 | 250 5,75 |

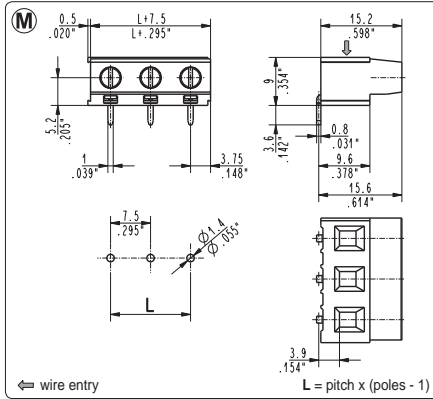
*W [kg]: approximate weight per box in kg

****industrial packaging:** add "-00000E" at standard code



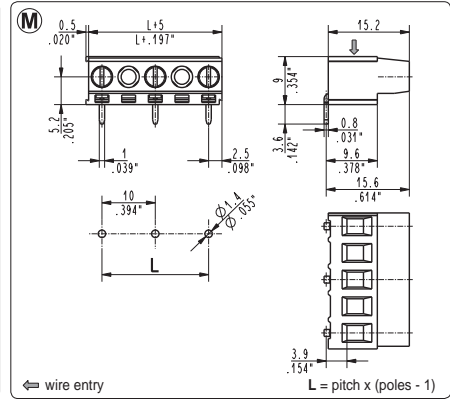
MSM_091 90°, modular

| 5 mm / .197" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|--------------------|----------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 02 | MSM02091 | 900 | 2,70 | 2000 | 6,00 |
| 03 | MSM03091 | 600 | 2,70 | 1750 | 7,88 |
| 04 | MSM04091 | 400 | 2,40 | 1500 | 9,00 |
| 05 | MSM05091 | 350 | 2,63 | 1000 | 7,50 |
| 06 | MSM06091 | 300 | 2,70 | 750 | 6,75 |
| 07 | MSM07091 | 250 | 2,63 | 750 | 7,88 |
| 08 | MSM08091 | 200 | 2,40 | 750 | 9,00 |
| 09 | MSM09091 | 175 | 2,36 | 500 | 6,75 |
| 10 | MSM10091 | 175 | 2,63 | 500 | 7,50 |
| 11 | MSM11091 | 150 | 2,48 | 500 | 8,25 |
| 12 | MSM12091 | 150 | 2,70 | 500 | 9,00 |
| 13 | MSM13091 | 75 | 1,46 | 500 | 9,75 |
| 14 | MSM14091 | 75 | 1,58 | 250 | 5,25 |
| 15 | MSM15091 | 75 | 1,69 | 250 | 5,63 |
| 16 | MSM16091 | 75 | 1,80 | 250 | 6,00 |
| 17 | MSM17091 | 75 | 1,91 | 250 | 6,38 |
| 18 | MSM18091 | 75 | 2,03 | 250 | 6,75 |
| 19 | MSM19091 | 50 | 1,43 | 250 | 7,13 |
| 20 | MSM20091 | 50 | 1,50 | 250 | 7,50 |
| 21 | MSM21091 | 50 | 1,58 | 250 | 7,88 |
| 22 | MSM22091 | 50 | 1,65 | 250 | 8,25 |
| 23 | MSM23091 | 50 | 1,73 | 250 | 8,63 |
| 24 | MSM24091 | 50 | 1,80 | 250 | 9,00 |
| 25 | MSM25091 | 50 | 1,88 | 250 | 9,38 |



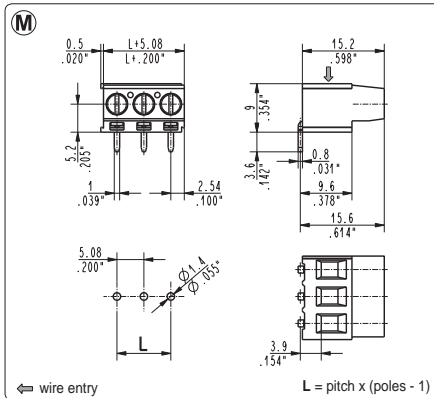
MSM_093 90°, modular

| 7.5 mm / .295" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|----------------------|----------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 02 | MSM02093 | 300 | 1,05 | 1750 | 6,13 |
| 03 | MSM03093 | 200 | 1,05 | 1500 | 7,88 |
| 04 | MSM04093 | 150 | 1,05 | 1250 | 8,75 |



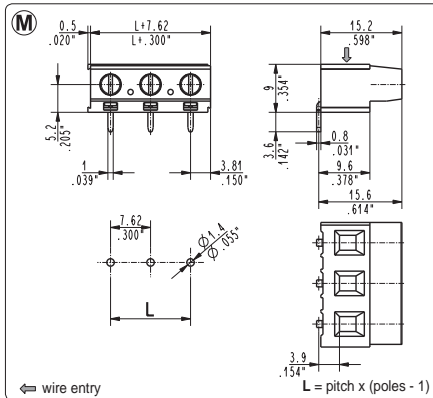
MSM_092 90°, modular

| 10 mm / .394" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|---------------------|----------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 01 | MSM01092 | 450 | 0,80 | 2000 | 3,54 |
| 02 | MSM02092 | 300 | 1,06 | 1750 | 6,20 |
| 03 | MSM03092 | 175 | 0,93 | 1000 | 5,31 |
| 04 | MSM04092 | 125 | 0,89 | 750 | 5,31 |
| 05 | MSM05092 | 100 | 0,89 | 500 | 4,43 |
| 06 | MSM06092 | 75 | 0,80 | 500 | 5,31 |
| 07 | MSM07092 | 75 | 0,93 | 500 | 6,20 |
| 08 | MSM08092 | 75 | 1,06 | 500 | 7,08 |
| 09 | MSM09092 | 75 | 1,19 | 250 | 3,98 |
| 10 | MSM10092 | 50 | 0,89 | 250 | 4,43 |
| 11 | MSM11092 | 50 | 0,97 | 250 | 4,87 |
| 12 | MSM12092 | 50 | 1,06 | 250 | 5,31 |
| 13 | MSM13092 | 50 | 1,15 | 250 | 5,75 |



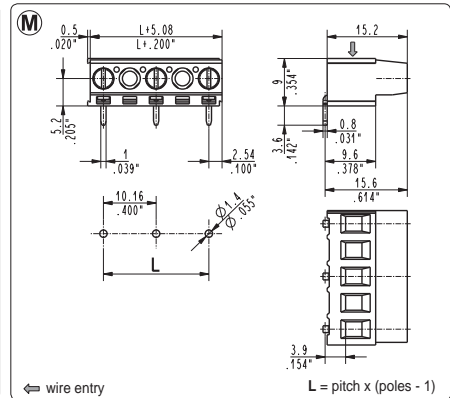
MSM_095 90°, modular

| 5.08 mm / .200" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|-----------------------|----------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 02 | MSM02095 | 900 | 2,70 | 2000 | 6,00 |
| 03 | MSM03095 | 600 | 2,70 | 1750 | 7,88 |
| 04 | MSM04095 | 400 | 2,40 | 1500 | 9,00 |
| 05 | MSM05095 | 350 | 2,63 | 1000 | 7,50 |
| 06 | MSM06095 | 300 | 2,70 | 750 | 6,75 |
| 07 | MSM07095 | 250 | 2,63 | 750 | 7,88 |
| 08 | MSM08095 | 200 | 2,40 | 750 | 9,00 |
| 09 | MSM09095 | 175 | 2,36 | 500 | 6,75 |
| 10 | MSM10095 | 175 | 2,63 | 500 | 7,50 |
| 11 | MSM11095 | 150 | 2,48 | 500 | 8,25 |
| 12 | MSM12095 | 150 | 2,70 | 500 | 9,00 |
| 13 | MSM13095 | 75 | 1,46 | 500 | 9,75 |
| 14 | MSM14095 | 75 | 1,58 | 250 | 5,25 |
| 15 | MSM15095 | 75 | 1,69 | 250 | 5,63 |
| 16 | MSM16095 | 75 | 1,80 | 250 | 6,00 |
| 17 | MSM17095 | 75 | 1,91 | 250 | 6,38 |
| 18 | MSM18095 | 75 | 2,03 | 250 | 6,75 |
| 19 | MSM19095 | 50 | 1,43 | 250 | 7,13 |
| 20 | MSM20095 | 50 | 1,50 | 250 | 7,50 |
| 21 | MSM21095 | 50 | 1,58 | 250 | 7,88 |
| 22 | MSM22095 | 50 | 1,65 | 250 | 8,25 |
| 23 | MSM23095 | 50 | 1,73 | 250 | 8,63 |
| 24 | MSM24095 | 50 | 1,80 | 250 | 9,00 |
| 25 | MSM25095 | 50 | 1,88 | 250 | 9,38 |



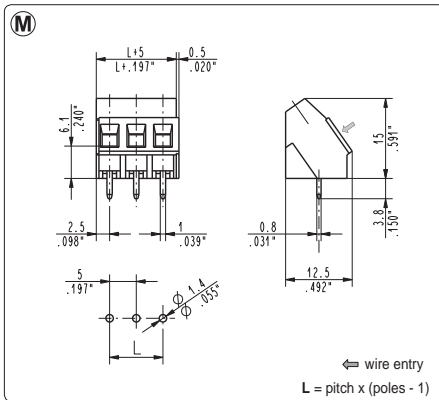
MSM_097 90°, modular

| 7.62 mm / .300" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|-----------------------|----------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 02 | MSM02097 | 300 | 1,05 | 1750 | 6,13 |
| 03 | MSM03097 | 200 | 1,05 | 1500 | 7,88 |

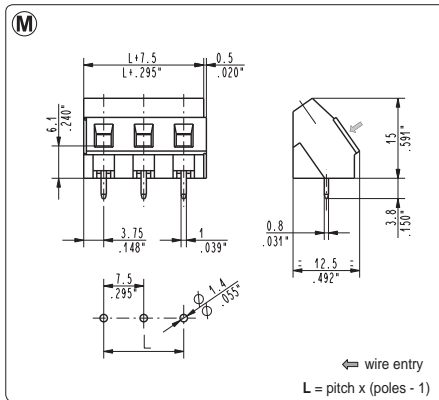


MSM_096 90°, modular

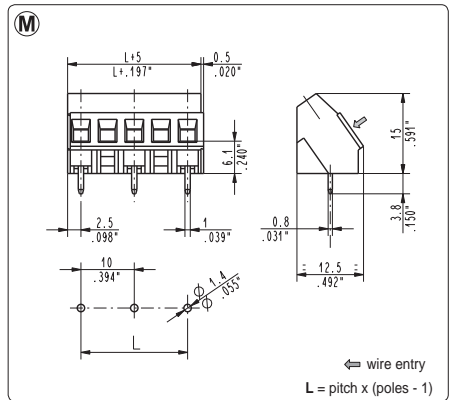
| 10.16 mm / .400" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|------------------------|----------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 01 | MSM01096 | 450 | 0,80 | 2000 | 3,54 |
| 02 | MSM02096 | 300 | 1,06 | 1750 | 6,20 |
| 03 | MSM03096 | 175 | 0,93 | 1000 | 5,31 |
| 04 | MSM04096 | 125 | 0,89 | 750 | 5,31 |
| 05 | MSM05096 | 100 | 0,89 | 500 | 4,43 |
| 06 | MSM06096 | 75 | 0,80 | 500 | 5,31 |
| 07 | MSM07096 | 75 | 0,93 | 500 | 6,20 |
| 08 | MSM08096 | 75 | 1,06 | 500 | 7,08 |
| 09 | MSM09096 | 75 | 1,19 | 250 | 3,98 |
| 10 | MSM10096 | 50 | 0,89 | 250 | 4,43 |
| 11 | MSM11096 | 50 | 0,97 | 250 | 4,87 |
| 12 | MSM12096 | 50 | 1,06 | 250 | 5,31 |
| 13 | MSM13096 | 50 | 1,15 | 250 | 5,75 |


MSM_041 35°, modular

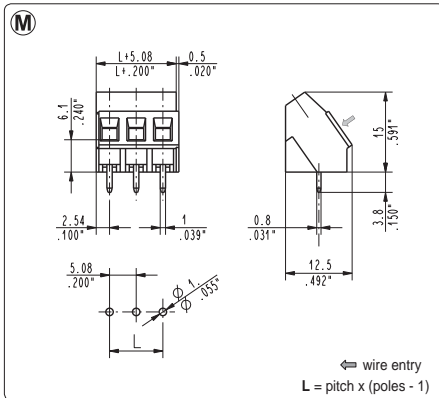
| 5 mm / .197" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|--------------------|----------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 02 | MSM02041 | 900 | 2,81 | 2500 | 7,80 |
| 03 | MSM03041 | 600 | 2,81 | 1500 | 7,02 |
| 04 | MSM04041 | 400 | 2,50 | 1500 | 9,36 |
| 05 | MSM05041 | 350 | 2,73 | 1000 | 7,80 |
| 06 | MSM06041 | 300 | 2,81 | 750 | 7,02 |
| 07 | MSM07041 | 250 | 2,73 | 750 | 8,19 |
| 08 | MSM08041 | 200 | 2,50 | 750 | 9,36 |
| 09 | MSM09041 | 175 | 2,46 | 500 | 7,02 |
| 10 | MSM10041 | 175 | 2,73 | 500 | 7,80 |
| 11 | MSM11041 | 150 | 2,57 | 500 | 8,58 |
| 12 | MSM12041 | 150 | 2,81 | 500 | 9,36 |


MSM_043 35° modular

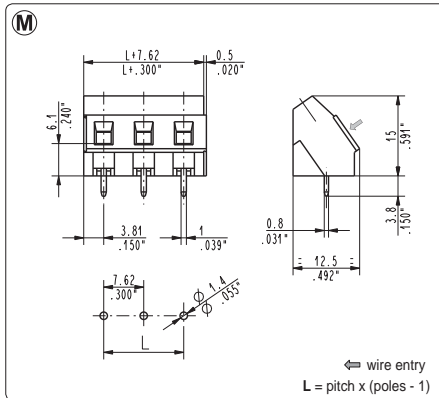
| 7.5 mm / .295" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|----------------------|----------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 02 | MSM02043 | 300 | 1,05 | 1750 | 6,13 |
| 03 | MSM03043 | 200 | 1,05 | 1500 | 7,88 |
| 04 | MSM04043 | 150 | 1,05 | 1250 | 8,75 |
| 05 | MSM05043 | 100 | 0,88 | 1000 | 8,75 |
| 06 | MSM06043 | 75 | 0,79 | 750 | 7,88 |
| 07 | MSM07043 | 75 | 0,92 | 750 | 9,19 |
| 08 | MSM08043 | 75 | 1,05 | 750 | 10,50 |
| 09 | MSM09043 | 75 | 1,18 | 500 | 7,88 |
| 10 | MSM10043 | 75 | 1,31 | 500 | 8,75 |
| 11 | MSM11043 | 50 | 0,96 | 250 | 4,81 |
| 12 | MSM12043 | 50 | 1,05 | 250 | 5,25 |


MSM_042 35° modular

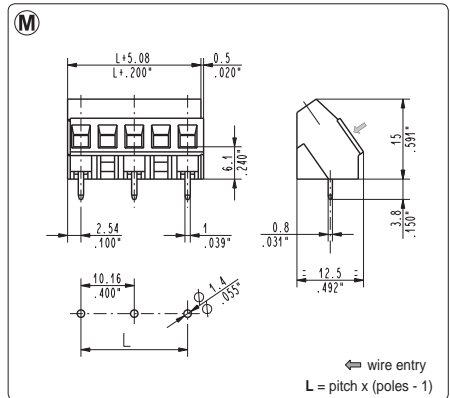
| 10 mm / .394" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|---------------------|----------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 01 | MSM01042 | 450 | 0,80 | 2500 | 4,43 |
| 02 | MSM02042 | 300 | 1,06 | 1500 | 5,31 |
| 03 | MSM03042 | 175 | 0,93 | 1000 | 5,31 |
| 04 | MSM04042 | 125 | 0,89 | 750 | 5,31 |
| 05 | MSM05042 | 100 | 0,89 | 500 | 4,43 |
| 06 | MSM06042 | 75 | 0,80 | 500 | 5,31 |


MSM_045 35°, modular

| 5.08 mm / .200" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|-----------------------|----------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 02 | MSM02045 | 900 | 2,81 | 2500 | 7,80 |
| 03 | MSM03045 | 600 | 2,81 | 1500 | 7,02 |
| 04 | MSM04045 | 400 | 2,50 | 1500 | 9,36 |
| 05 | MSM05045 | 350 | 2,73 | 1000 | 7,80 |
| 06 | MSM06045 | 300 | 2,81 | 750 | 7,02 |
| 07 | MSM07045 | 250 | 2,73 | 750 | 8,19 |
| 08 | MSM08045 | 200 | 2,50 | 750 | 9,36 |
| 09 | MSM09045 | 175 | 2,46 | 500 | 7,02 |
| 10 | MSM10045 | 175 | 2,73 | 500 | 7,80 |
| 11 | MSM11045 | 150 | 2,57 | 500 | 8,58 |
| 12 | MSM12045 | 150 | 2,81 | 500 | 9,36 |
| 13 | MSM13045 | 75 | 1,52 | 250 | 5,07 |
| 14 | MSM14045 | 75 | 1,64 | 250 | 5,46 |
| 15 | MSM15045 | 75 | 1,76 | 250 | 5,85 |
| 16 | MSM16045 | 75 | 1,87 | 250 | 6,24 |
| 17 | MSM17045 | 70 | 1,86 | 250 | 6,63 |
| 18 | MSM18045 | 65 | 1,83 | 250 | 7,02 |
| 19 | MSM19045 | 50 | 1,48 | 250 | 7,41 |
| 20 | MSM20045 | 50 | 1,56 | 250 | 7,80 |
| 21 | MSM21045 | 50 | 1,64 | 250 | 8,19 |
| 22 | MSM22045 | 50 | 1,72 | 250 | 8,58 |
| 23 | MSM23045 | 50 | 1,79 | 250 | 8,97 |
| 24 | MSM24045 | 50 | 1,87 | 250 | 9,36 |
| 25 | MSM25045 | 50 | 1,95 | 250 | 9,75 |


MSM_047 35°, modular

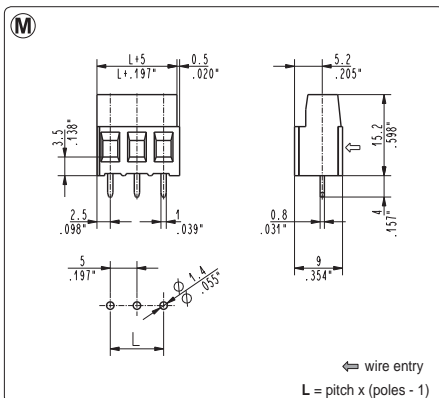
| 7.62 mm / .300" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|-----------------------|----------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 02 | MSM02047 | 300 | 1,05 | 1750 | 6,13 |
| 03 | MSM03047 | 200 | 1,05 | 1500 | 7,88 |
| 04 | MSM04047 | 150 | 1,05 | 1250 | 8,75 |
| 05 | MSM05047 | 100 | 0,88 | 1000 | 8,75 |
| 06 | MSM06047 | 75 | 0,79 | 750 | 7,88 |
| 07 | MSM07047 | 75 | 0,92 | 750 | 9,19 |
| 08 | MSM08047 | 75 | 1,05 | 750 | 10,50 |
| 09 | MSM09047 | 75 | 1,18 | 500 | 7,88 |
| 10 | MSM10047 | 75 | 1,31 | 500 | 8,75 |
| 11 | MSM11047 | 50 | 0,96 | 250 | 4,81 |
| 12 | MSM12047 | 50 | 1,05 | 250 | 5,25 |


MSM_046 35°, modular

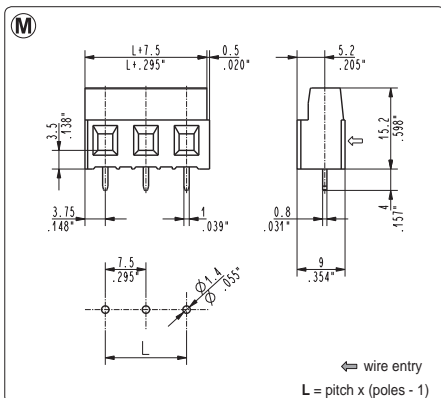
| 10.16 mm / .400" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|------------------------|----------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 01 | MSM01046 | 450 | 0,80 | 2500 | 4,43 |
| 02 | MSM02046 | 300 | 1,06 | 1500 | 5,31 |
| 03 | MSM03046 | 175 | 0,93 | 1000 | 5,31 |
| 04 | MSM04046 | 125 | 0,89 | 750 | 5,31 |
| 05 | MSM05046 | 100 | 0,89 | 500 | 4,43 |
| 06 | MSM06046 | 75 | 0,80 | 500 | 5,31 |
| 07 | MSM07046 | 75 | 0,93 | 500 | 6,20 |
| 08 | MSM08046 | 75 | 1,06 | 250 | 3,54 |
| 09 | MSM09046 | 75 | 1,19 | 250 | 3,98 |
| 10 | MSM10046 | 50 | 0,89 | 250 | 4,43 |
| 11 | MSM11046 | 50 | 0,97 | 250 | 4,87 |
| 12 | MSM12046 | 50 | 1,06 | 250 | 5,31 |
| 13 | MSM13046 | 50 | 1,15 | 250 | 5,75 |

*W [kg]: approximate weight per box in kg

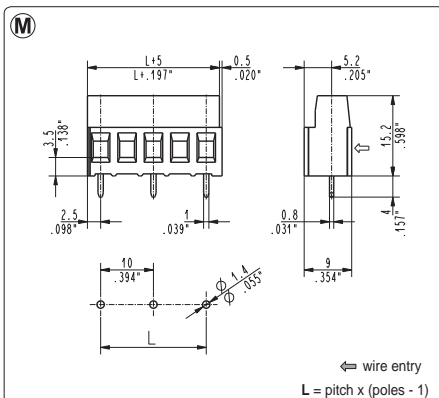
**industrial packaging: add "-00000E" at standard code


MSM_001-000T straight, modular

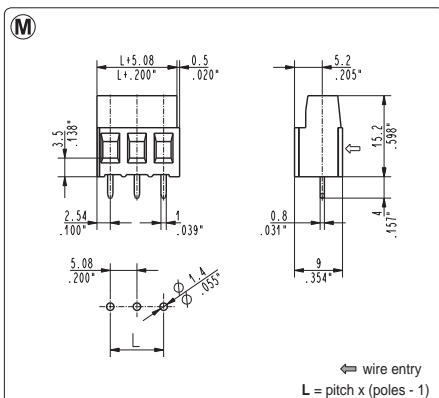
| 5 mm / .197" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|--------------------|---------------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 02 | MSM02001-000T | 900 | 2,81 | 2000 | 6,24 |
| 03 | MSM03001-000T | 600 | 2,81 | 1750 | 8,19 |
| 04 | MSM04001-000T | 400 | 2,50 | 1500 | 9,36 |
| 05 | MSM05001-000T | 350 | 2,73 | 1000 | 7,80 |
| 06 | MSM06001-000T | 300 | 2,81 | 750 | 7,02 |
| 07 | MSM07001-000T | 250 | 2,73 | 750 | 8,19 |
| 08 | MSM08001-000T | 200 | 2,50 | 750 | 9,36 |
| 09 | MSM09001-000T | 175 | 2,46 | 500 | 7,02 |
| 10 | MSM10001-000T | 175 | 2,73 | 500 | 7,80 |
| 11 | MSM11001-000T | 150 | 2,57 | 500 | 8,58 |
| 12 | MSM12001-000T | 150 | 2,81 | 500 | 9,36 |
| 13 | MSM13001-000T | 75 | 1,52 | 500 | 10,14 |
| 14 | MSM14001-000T | 75 | 1,64 | 250 | 5,46 |
| 15 | MSM15001-000T | 75 | 1,76 | 250 | 5,85 |
| 16 | MSM16001-000T | 75 | 1,87 | 250 | 6,24 |
| 17 | MSM17001-000T | 75 | 1,99 | 250 | 6,63 |
| 18 | MSM18001-000T | 75 | 2,11 | 250 | 7,02 |
| 19 | MSM19001-000T | 50 | 1,48 | 250 | 7,41 |
| 20 | MSM20001-000T | 50 | 1,56 | 250 | 7,80 |
| 21 | MSM21001-000T | 50 | 1,64 | 250 | 8,19 |
| 22 | MSM22001-000T | 50 | 1,72 | 250 | 8,58 |
| 23 | MSM23001-000T | 50 | 1,79 | 250 | 8,97 |
| 24 | MSM24001-000T | 50 | 1,87 | 250 | 9,36 |
| 25 | MSM25001-000T | 50 | 1,95 | 250 | 9,75 |


MSM_003-000T straight, modular

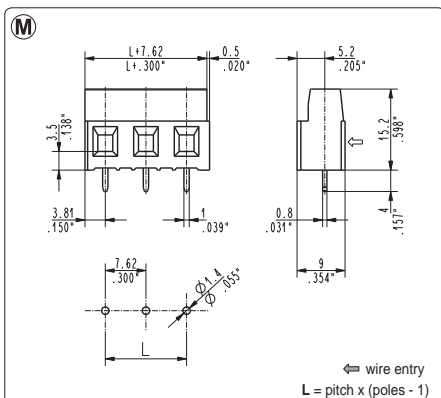
| 7.5 mm / .295" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|----------------------|---------------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 02 | MSM02003-000T | 300 | 1,05 | 1750 | 6,13 |
| 03 | MSM03003-000T | 200 | 1,05 | 1500 | 7,88 |
| 04 | MSM04003-000T | 150 | 1,05 | 1250 | 8,75 |


MSM_002-000T straight, modular

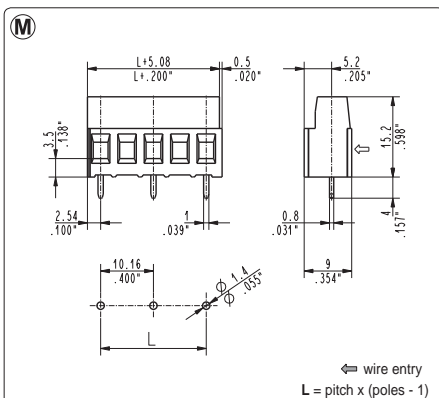
| 10 mm / .394" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|---------------------|---------------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 01 | MSM01002-000T | 450 | 0,80 | 2000 | 3,54 |
| 02 | MSM02002-000T | 300 | 1,06 | 1750 | 6,20 |
| 03 | MSM03002-000T | 175 | 0,93 | 1000 | 5,31 |
| 04 | MSM04002-000T | 125 | 0,89 | 750 | 5,31 |
| 05 | MSM05002-000T | 100 | 0,89 | 500 | 4,43 |
| 06 | MSM06002-000T | 75 | 0,80 | 500 | 5,31 |
| 07 | MSM07002-000T | 75 | 0,93 | 500 | 6,20 |
| 08 | MSM08002-000T | 75 | 1,06 | 500 | 7,08 |
| 09 | MSM09002-000T | 75 | 1,19 | 250 | 3,98 |
| 10 | MSM10002-000T | 50 | 0,89 | 250 | 4,43 |
| 11 | MSM11002-000T | 50 | 0,97 | 250 | 4,87 |
| 12 | MSM12002-000T | 50 | 1,06 | 250 | 5,31 |
| 13 | MSM13002-000T | 50 | 1,15 | 250 | 5,75 |


MSM_005-000T straight, modular

| 5.08 mm / .200" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|-----------------------|---------------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 02 | MSM02005-000T | 900 | 2,81 | 2000 | 6,24 |
| 03 | MSM03005-000T | 600 | 2,81 | 1750 | 8,19 |
| 04 | MSM04005-000T | 400 | 2,50 | 1500 | 9,36 |
| 05 | MSM05005-000T | 350 | 2,73 | 1000 | 7,80 |
| 06 | MSM06005-000T | 300 | 2,81 | 750 | 7,02 |
| 07 | MSM07005-000T | 250 | 2,73 | 750 | 8,19 |
| 08 | MSM08005-000T | 200 | 2,50 | 750 | 9,36 |
| 09 | MSM09005-000T | 175 | 2,46 | 500 | 7,02 |
| 10 | MSM10005-000T | 175 | 2,73 | 500 | 7,80 |
| 11 | MSM11005-000T | 150 | 2,57 | 500 | 8,58 |
| 12 | MSM12005-000T | 150 | 2,81 | 500 | 9,36 |
| 13 | MSM13005-000T | 75 | 1,52 | 500 | 10,14 |
| 14 | MSM14005-000T | 75 | 1,64 | 250 | 5,46 |
| 15 | MSM15005-000T | 75 | 1,76 | 250 | 5,85 |
| 16 | MSM16005-000T | 75 | 1,87 | 250 | 6,24 |
| 17 | MSM17005-000T | 75 | 1,99 | 250 | 6,63 |
| 18 | MSM18005-000T | 75 | 2,11 | 250 | 7,02 |
| 19 | MSM19005-000T | 50 | 1,48 | 250 | 7,41 |
| 20 | MSM20005-000T | 50 | 1,56 | 250 | 7,80 |
| 21 | MSM21005-000T | 50 | 1,64 | 250 | 8,19 |
| 22 | MSM22005-000T | 50 | 1,72 | 250 | 8,58 |
| 23 | MSM23005-000T | 50 | 1,79 | 250 | 8,97 |
| 24 | MSM24005-000T | 50 | 1,87 | 250 | 9,36 |
| 25 | MSM25005-000T | 50 | 1,95 | 250 | 9,75 |


MSM_007-000T straight, modular

| 7.62 mm / .300" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|-----------------------|---------------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 02 | MSM02007-000T | 300 | 1,05 | 1750 | 6,13 |
| 03 | MSM03007-000T | 200 | 1,05 | 1500 | 7,88 |


MSM_006-000T straight, modular

| 10.16 mm / .400" pitch | | Pcs/pack. | W [kg]* | Pcs/Ind.** | W [kg]* |
|------------------------|---------------|-----------|---------|------------|---------|
| Poles | Code | | | | |
| 01 | MSM01006-000T | 450 | 0,80 | 2000 | 3,54 |
| 02 | MSM02006-000T | 300 | 1,06 | 1750 | 6,20 |
| 03 | MSM03006-000T | 175 | 0,93 | 1000 | 5,31 |
| 04 | MSM04006-000T | 125 | 0,89 | 750 | 5,31 |
| 05 | MSM05006-000T | 100 | 0,89 | 500 | 4,43 |
| 06 | MSM06006-000T | 75 | 0,80 | 500 | 5,31 |
| 07 | MSM07006-000T | 75 | 0,93 | 500 | 6,20 |
| 08 | MSM08006-000T | 75 | 1,06 | 500 | 7,08 |
| 09 | MSM09006-000T | 75 | 1,19 | 250 | 3,98 |
| 10 | MSM10006-000T | 50 | 0,89 | 250 | 4,43 |
| 11 | MSM11006-000T | 50 | 0,97 | 250 | 4,87 |
| 12 | MSM12006-000T | 50 | 1,06 | 250 | 5,31 |
| 13 | MSM13006-000T | 50 | 1,15 | 250 | 5,75 |

*W [kg]: approximate weight per box in kg

**industrial packaging: add "-00000E" at standard code