



## Connectors for Winter and Road Service Area Equipments

### Comprehensive Solution for Vehicles & Equipments

**Standardized interface for trucks & accessories**

■ Approved by EN 16330

**Outdoor use & Heavy duty**

■ Enhanced grip to use while wearing gloves  
Waterproof IP68/69K  
UV resistance  
Resistance to shocks & vibrations

**Covering all aspects from vehicles to attachments**

■ Complete range with connectors, closing cap, backshells and accessories

## Typical Applications



Winter & Road Service Vehicles



Accessories



Agriculture



Off road - Mining



Mobile Machinery

## General Technical Characteristics

WME1: Solution from vehicle to attachment



### Materials

- **Shell:** Thermoplastic
- **Backshells and cable glands:** Thermoplastic
- **Coupling ring:** Thermoplastic
- **Spring:** Stainless steel
- **Insert:** Thermoplastic
- **Contacts:** See page 6
- **Halogen free**
- **RoHS compliant & conforms to the Chinese standard SJ/T1166-2006 (Chinese RoHS equivalent)**



### Environmental

- **Operating temperature:** from -30°C to +85°C
- **Flammability rating:** UL94 V-0
- **Salt spray:** ≥ 500 hours
- **Sealing:** IP68/IP69K
- **Fluid resistance:**
  - Gasoil
  - Mineral oil
  - Acid bath
  - Cleaning agent
  - Basic bath



With courtesy of Dainger

### Electrical

- **Withstand voltage:** 5.000 V
- **Current rating:**
  - Power #8: 44 Amps
  - Signal #16: 13 Amps
- **Contact resistance:**
  - #8: ≤ 5 mΩ
  - #16: ≤ 3 mΩ

### Mechanical

- **Durability:** 250 matings & unmatings
- **Vibration resistance ISO 16750-3:**
  - Acceleration 5.79 g.
  - Duration: 32 hours per axe
  - Frequency: 10-20,000 Hz
- **Thermal shock:** 100 cycles 1h30, from -30°C +85°C.

WME2: Solution for inside the cabin



### Materials

- **Shell:** Thermoplastic
- **Backshells and cable glands:** Thermoplastic
- **Coupling ring:** Thermoplastic
- **Insert:** Thermoplastic
- **Contacts:** See page 10
- **Halogen free**
- **RoHS compliant & conforms to the Chinese standard SJ/T1166-2006 (Chinese RoHS equivalent)**



### Environmental

- **Operating temperature:** from -40°C to +125°C
- **Flammability rating:** UL94 V-0
- **Salt spray:**
  - > 1,000 hours (mated connectors)
  - 48 hours (unmated connectors)
- **Sealing:** IP67/IP68
- **Fluid resistance:**
  - Gasoil
  - Mineral oil
  - Acid bath
  - Basic bath



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### Electrical

- **Withstand voltage:** 1.500 V
- **Contact resistance:** < 3 mΩ
- **Current rating:** #16: 13 Amps



### Mechanical

- **Durability:** 250 matings & unmatings
- **Frequency range:**
  - 10-20,000 Hz, 20 g.
  - 10 cycles in accordance with CEI 28-2-6

## WME1: 4x#8 + 7x#16



## Connector Part Numbers

Connector type	Contact type	Layout	Connector delivered with		Part numbers	
			Closing cap	Backshell	Male insert	Female insert
Square flange receptacle	Crimped contacts supplied separately see page 6	4 x #8 + 7# 16	No	No	<b>WME10003A</b>	-
Receptacle with closing cap			Yes	No	<b>WME10007A</b>	-
			Yes	Yes	<b>WME10012A</b>	-
Plug			N/A	No	-	<b>WME10002A</b>
			N/A	Yes	-	<b>WME10013A</b>

## Backshells

Backshell type	IP level	Ø cable range mini/maxi	Part numbers
Backshell with grommet and spacer for receptacle	IP68/69K	9/18 mm	<b>WME10010A</b>
Backshell with grommet and spacer for plug	IP68/69K		<b>WME10011A</b>

## Accessories

**Protectiv cap for Plug**

IP40

**Part number**  
**WME11011A**

**Dust cap for WME10003A/10007A/10012A**

IP65

**Part number**  
**WME10015A**  
With chain

## Dimensions

11 pos.

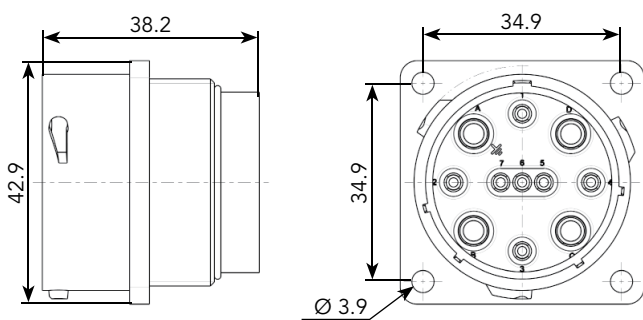
### Square flange receptacle - WME10007A & WME10012A



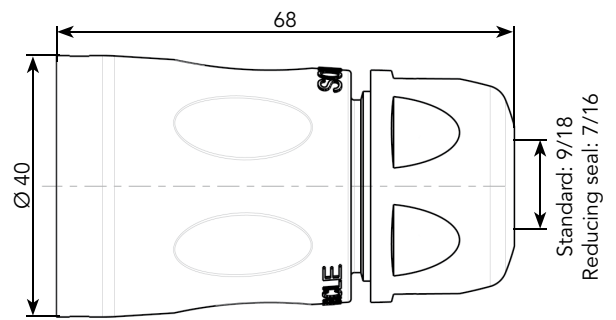
### Plug - WME10002A & WME10013A



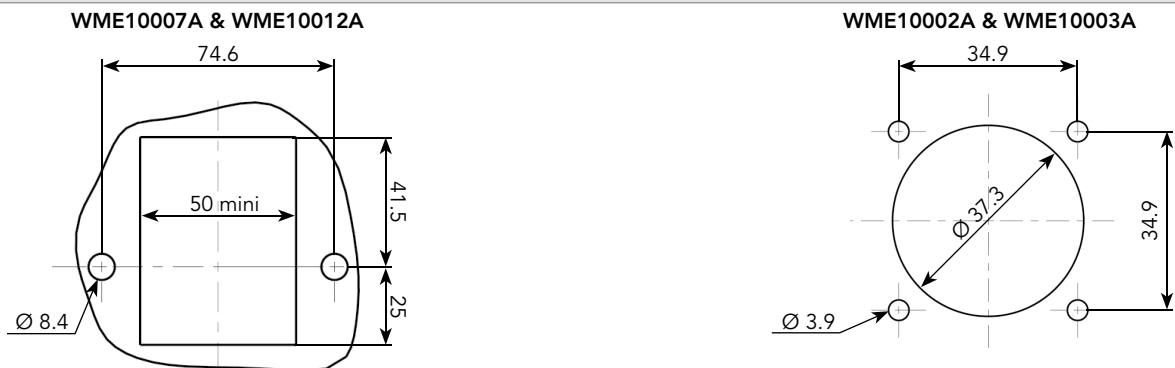
### Square flange receptacle - WME10003A



### WME10010A & WME10011A



### Panel Cut Out



Note: all dimensions are in mm

## Contacts for WME1

Contact size	Conector type	Type	Wire size		Part number		Max wire Ø (mm)	Max insulator Ø (mm)	Available plating see below
			AWG	mm <sup>2</sup>	Male	Female			
#16 Ø1.6 mm	WME1	Machined	30-28	0.05-0.08	<b>RM28M1-</b>	<b>RC28M1-</b>	0.55	1.1	K, J
		Machined	26-24	0.13-0.2	<b>RM24M9-</b>	<b>RC24M9-</b>	0.8	1.6	K, J
		Stamped & Formed	26-24	0.13-0.25	<b>SM24M1-</b> <sup>(1)</sup> <b>SM24ML1-</b> <sup>(2)</sup>	<b>SC24M1-</b> <sup>(1)</sup> <b>SC24ML1-</b> <sup>(2)</sup>	0.89-1.28	Insulation grip	S31, S18, TK6
		Machined	22-20	0.32-0.52	<b>RM20M13-</b> <b>RM20M12-</b>	<b>RC20M13-</b> <b>RC20M12-</b>	1.18	1.8 2.2	K, J
		Stamped & Formed	22-20	0.35-0.5	<b>SM20M1-</b> <sup>(1)</sup> <b>SM20ML1-</b> <sup>(2)</sup>	<b>SC20M1-</b> <sup>(1)</sup> <b>SC20ML1-</b> <sup>(2)</sup>	1.17-2.08	Insulation grip	S31, S18, TK6
		Machined	20-16	0.52-1.5	<b>RM16M23-</b>	<b>RC16M23-</b>	1.8	3.2	K, J
		Stamped & Formed	18-16	0.8-1.5	<b>SM16M1-</b> <sup>(1)</sup> <b>SM16ML1-</b> <sup>(2)</sup>	<b>SC16M1-</b> <sup>(1)</sup> <b>SC16ML1-</b> <sup>(2)</sup>	3.0	No insulation grip	S31, S18, TK6
		Stamped & Formed	18-16	0.8-1.5	<b>SM16M11-</b> <sup>(1)</sup> <b>SM16ML11-</b> <sup>(2)</sup>	<b>SC16M11-</b> <sup>(1)</sup> <b>SC16ML11-</b> <sup>(2)</sup>	2.0-3.0	Insulation grip	S31, S18, TK6
		Machined	16-14	1.5-2.5	<b>RM14M30-</b>	<b>RC14M30-</b>	2.28	3.2	K, J
		Stamped & Formed	14	2.0-2.5	<b>SM14M1-</b> <sup>(1)</sup> <b>SM14ML1-</b> <sup>(2)</sup>	<b>SC14M1-</b> <sup>(1)</sup> <b>SC14ML1-</b> <sup>(2)</sup>	3.0	No insulation grip	S31, S18, TK6
#8 Ø3.6 mm	Machined		16	1.5	<b>82913601A</b>	<b>82913600A</b>	-	6.5	A
			14	2.5	<b>82913603A</b>	<b>82913602A</b>			
			12	4	<b>82913605A</b>	<b>82913604A</b>			
			10	6.0	<b>82913607A</b>	<b>82913606A</b>			
			8	10.0	<b>82913609A</b>	<b>82913608A</b>			

(1) contact reeled (2) loose contact  
 Exemple: **RM28M1K** - Size #16, Machined, AWG30 wire.

### Contact Selector Guide

#### Contacts Supplied Separately

Electrical characteristics: contact resistance		
#16 Ø1.6mm	Machined	< 3mΩ
	Stamped & formed	< 6mΩ
#8 Ø3.6mm	Machined	< 5mΩ

Available plating options	
<b>A</b>	2µ Ni + 2µ Ag
<b>J</b>	Gold flash over 2µ Ni
<b>K</b>	Min 0.4µ gold over 2µ Ni
<b>S31</b>	Active part: Gold flash over Ni Crimp area: Nickel
<b>S18</b>	Active part: 0.75µ gold min over 2µ Ni Crimp area: 1.3µ tin over Ni Other: Nickel
<b>TK6</b>	2-5µ Sn pre-plated
<b>D70</b>	Superseded by S31
<b>S6</b>	Superseded by S18
<b>Other platings on request (contact supplied separately)</b>	
<b>T</b>	T: 2µm Ni mini all over + 3 to 5 µm Sn all over
<b>D28</b>	0.75µ gold over Ni

# Tooling for WME1

11 pos.

## Crimp Tooling

### Standard contacts

Contact size	Part number <sup>(1)</sup>	Head*	Handles*	Extraction tools
#16 Ø 1.6mm	RM/RC 28M-	S16RCM20	SHANDLES	RX2025GE1
	RM/RC 24M9-			
	RM/RC 20M13-			
	RM/RC 20M12-			
	RM/RC 16M23-	S16RCM16		
	RM/RC 14M30-	S16RCM14		
	SM/SC 24ML1-	S16SCM20		
	SM/SC 20ML1-			
	SM/SC 16ML1-	S16SCML1		
	SM/SC 14ML1-	S16SCML11		
SM/SC 16ML11-				

(1) see page 6 for plating options and other contact details

\* Endurance of SHANDLES & Head tools = 50,000 cycles

Contact size	Part number	Tool with separate locator		Extraction tools
		Hand tool	Positioner + locator setting	
#8 Ø 3.6mm	82913601A / 82913600A	M317	VGE10078A	51060210936
	82913603A / 82913602A			
	82913605A / 82913604A			
	82913607A / 82913606A			
	82913609A / 82913608A			

### Tools for contact #16



Part number Handle  
(without Head)

SHANDLES



Crimp Tooling  
(without Shandles)

S16RCM16\*



Part number  
Extraction Tool

RX2025GE1

### Tools for contact #8



Part number Hand Tool

M317



Part number  
Positioner + Locator Setting

VGE10078A



Part number  
Extraction Tool

51060210936

\* Heads to be used with handle PN: SHANDLES

## WME2: 9x#16



## Connector Part Numbers

Connector type	Contact type	Layout	Backshell	Part numbers	
				Male insert	Female insert
Square flange receptacle	Crimped contacts supplied separately see page 8	9 x 16	No	WME20003A	WME20006A
Plug			No	WME20005A	WME20002A

## Backshells

Backshell type	IP level	Part numbers
Straight backshell for flexible conduit system	IP67	WME20008A
Sealing gland backshell with anti-decoupling system	IP67	WME20009A
90° backshell with sealing gland	IP67	WME20010A

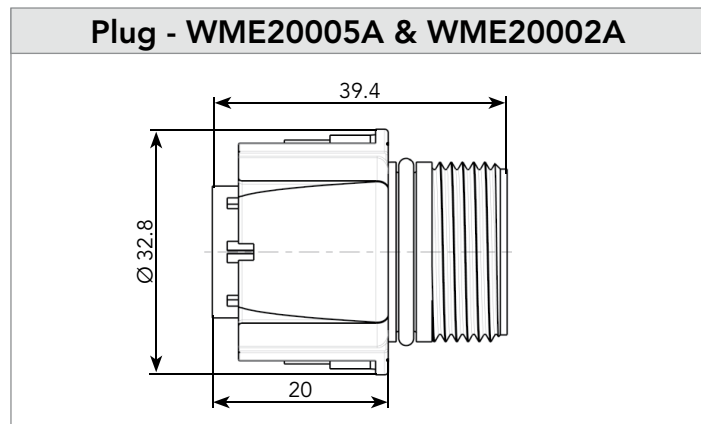
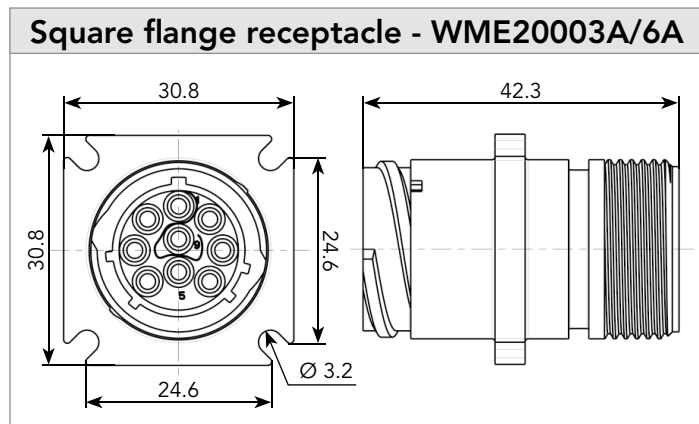
## Accessories

Receptacle dustcap	
Part number	IP67
WME20007A	

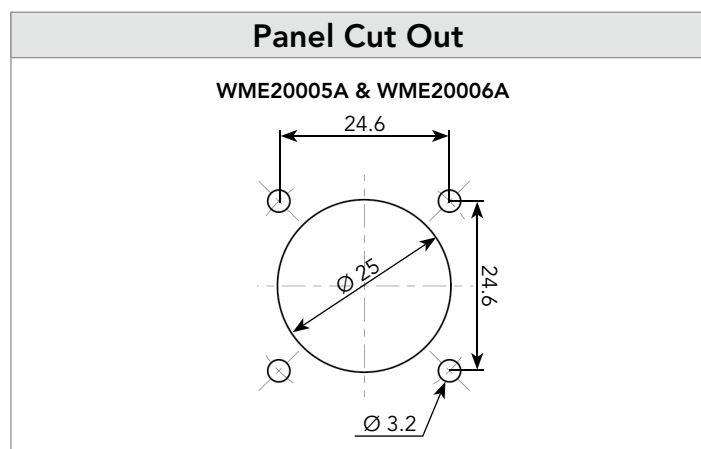
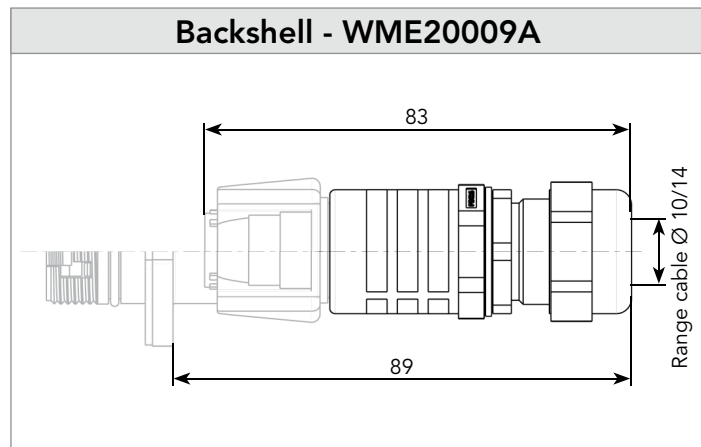
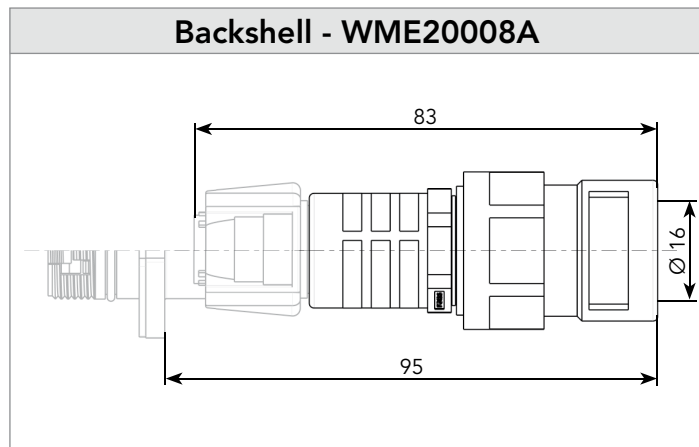
Panel gasket	
Part number	
WME20011A	
IP67	



## Dimensions



9 pos.



Note: all dimensions are in mm

## Contacts for WME2

Contact size	Conector type	Type	Wire size		Part number		Contact resistance	Wire Ø (mm)	Max insulator Ø (mm)	Available plating
			AWG	mm²	Male	Female				
#16 Ø1.6 mm	WME2	Stamped & Formed	18-16	0.8-1.5	CF16PC10RF <sup>(1)</sup>	CF16SC10RF <sup>(1)</sup>	< 7mΩ	0.7 to 1.5	3	Active part: Gold flash
			14	2.5	CF16PC18RF <sup>(2)</sup>	CF16SC18RF <sup>(2)</sup>				
		Crimp Machined	18-14	0.8-2.5	CM16PC10MQ	CM16SC10MQ	< 4mΩ	0.93 to 1.91	3	Active part: 0.4µ gold
		Solder Machined	14	2.5	CM16PS10MQ	CM16SS10MQ	< 7mΩ	-	3	
		Crimp Machined	18 to 13		CM16PC00MQ	CM16SC00MQ	< 4mΩ	0.93 to 2.6	3	

(1): loose piece contacts

(2): reeled contacts

### Tools for stamped & formed contact #16

Contact part Number	Contact size	Cable size	Cable section (mm²)	Crimping handle	Crimp head	Head cavity size
CF16PC10RF CF16SC10RF	#16 Ø1.6 mm	AWG 19	0.70 min	Shandles	S16CFSP	19/18
		AWG 18	0.80 max			
		AWG 16	1.5 max			
CF16PC40RF CF16SC40RF	#16 Ø1.6 mm	AWG 14	2.5 min	Shandle	S16CFSP	14

### Tools for machined contact #16



Part number  
Positioner + Locator Setting  
**8365-2**



Part number Hand Tool  
**8365**

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