



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



With courtesy of Damier

Winter & Road Service Vehicles



Accessories



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Agriculture



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Off road - Mining



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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

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

Electrical

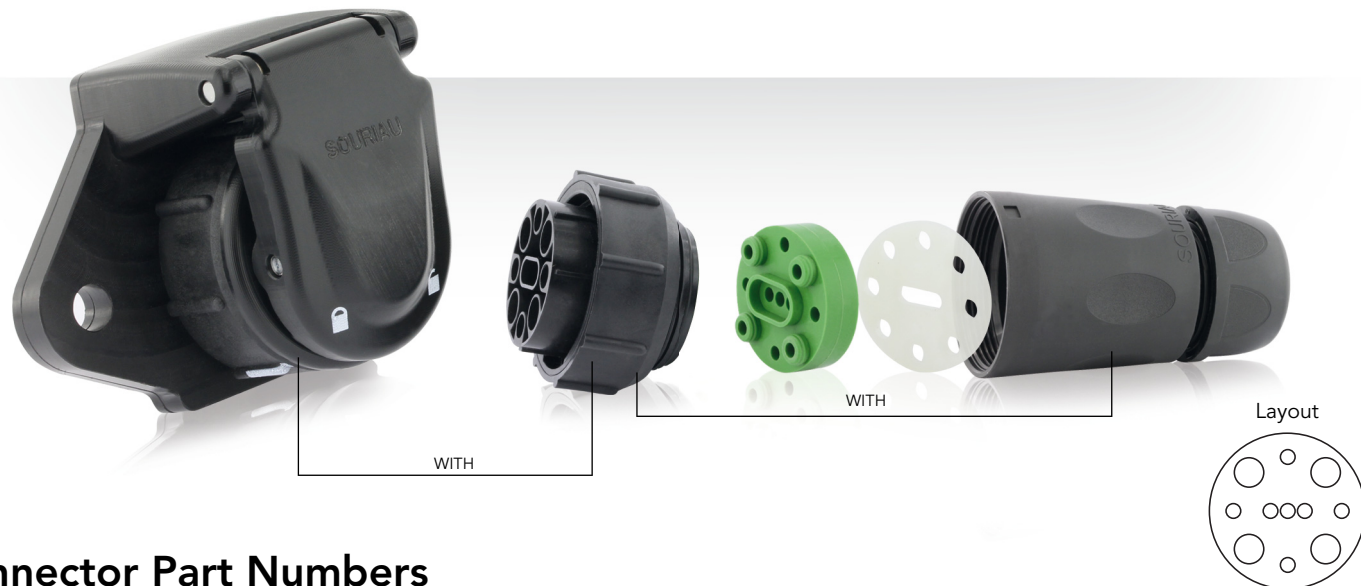
- **Withstand voltage:** 1.500 V
- **Contact resistance:** < 3 mΩ
- **Current rating:** #16: 13 Amps



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	WME10003A	-
Receptacle with closing cap			Yes	No	WME10007A	-
			Yes	Yes	WME10012A	-
Plug			N/A	No	-	WME10002A
			N/A	Yes	-	WME10013A

Backshells

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

Accessories

Protectiv cap for Plug

IP40

Part number
WME11011A

Dust cap for WME10003A/10007A/10012A

IP65

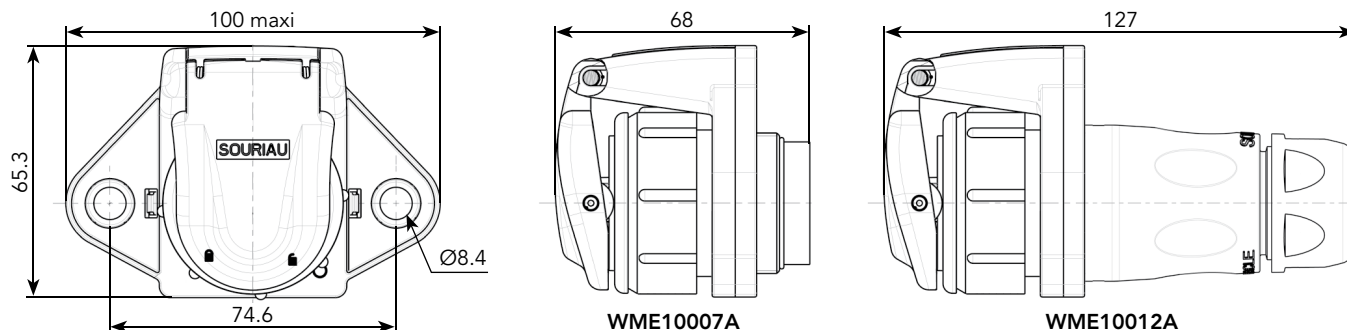
Part number
WME10015A

With chain

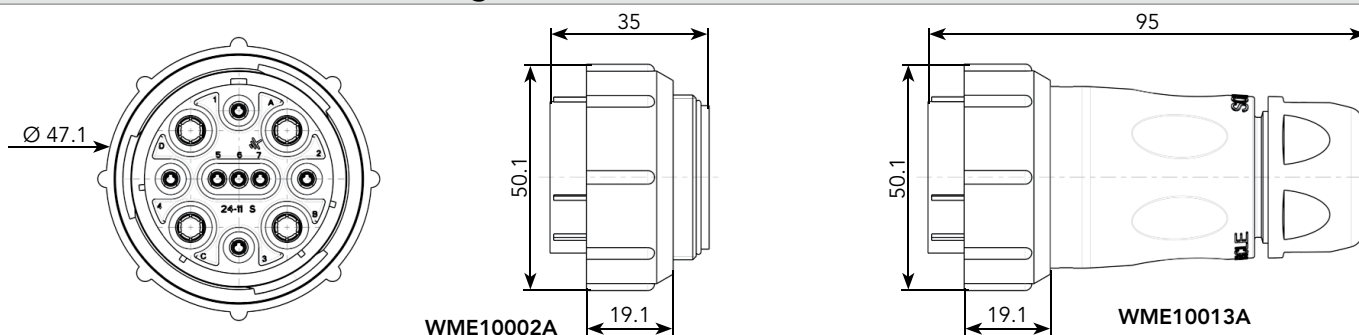
Dimensions

11
pos.

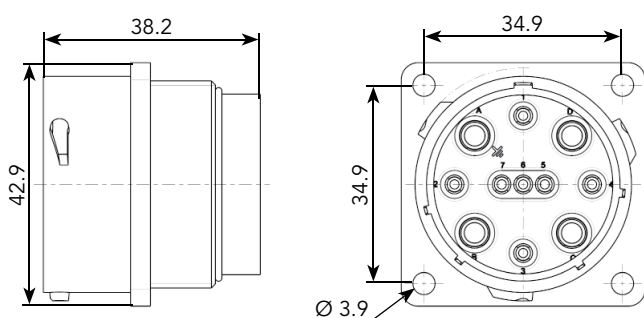
Square flange receptacle - WME10007A & WME10012A



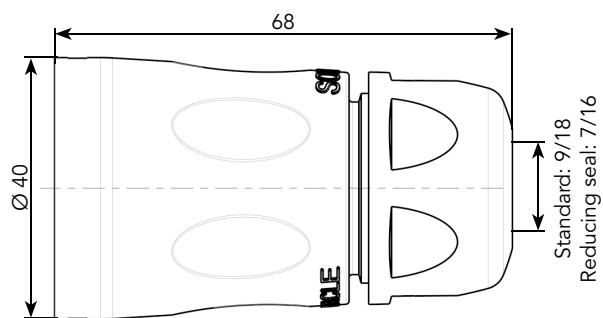
Plug - WME10002A & WME10013A



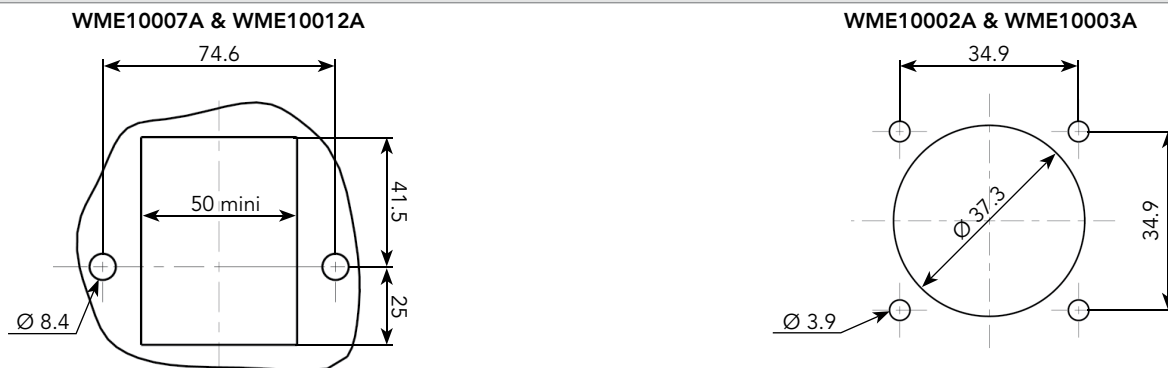
Square flange receptacle - WME10003A



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	mm²	Male	Female			
#16 Ø1.6 mm	WME1	Machined	30-28	0.05-0.08	RM28M1-	RC28M1-	0.55	1.1	K, J
		Machined	26-24	0.13-0.2	RM24M9-	RC24M9-	0.8	1.6	K, J
		Stamped & Formed	26-24	0.13-0.25	SM24M1- ⁽¹⁾ SM24ML1- ⁽²⁾	SC24M1- ⁽¹⁾ SC24ML1- ⁽²⁾	0.89-1.28	Insulation grip	S31, S18, TK6
		Machined	22-20	0.32-0.52	RM20M13-	RC20M13-	1.18	1.8	K, J
					RM20M12-	RC20M12-		2.2	
		Stamped & Formed	22-20	0.35-0.5	SM20M1- ⁽¹⁾ SM20ML1- ⁽²⁾	SC20M1- ⁽¹⁾ SC20ML1- ⁽²⁾	1.17-2.08	Insulation grip	S31, S18, TK6
		Machined	20-16	0.52-1.5	RM16M23-	RC16M23-	1.8	3.2	K, J
		Stamped & Formed	18-16	0.8-1.5	SM16M1- ⁽¹⁾ SM16ML1- ⁽²⁾	SC16M1- ⁽¹⁾ SC16ML1- ⁽²⁾	3.0	No insulation grip	S31, S18, TK6
		Stamped & Formed	18-16	0.8-1.5	SM16M11- ⁽¹⁾ SM16ML11- ⁽²⁾	SC16M11- ⁽¹⁾ SC16ML11- ⁽²⁾	2.0-3.0	Insulation grip	S31, S18, TK6
		Machined	16-14	1.5-2.5	RM14M30-	RC14M30-	2.28	3.2	K, J
Stamped & Formed	14	2.0-2.5	SM14M1- ⁽¹⁾ SM14ML1- ⁽²⁾	SC14M1- ⁽¹⁾ SC14ML1- ⁽²⁾	3.0	No insulation grip	S31, S18, TK6		
#8 Ø3.6 mm	Machined	16	1.5	82913601A	82913600A	-	6.5	A	
		14	2.5	82913603A	82913602A				
		12	4	82913605A	82913604A				
		10	6.0	82913607A	82913606A				
		8	10.0	82913609A	82913608A				

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

Tooling for WME1

Crimp Tooling

11
pos.

Standard contacts

Contact size	Part number ⁽¹⁾	Head*	Handles*	Extraction tools
#16 Ø 1.6mm	RM/RC 28M-	S16RCM20	SHANGLES	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-			
SM/SC 16ML11-	S16SCML11			

(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	3	51060210936
	82913603A / 82913602A			3	
	82913605A / 82913604A			4	
	82913607A / 82913606A			5	
	82913609A / 82913608A			6/7	

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
WME20007A

IP67

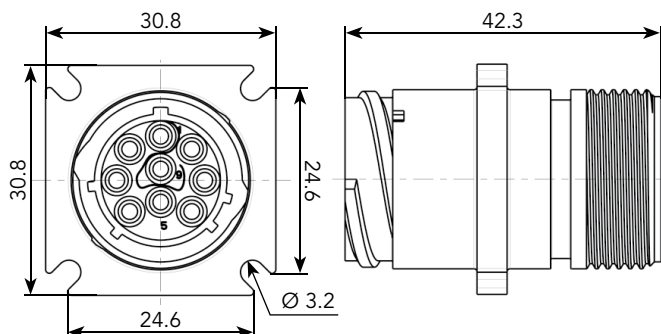
Panel gasket

Part number
WME20011A

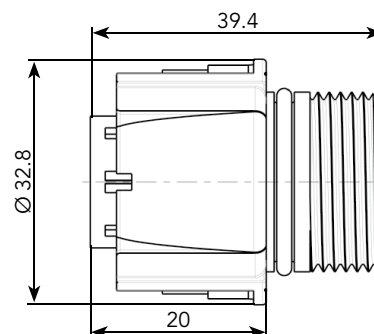
IP67

Dimensions

Square flange receptacle - WME20003A/6A

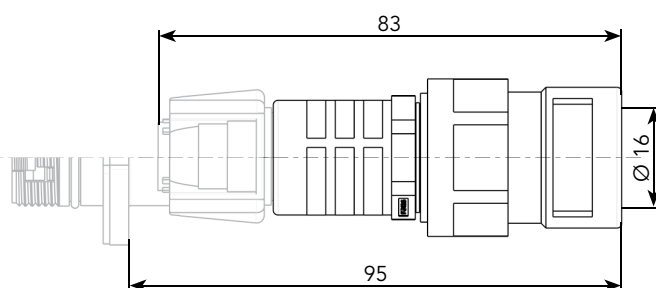


Plug - WME20005A & WME20002A

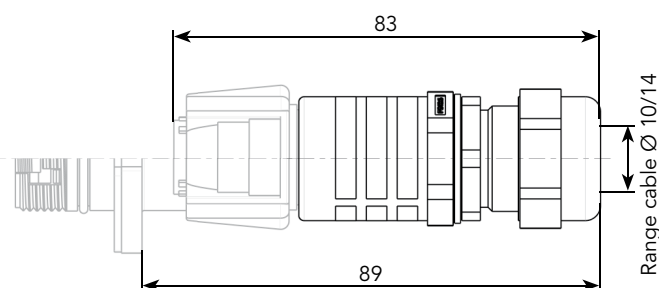


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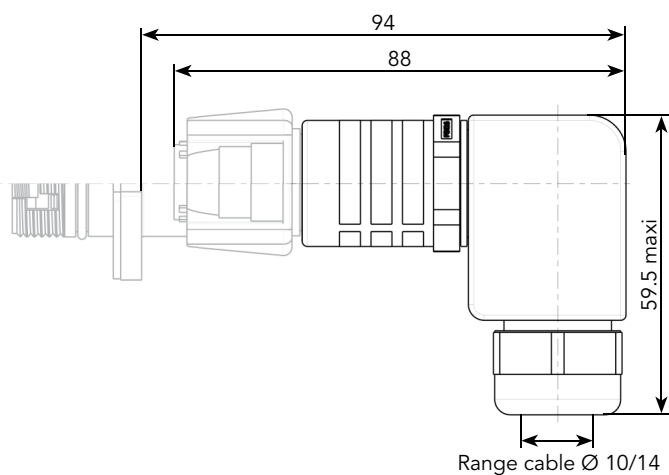
Backshell - WME20008A



Backshell - WME20009A

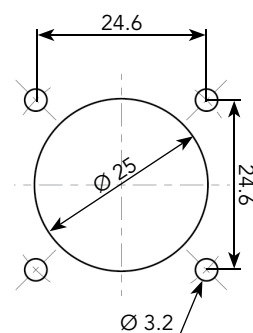


Backshell - WME20010A



Panel Cut Out

WME20005A & WME20006A



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 ⁽¹⁾	CF16SC10RF ⁽¹⁾	< 7mΩ	0.7 to 1.5	3	Active part: Gold flash
			14	2.5	CF16PC18RF ⁽²⁾	CF16SC18RF ⁽²⁾				
		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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