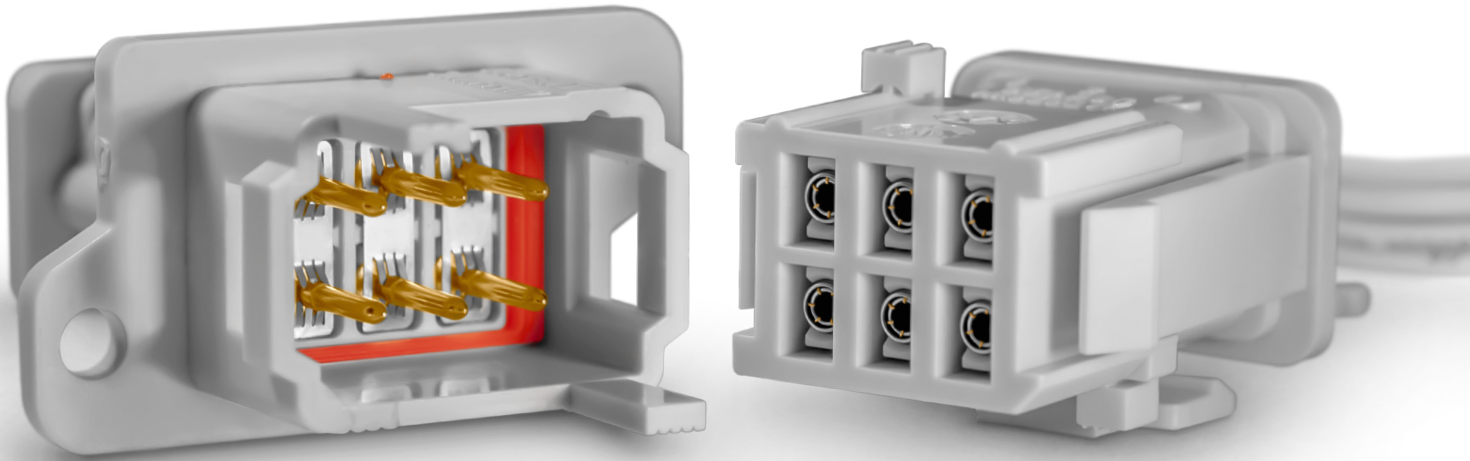


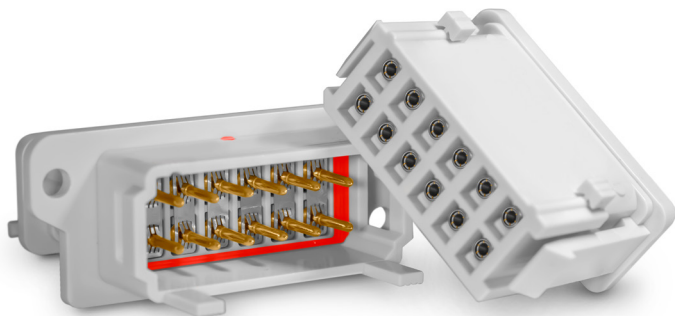
REP Series

Environmentally-Sealed Rectangular Plastic Connectors



REP Series

Environmentally - Sealed Rectangular Plastic Connectors



Optimised for
use in rail and
embedded
applications

Smiths Interconnectors' REP Series, multi-pole, sealed, plastic connectors, provides a quick and secure connection of embedded equipment across a wide range of industries, such as sensors, brakes, lighting, air conditioning and communications found within industrial, rail, test and measurement, automotive, public works and defence.

The connector uses the proven Hypertac® hyperboloid contact technology which guarantees excellent reliability, even under high levels of shock and vibration and allows up to 500 mating cycles and high current rating up to 18 A. The REP connector range offers two main versions: with crimp termination contacts for cable harness applications and with straight or bent termination contacts for PCB mount applications. Both versions are available in 3 layouts: 2, 6 and 12 ways. The REP Series comes with a shunt accessory enabling electrical derivation inside the connector for transmission of information to different locations.

Only one contact can be used for cross section cables 0.5 mm² to 2.5 mm² (24-12 AWG) according to NFF 63-808 and EN 50-306 standards. No specific tool is required, with consequent reduction of supply chain, maintenance and cabling costs. Furthermore, for easy mounting, the connector includes polarized guides and provides several configurations: cable to cable, clips, front and back panel mount.

Connectors are available for delivery as a complete, tested pre-cabled solution according to customers' specifications.

Features

Compact, flexible design

- Standard insulators available in 2, 6 and 12-way configurations
- Crimp, straight and bent termination options

Easy mounting and maintenance

- No specific tooling required for mounting
- One contact required for cross-section cables 0.50-2.50 mm² (24-12 AWG) to NFF 63-808 and EN 50-306 standards

High quality, integrated features

- Overmoulded silicone grommet and interfacial seal delivers IP66 and IP67 protection
- Vibration resistance to EN 61-373, Category 2 standards
- Compliance to fire and smoke standards
- Improved polarised guides
- Three coding devices: cable-to-cable, clip locking, and front and back panel mount

Hypertac® contact technology

- 360° wiping action
- Low insertion/extraction forces
- Minimal contact resistance

Benefits

Optimised for use in rail and embedded applications

- Space and weight savings
- Qualified to ensure high degree of safety
- Able to accept a large panel of cables with standard offering

Complete, tested pre-cabled solutions available to customer's exact specifications

Fast and reliable connection

- Ensure failure-free performance in extremely demanding environments
- Immunity to fretting caused by mating/unmating and shock and vibration

Reduced cost of ownership

- Minimised supply chain, inventory and maintenance costs
- Lowered cabling costs

Superior performance

- Hypertac® contacts ensure 30% higher current carrying capacity than contacts of the same size

Technical Characteristics

STANDARDS

Contact Arrangements Contact Diameter Weight (contacts included)	2, 6, 12 Size 16: Ø 1.50 mm (0.059 in) REP102 with contacts: 7.74g REP202 with contacts: 8.18g REP402 with bent contacts: 9g REP402 with straight contacts: 8g REP506 with contacts: 17.9g REP606 with contacts: 19.3g REP406 with bent contacts: 15.5g REP406 with straight contacts: 13.5g REP512 with contacts: 32.8g REP612 with contacts: 33.9g REP412 with bent contacts: 25g REP412 with straight contacts: 22g	
Coding Configurations Polarisation	Cable-to-cable, clip locking, panel mount 180°	

Materials & Plating

Contacts Insulator Seal & Grommet	Gold over nickel plating Polycarbonate Overmoulded silicone	
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Mechanical & Environmental

Contact Retention Force Clip Locking Retention Force Mating Cycles Temperature Range	> 70 N >190 N > 500 cycles -75 °C to +100 °C (for crimp versions) -40 °C to +250 °C (for receptacles REP4xx)	– – – – –
Vibration Flammability	Category 2 (bogie installation) I2 F1 Condition 4 HL3 for R22 30s Category 2 V-O	EN 61-373 NF F 16-101 NF F 16-102 EN 45545-2 EN ISO 11925-2 UNI CEI 11170-3 UL94
Salt Spray Fluid Resistance	> 96 hours Cleaning substances, gasoline/oil, acids,	ASTM-B-117 IP66, IP67

Electrical

Current Rating Voltage Rating Dielectric Withstanding Voltage Contact Resistance Insulation Resistance	18 A 230 V (400 V with plastic dummy contacts) 2725 V ≤ 2.5 mΩ ≥ 5x10 ³ MΩ	– EN 50124-1, pollution degree 3 EN 50124-1 – –
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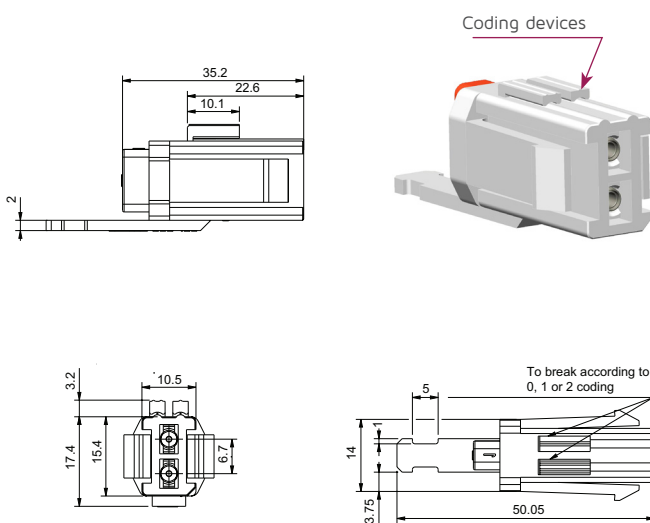
Dimensions 2,6,12-Way Connectors

2 Way Plugs & Receptacles

Cable Harness, Crimp Termination

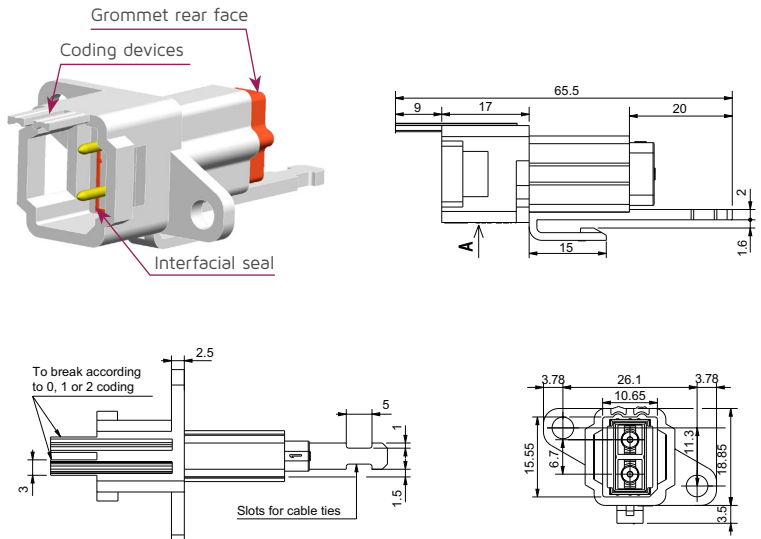
Female plug

P/N: REP-102-XX-20-XX



Male receptacle

P/N: REP-202-XX-20-XX

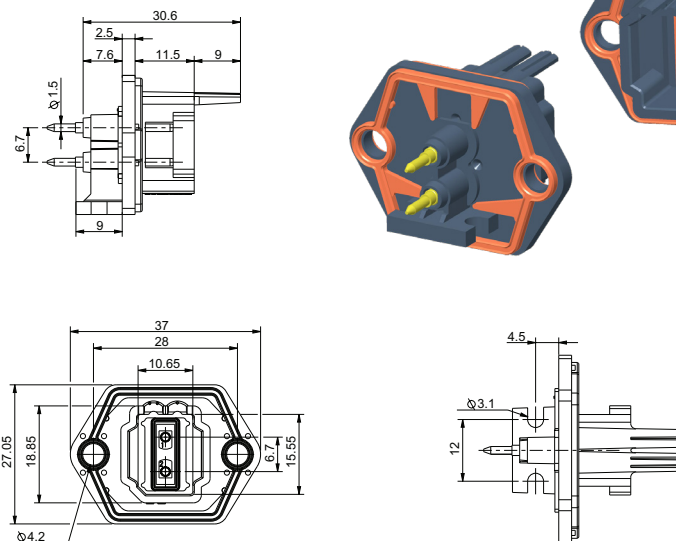


2 Way Receptacles

PCB/Panel Mount, Straight & Bent Termination

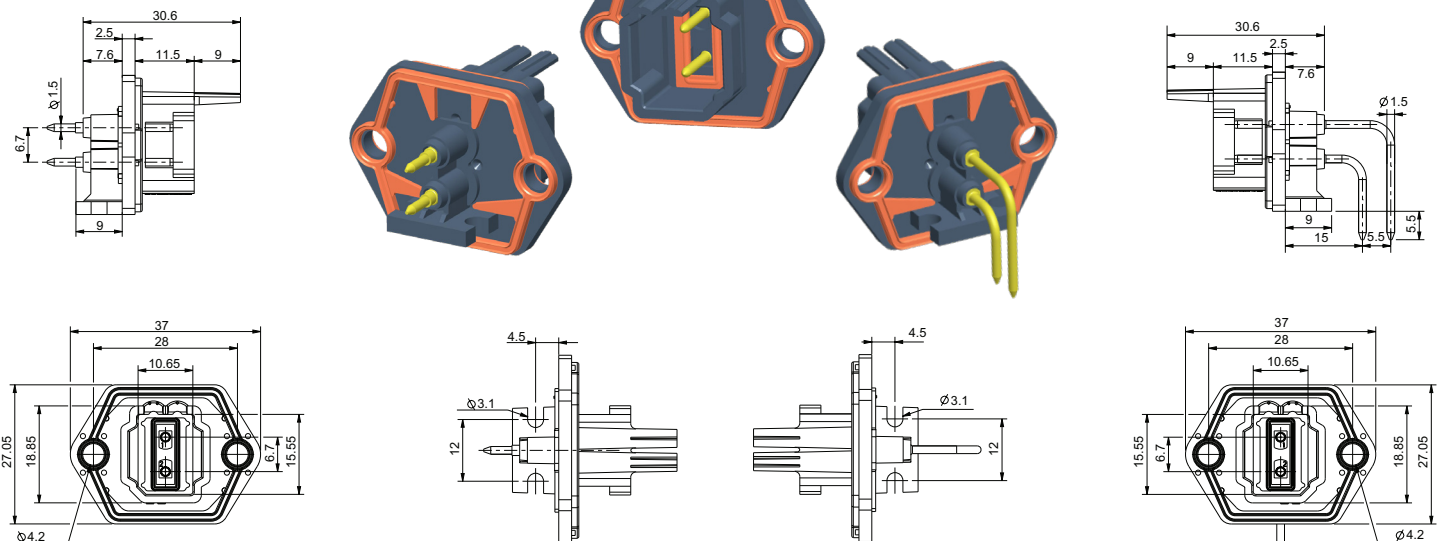
Straight male receptacle

P/N: REP-402-XX-30-XX



Bent male receptacle

P/N: REP-402-XX-10-XX

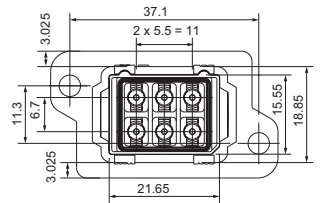
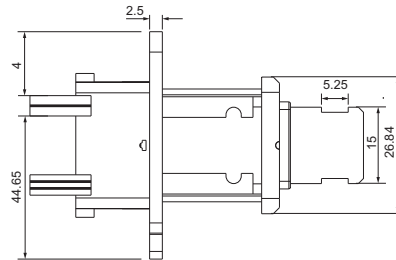
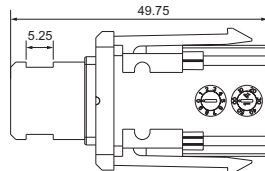
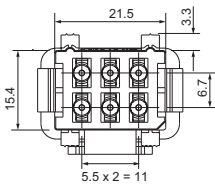
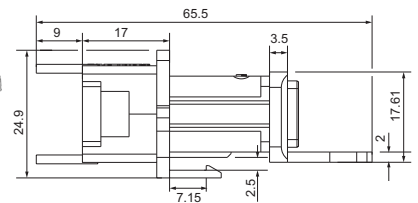
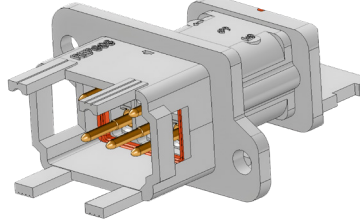
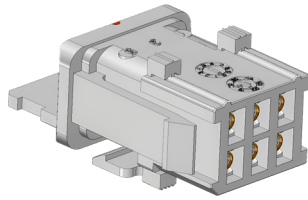
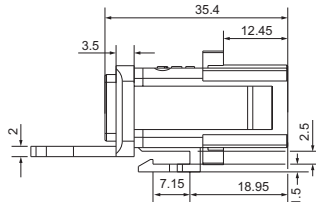


6 Way Plugs & Receptacles

Cable Harness, Crimp Termination

Female plug

P/N: REP-506-XX-20-XX

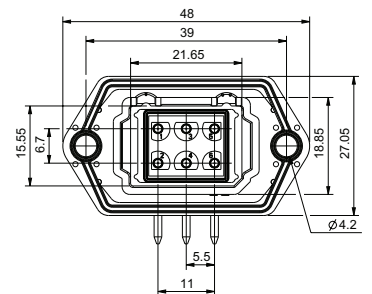
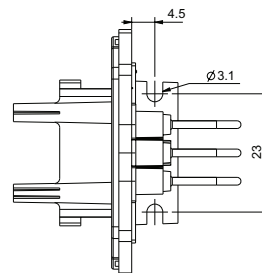
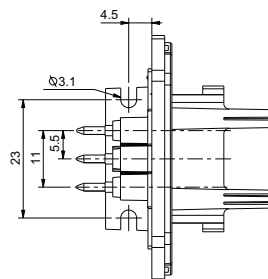
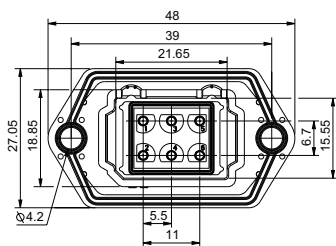
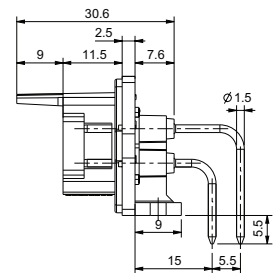
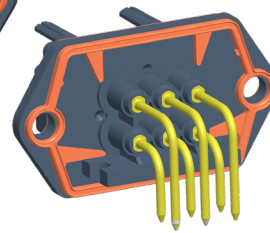
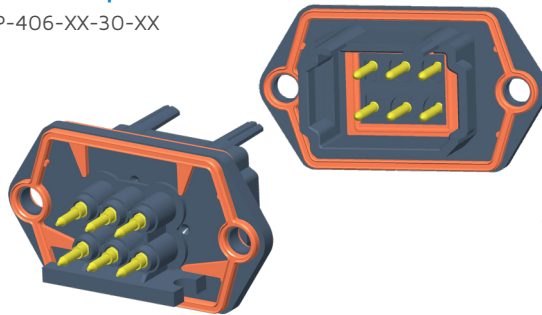
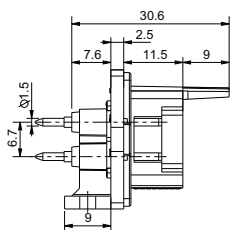


6 Way Receptacles

PCB/Panel Mount, Straight & Bent Termination

Straight male receptacle

P/N: REP-406-XX-30-XX

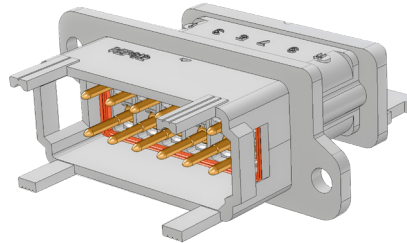
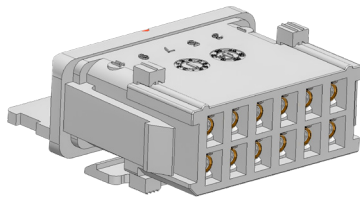
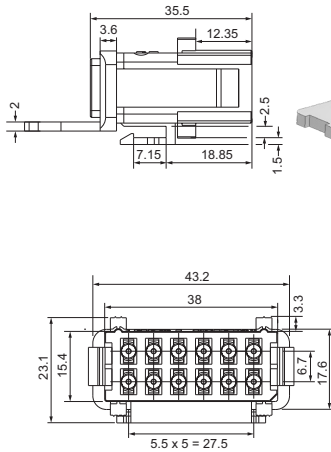


12 Way Plugs & Receptacles

Cable Harness, Crimp Termination

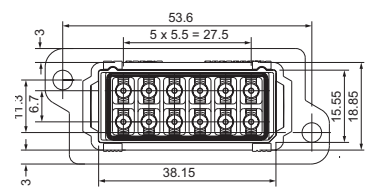
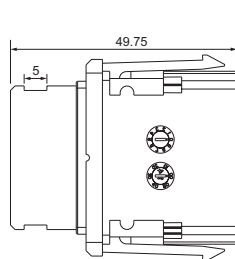
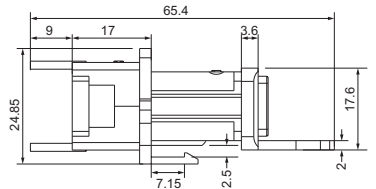
Female plug

P/N: REP-512-XX-20-XX



Male receptacle

P/N: REP-612-XX-20-XX

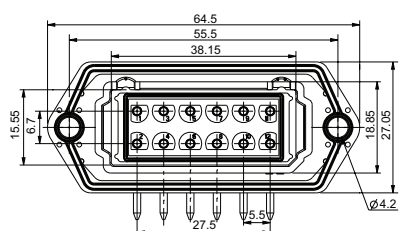
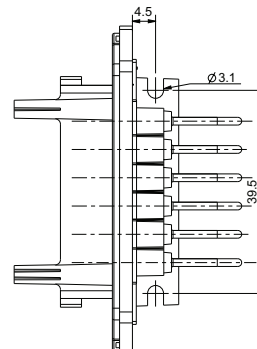
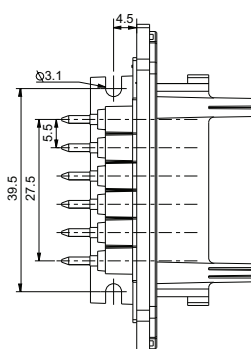
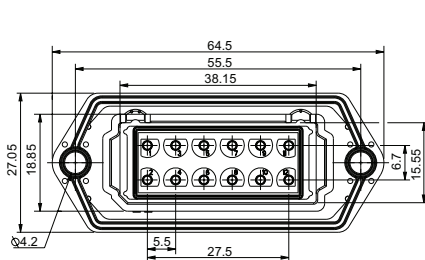
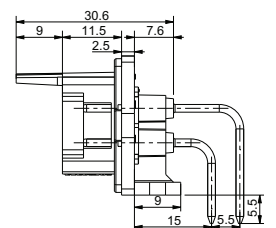
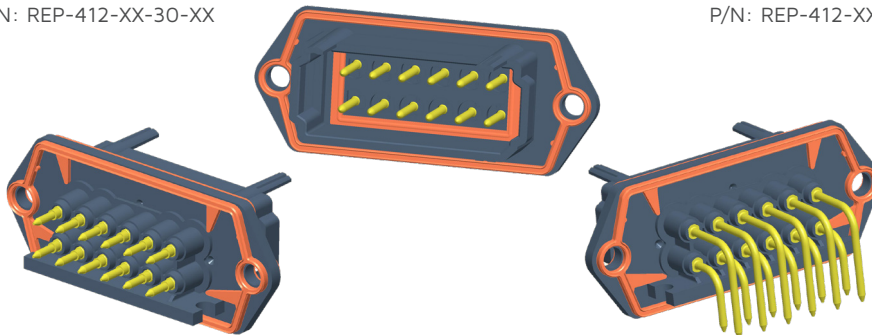
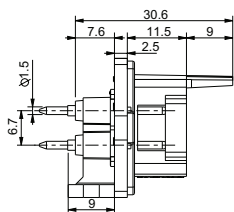


12 Way Receptacles

PCB/Panel Mount, Straight & Bent Termination

Straight male receptacle

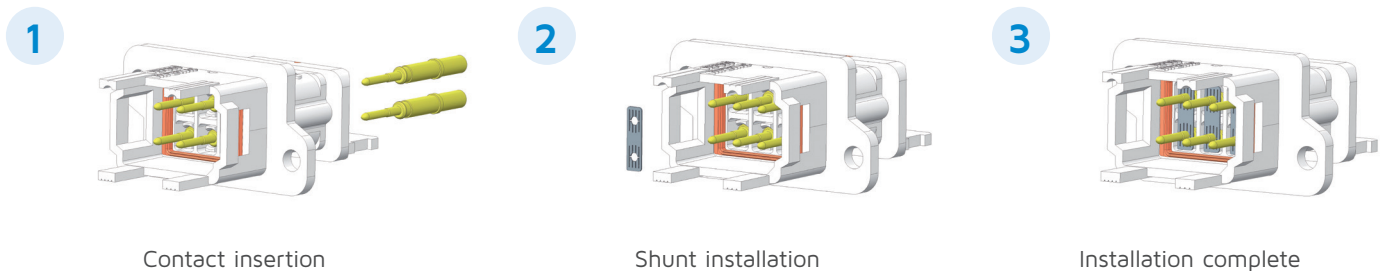
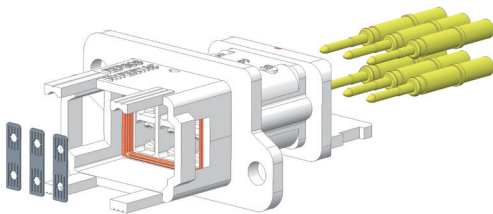
P/N: REP-412-XX-30-XX



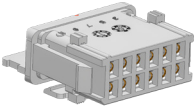
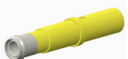
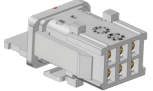
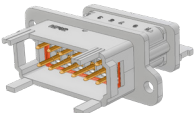
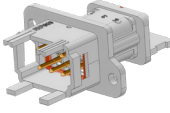
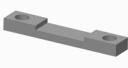
Dimensions are in mm | All specifications are subject to change without notice

Assembly Contacts & Accessories

Contact & Shunt Assembly



Accessories

CONNECTOR	ACCESSORIES					CONTACTS	TOOLING EQUIPMENT		
	Cable Retainer	Panel Seal	Panel Mount Bracket	Dummy Contacts ⁽¹⁾	Filler Plug		Crimping Tool	Locator	Selector Positions Wire Cross Sections
 Female plug, 12-way REP 512	 REP 007-12		 REP 003-12			 0151832-20-N1	Astro-tool TGV 101	TGV 202 rouge	Position 5: AWG 20-18 Position 6: AWG 16-14 Position 7: AWG 14
 Female plug, 6-way REP 506	 REP 007-06		 REP 003-06				Daniels FT8	SH 463 rouge	Extraction Tool SD-0150000012
 Male receptacle, 12-way REP 612	 REP 007-12	 REP 006-12	 REP 003-12	 REP 002	 REP 001	 0151081-20-1G	Astro-tool TGV 101	TGV 202 rouge	Position 5: AWG 20-18 Position 6: AWG 16-14 Position 7: AWG 14
 Male receptacle, 6-way REP 606	 REP 007-06	 REP 006-06	 REP 003-06				Daniels FT8	SH 463 rouge	Extraction Tool SD-0150000012

(1) Use up to 400 V

Dimensions are in mm | All specifications are subject to change without notice

How To Order



R E P

1

2

3

4

5

1 Series	R E P Series [fixed]
2 Layout	1 0 2 Plug - 2 socket contacts 2 0 2 Receptacle - 2 pin contacts 4 0 2 Receptacle for pcb or panel mount - 2 pin contacts 4 0 6 Receptacle for pcb or panel mount - 6 pin contacts 4 1 2 Receptacle for pcb or panel mount - 12 pin contacts 5 0 6 Plug - 6 socket contacts 5 1 2 Plug - 12 socket contacts 6 0 6 Receptacle - 6 pin contacts 6 1 2 Receptacle - 12 pin contacts
3 Part - Polarity	0 3 Plug without contact 0 4 Receptacle without contact 1 2 Female plug with contacts 2 3 Male receptacle with contacts 2 7 Male receptacle with tinned contacts 2 B Male receptacle with RoHS tinned contacts
4 Termination Style	0 0 Without contact 1 0 Bent termination contact for REP 402, 406 and 412 2 0 Crimp contact 24-12 AWG for REP 102, 506, 512, 202, 606 and 612 3 0 Straight termination contact for REP 402, 406 and 412
5 Accessories	0 0 Without accessory 0 1 Filler plug for REP 102, 506, 512, 202, 606 and 612 0 2 Plastic dummy contact for REP 102, 506, 512, 202, 606 and 612 0 3 Bracket for panel mounting for REP 202, 606 and 612 0 4 Spacer for straight termination contact for REP 402, 406 and 412 0 7 With accessory for cable retainer for REP 606 and 612 0 9 With shunts for REP 606 and 612 1 0 With panel seal for REP 606 and 612

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