

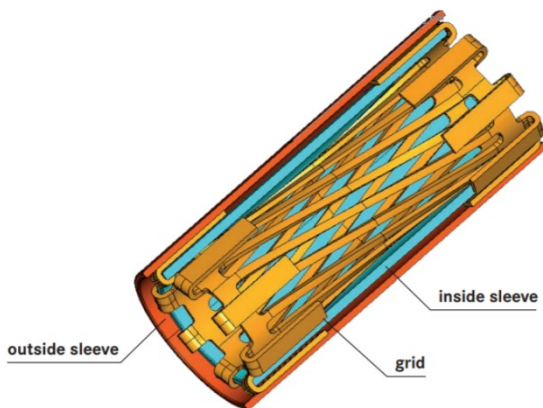
Amphenol Network Solutions Connector Advantages

Amphenol's P24 and P40 connectors used on the new Amphenol Network Solutions connectorized power panels are industry leading in performance, user access, and flexibility. The P24 connectors use SureSocket™ technology, while P40 connectors use RADSOK™ technology. These terminals were originally developed for the automotive industry but have since been implemented in a vast array of industrial applications. These heavy-duty terminals are known for their high allowable power, low voltage drop, and low temperature rise.



300CB08-C Circuit Breaker Panel with P40 connectors

Amphenol's connector technology is based on a smooth pin and a flat grid that is either twisted or formed into a hyperbolic geometry and pressed into a socket. Our competitor's terminals rely on a stamped beam element to act as a spring, which tend to weaken over time. The RADSOK and SureSocket grids distribute normal forces over a high percentage of the mating pin surface, creating a smooth uniform engagement. The large and consistent interface between the grid and pin surface result in low contact resistance, allowing terminals to be smaller than competitors with equal power ratings. These smaller terminals are crucial to the accessibility of the outputs on the rear of our panels. Connectors can easily be disengaged even when panels are stacked with no RU space in between. The competition's design makes disengaging connectors challenging if panels are stacked directly on top of each other.



RADSOK™ details

The flexibility of the connector design clearly outshines the competition. Our competitor's connectors cannot be field terminated. That means at the time of order, the wire gauge, color, and length must be known to purchase cable whips. If a rework is required, cables must be ordered from the factory. This could cause huge delays in installation schedules. Alternatively, the Amphenol Networks Solutions' connector can be terminated in the field using a standard Daniels crimping tool. Connectors can be easily disassembled, and replacement terminals are available. If cable parameters are already known, we offer pre-terminated whips for your convenience.



Daniels M300BT crimper

The connectors used on our panels are a clear winner when compared to the alternatives. Superior electrical performance, easier user access, and installation flexibility makes Amphenol Network Solutions your optimal source for your power distribution needs.

INDUSTRIAL@AMPHENOL
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Amphenol Audio, USA
Amphenol Sine Systems, USA
Amphenol Tuchel Industrial, GmbH



RADSOK® technology is based upon a stamped and formed flat grid, uniquely twisted into a hyperbolic geometry to provide robust, high density contact to the mating pin contact. Most pin and socket technologies rely on spring (beam element) properties of the contact elements, which tend to weaken over time. Unlike most other pin and socket solutions, the RADSOK® also utilizes the tensile strength properties of the flat, high conductivity alloy grid. This provides the high normal forces required for conductivity while also providing a large conductive surface area. Correspondingly low voltage drop and low temperature rise are also achieved while maintaining low insertion forces.

The RADSOK® Design:

- Socket cylinder within female contact has several equally spaced longitudinal beams twisted into a hyperbolic shape
 - As a male pin is inserted, axial members in the female half deflect, imparting high current flow across the connection with minimal voltage loss
 - The hyperbolic, stamped grid configuration ensures a large, coaxial, face-to-face surface area engagement
 - Ideal for crimp termination applications requiring repeated mating cycles and high current with a low multi-volt drop
- RADSOK® Technology Advantages
- High Reliability - Unique design and construction technology create an electrical contact interface that exceeds typical interconnect requirements.
 - Low Contact Engagement/Separation Forces - The hyperbolic lamella socket contact construction distributes normal forces over a high percentage of the mating pin surface. This creates a smooth, even engagement effort. This force distribution also contributes to excellent performance in vibration applications with resistance to typical fretting corrosion.
 - Low Contact Resistance - The large interface area between the socket lamella and pin surface result in very low contact resistance, enabling the RADSOK® contacts' high current ratings compared to traditional power contact designs.
 - High Mating Cycle Durability - RADSOK® contacts with typical silver-plating finishes have demonstrated survival of 20,000 mating cycles. Specialized plating and contact lubricants can extend cycle life to 200,000 matings or higher. Even with continuous exposure to harsh environmental abuse, RADSOK® contacts have been tested to maintain low contact resistance beyond 10,000 mating cycles.



SS SureSocket™

Power Contact Technology

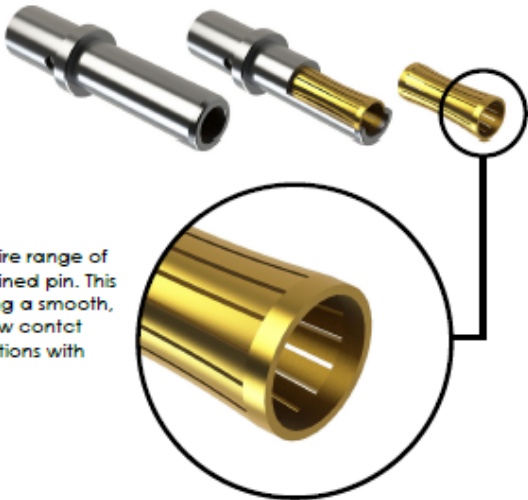
Confidence In Every Connection

The unique design of our SureSocket™ Contacts, available in 2.4mm with a wire range of 10-14AWG, provides a secure 360° of mating surface area to its mated machined pin. This distributes even forces over a high percentage of the mating surface, creating a smooth, even engagement effort with low insertion and extraction forces as well as low contact resistance. This also contributes to excellent performance in vibration applications with resistance to typical fretting corrosion.

Applications: Industrial, Automation, Harsh Environment

Key Features

- Longer contact life
- Low contact resistance
- Low insertion & extraction forces
- Immunity to shock & vibration
- Contact Area Extends 360° Around Pins



Accessory Descriptions

Connector kits include:

Qty 1: Plug housing

Qty 1: Contact retainer

Qty 2: Contacts (wire gauge depends on kit part number)



P40 Connector kit



P24 Connector kit

Replacement contacts: single contacts needed only to replace a crimped contact.



P40 Contact



P24 Contact

Crimp Tool (Daniels M300BT: p/n 150793): While this is a preferred crimper, any standard crimper should work.



Crimp Tool Locator (Daniels UH2-5: p/n 150794): optional crimper accessory to assist in locating contact at proper depth for crimping. Attaches to Daniels M300BT crimper.



Contact Removal Tool for P40 connectors (p/n 150797):

This tool is used to disassemble a P40 connector and is needed only to rework a cable. See this [website link](#) for a detailed video on how to use the tool.

Note: P24 connectors can be disassembled with fine needle nose pliers or a similar tool. No special tool is required.



Connector Ordering Guide

Connectors (Purchased Separately):	Part Number:	Panels where used
P40 Connector Kit: 8-6 AWG, Plug, Retainer, 2x Contacts	150326	240GT54 (TPA positions) 250TPA08 300CB08
P40 Connector Kit: 12-10 AWG, Plug, Retainer, 2x Contacts	150325	
P40 Replacement Contact: TPA, 8-6 AWG, Single Contact	150333	
P40 Replacement Contact: TPA, 12-10 AWG, Single Contact	150334	
P24 Connector Kit: GMT, 12-10 AWG, Plug, Retainer, 2x Contacts	150336	240GT54 (GMT positions) 125GMT10 125GMT15
P24 Connector Kit: GMT, 14-12 AWG, Plug, Retainer, 2x Contacts	150342	
P24 Connector Kit: 16-14 AWG, Plug, Retainer, 2x Contacts	152029	
P24 Connector Kit: 20-18 AWG, Plug, Retainer, 2x Contacts	152030	
P24 Replacement Contact: GMT, 12-10 AWG, Single Contact	150343	
P24 Replacement Contact: GMT, 14-12 AWG, Single Contact	150344	
Kit of 5 P24 Connectors: 12-10 AWG, Plug, Retainer, Contacts	150336-5	
Kit of 5 P24 Connectors: 14-12 AWG, Plug, Retainer, Contacts	150342-5	
Kit of 5 P24 Connectors: 16-14 AWG, Plug, Retainer, Contacts	152029-5	
Kit of 5 P24 Connectors: 20-18 AWG, Plug, Retainer, Contacts	152030-5	
Crimp Tool: 14-6 AWG, Daniels, M300BT	150793	
Crimp Tool Locator: Universal, Daniels, UH2-5	150794	
Contact Removal Tool: P40 Connector	150797	To dis-assemble P40 connector if needed for service

Daniels M300BT crimper settings

Terminal	Wire Gauge	M300BT Crimper Setting
4.0mm, 8-6AWG	6AWG	#7
	8AWG	#6
4.0mm, 12-10AWG	10AWG	#5
	12AWG	#4
2.4mm, 12-10AWG	10AWG	#4
	12AWG	#3
2.4mm, 14-12AWG	12AWG	#3
	14AWG	#2

Power Cables Customized for your application:

Amphenol knows that speed and flexibility are important for new deployments, whether in the field, or in a centralized rack assembly facility. That is why, in addition to the flexibility of field-installable connectors, we offer power cables customized for your application.



2.4mm GMT cable



4.0mm TPA-Circuit Breaker cable

To meet your specific requirements, cables are built to order. When requesting a quotation, please be prepared with the following details to ensure an accurate quote:

- a. Connector size
 - i. 4.0mm for TPA/Circuit Breaker
 - ii. 2.4mm for GMT
- b. Wire gauge
- c. Wire type
- d. Wire color
 - i. for BATTERY
 - ii. for RETURN
- e. Length



Typical 3-foot cable assembly

We currently offer TelcoFlex® L2 and Exane wire types, in the following colors. If you require other wire types or colors, contact us.

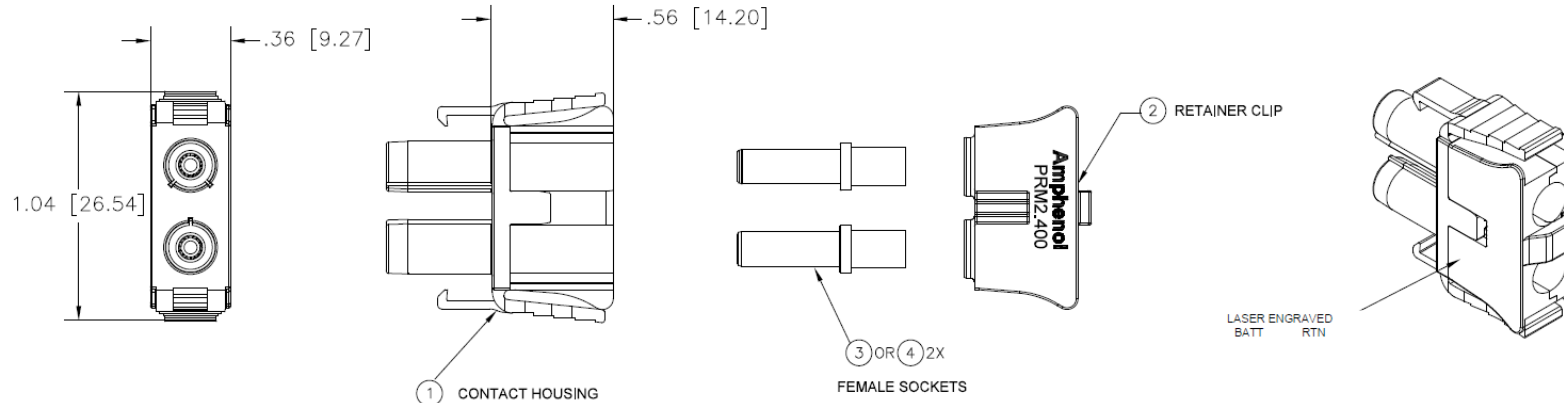
Telcoflex® L2 is available in 6, 8, 10, 12 gauge (for the 4mm connector) and 10, 12, 14 gauge (for the 2.4mm connector), and in these colors:

Red, Blue, Black, Grey, Red w/trace, Black w/trace, Grey w/trace

Exane® is available in 6, 8, 10, 12 gauge (for the 4mm connector) and 10, 12, 14 gauge (for the 2.4mm connector), and in these colors

Grey, Grey w/trace

REVISIONS					
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A1	-	INITIAL RELEASE	4JAN20	TZ	-

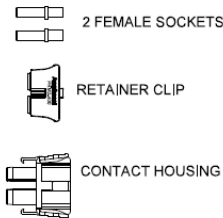


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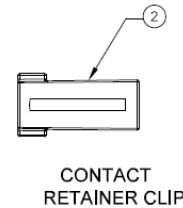
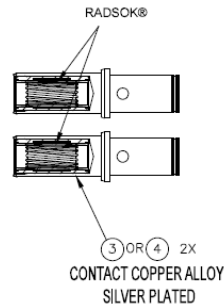
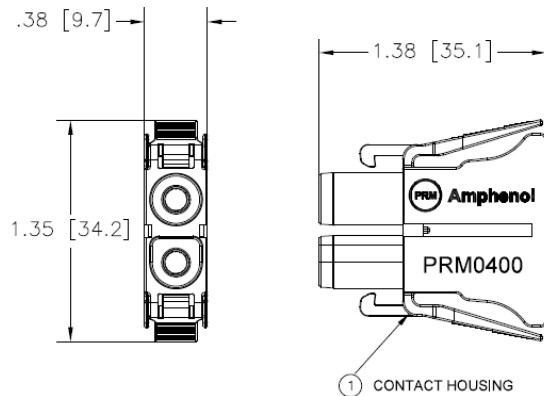
- 1) CONTACT BARREL RANGE: 10AWG TO 14AWG
- 2) MAX INSULATION SIZE: .216 (5.5MM)
- 3) RECOMMENDED CRIMP TOOLS:
HAND CRIMPER: DANIELS M300BT
UNIVERSAL POSITIONER: UH2-5
- 4) MATERIALS:
HOUSING BODY: GF PA 6/6
CONTACT: COPPER ALLOY / SILVER PLATED WITH RADSOK® TECHNOLOGY
- 5) ELECTRICAL DATA:
a) CURRENT (MAX): SEE CHART
b) VOLTAGE (MAX): 250V DC
- 6) TECHNICAL DATA:
a) TEMPERATURE RANGE: -40°C TO 125°C
b) MATING CYCLES: >500
- 7) RoHS COMPLIANT
- 8) UL 94 V-0 FLAME RATING
- 9) INSTALLATION INSTRUCTIONS:
WWW.AMPHENOL-SINE.COM/PDF/PRM2400-PLG.PDF

PART NUMBER	CONTACT P/N	WIRE AWG (mm²)	US UL	CUL
150342	150344	14 AWG (2.5mm²)	20A DC	15A DC
		12 AWG (4mm²)	30A DC	25A DC
150336	150343	12 AWG (4mm²)	30A DC	25A DC
		10 AWG (6mm²)	32A DC	32A DC

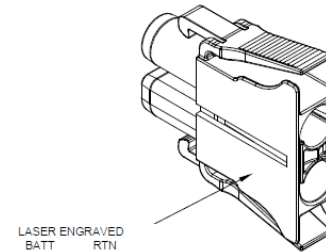
KIT CONTAINS



UNLESS OTHERWISE SPECIFIED			SIGNATURES		DATE
1) All dimensions are in metric (mm).			DRAWN:	TZ	1JAN20
2) Tolerances are as follows:			CHECKED:	RC	2FEB20
1 PL DEC ±0.30			ENGINEER:	TZ	
2 PL DEC ±0.15			APPROVAL:	TZ	3MAR20
3 PL DEC ±0.08			CUSTOMER:		
3) Note reference =			THIS DRAWING IS SUPPLIED FOR INFORMATION ONLY. DESIGN FEATURES, SPECIFICATIONS AND PERFORMANCE DATA SHOWN HEREON ARE THE PROPERTY OF THE AMPHENOL CORPORATION. NO RIGHTS OF REPRODUCTION ARE IMPLIED. ALL DIMENSIONS ARE SUBJECT TO NORMAL MANUFACTURING VARIATIONS.		
MATERIAL SPECIFICATIONS:			SIZE:	B	C-
PROCESS SPECIFICATIONS:			TYPE:		
NEXT ASSY:			SCALE:	NONE	
					REVISION
			Sine Systems - www.amphenol-sine.com 44724 Morley Drive Clinton Township, MI 48036		A1
			PRM SERIES™ FEMALE, PLUG SIDE 2.4MM		
			SHEET 1 OF 1		



CONTACT
RETAINER CLIP



REVISIONS					
REV	ECD	DESCRIPTION	DATE	BY	APPR
A1	-	INITIAL RELEASE	4JAN20	TZ	-

NOTES:

- 1) CONTACT BARREL RANGE: 10-12AWG, 6-10AWG
- 2) MAX INSULATION SIZE: .315 (8MM)
- 3) RECOMMENDED CRIMP TOOLS:
HAND CRIMPER: DANIELS M300BT
UNIVERSAL POSITIONER: UH2-5
- 4) EXTRACTION TOOL 150797
- 5) MATERIALS:
HOUSING BODY: GF PA 6/6
CONTACT: COPPER ALLOY / SILVER PLATED
WITH RADSOK® TECHNOLOGY
- 6) ELECTRICAL DATA:
a) CURRENT (MAX): SEE CHART
b) VOLTAGE (MAX): 250V DC
- 7) TECHNICAL DATA:
a) TEMPERATURE RANGE: -40°C TO 125°C
b) MATING CYCLES: >500
- 8) RoHS COMPLIANT
- 9) UL 94 V-0 FLAME RATING
- 10) INSTALLATION INSTRUCTIONS:
WWW.AMPHENOL-SINE.COM/PDF/PRM0400-PLG.PDF

KIT CONTAINS

2 CONTACTS



CONTACT
RETAINER CLIP



CONTACT HOUSING



PART NUMBER	CONTACT P/N	WIRE AWG (mm²)	US UL	CUL
150325	150334	12 AWG (4mm²)	30A DC	30A DC
		10 AWG (6mm²)	43A DC	43A DC
150326	150333	8 AWG (10mm²)	57A DC	57A DC
		6 AWG (16mm²)	70A DC	60A DC

UNLESS OTHERWISE SPECIFIED		SIGNATURES		DATE
1) All dimensions are in metric (mm).				
2) Tolerances are as follows:				
1 PL DEC ±0.30 1) Fractions ±1/64				
2 PL DEC ±0.15 Angles ±1°				
3 PL DEC ±0.08				
3) Note reference =				
MATERIAL SPECIFICATIONS:		DRAWN:		TZ
SEE NOTES		CHECKED:		RC
		ENGINEER:		TZ
		APPROVAL:		TZ
				3MAR20
PROCESS SPECIFICATIONS:		CUSTOMER:		
NEXT ASSY:		THIS DRAWING IS SUPPLIED FOR INFORMATION ONLY. DESIGN FEATURES, SPECIFICATIONS AND PERFORMANCE DATA SHOWN HEREON ARE THE PROPERTY OF THE AMPHENOL CORPORATION. NO RIGHTS OF REPRODUCTION ARE IMPLIED. ALL DIMENSIONS ARE SUBJECT TO NORMAL MANUFACTURING VARIATIONS.		
		SIZE:	TYPE:	DWG NO:
		B	C-	
		SCALE:	NONE	
		SHEET 1 OF 1		REVISION A1

Amphenol

Sine Systems - www.amphenol-sine.com
44724 Morley Drive
Clinton Township, MI 48036

PRM SERIES™
FEMALE, PLUG SIDE 4MM