

# EPIC<sup>®</sup> Rectangular Connectors

## MC Series

The MC Modular Series connector can be custom configured to meet application requirements by combining a variety of standard plug-and-play modules within various size support frames. Configurations include contacts for power and control, thermocouple contacts, data modules for Profibus and Ethernet, and pneumatic modules.



## TECHNICAL DATA

### Inserts:

**Number of Contacts:** 2 - 280 (+PE)  
**Rated Voltage:** VDE: 30 - 1000V  
 UL: 100 - 600V  
 CSA: 100 - 600V

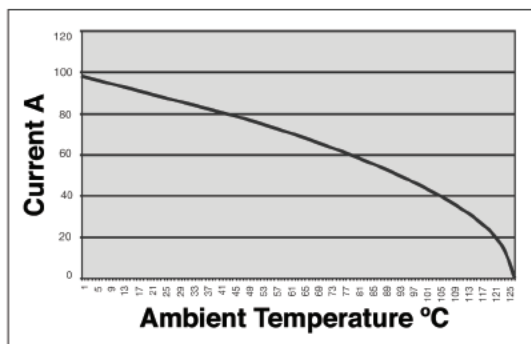
**Rated Current:** VDE: 1 - 82A  
 UL: 4 - 82A  
 CSA: 4 - 82A

**Pollution Level:** 3

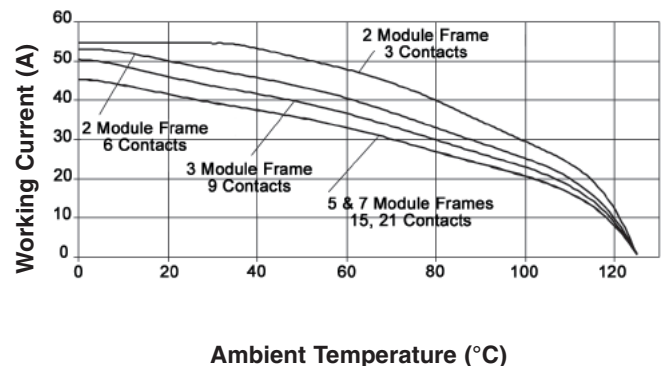
**Temperature Range:** -40°C to 125°C  
**Termination Type:** Crimp termination: .06 - 10 mm<sup>2</sup>, AWG: 30 - 6 AWG  
 Cage Clamp: 0.5 - 2.5 mm<sup>2</sup>, AWG: 20 - 14  
 Screw: 4 - 25 mm<sup>2</sup>, AWG: 12 - 4  
**Contacts:** Copper alloy, silver plated/ gold plated  
**Contact Resistance:** <1mOhm - <5mOhm  
**Dimension transient:** 1.5 - 8kV, depending on module  
**Mating Cycles:** 100 (higher mating cycles depends on the application)

## TECHNICAL DATA: DERATING CURVES

**2 CONTACT MODULE:**  
 4 - 25 mm<sup>2</sup> (12 - 4 AWG)



**3 MODULE MACHINE CONTACTS:**  
 6 mm<sup>2</sup> (10 AWG)

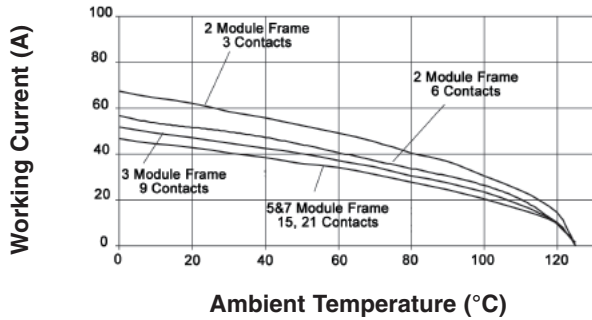


# EPIC<sup>®</sup> Rectangular Connectors

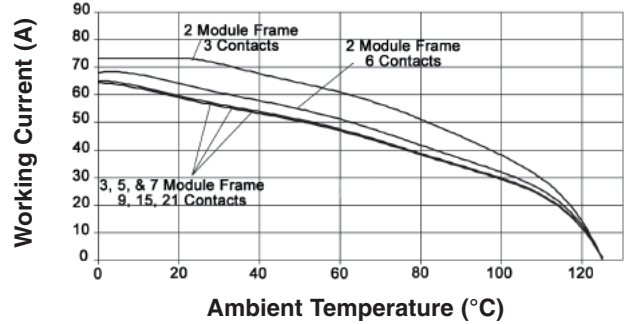
MC Series

## TECHNICAL DATA: DERATING CURVES

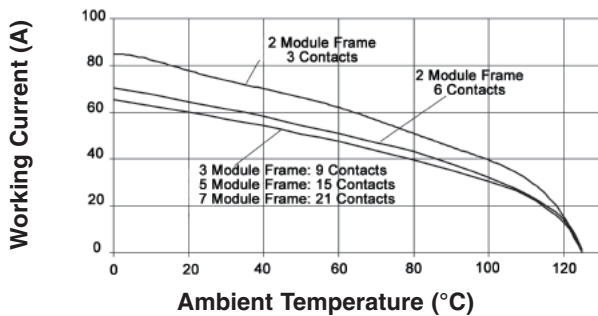
**3 MODULE HIGH VOLTAGE  
MACHINE CONTACTS: 6 mm<sup>2</sup> (10 AWG)**



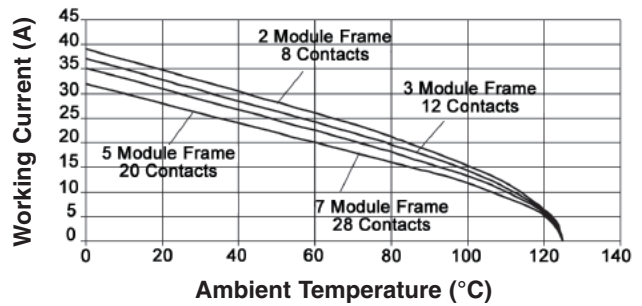
**3 MODULE MACHINE CONTACTS:  
10 mm<sup>2</sup> (8 AWG)**



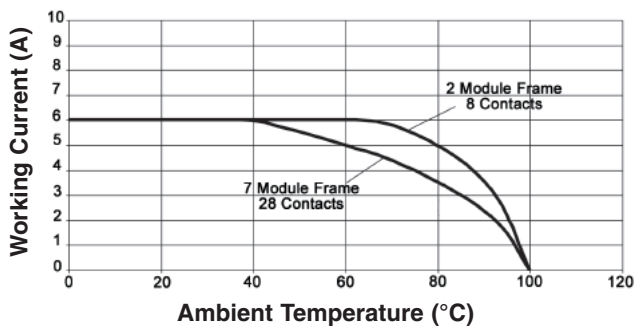
**3 MODULE HIGH VOLTAGE  
MACHINE CONTACTS: 10 mm<sup>2</sup> (8 AWG)**



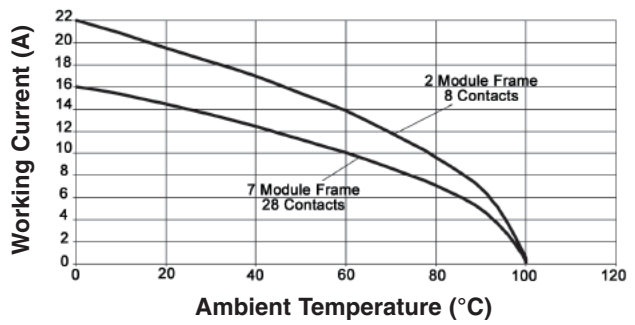
**4 MODULE MACHINE CONTACTS:  
4.0 mm<sup>2</sup> (12 AWG)**



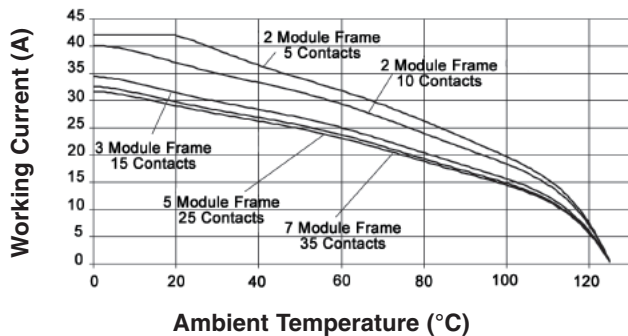
**4 MODULE CAGE CLAMP:  
0.5 mm<sup>2</sup> (20 AWG)**



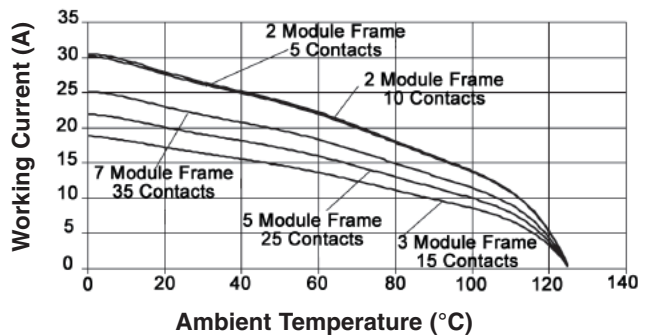
**4 MODULE MACHINE CONTACTS:  
2.5 mm<sup>2</sup> (14 AWG)**



**5 MODULE MACHINE CONTACTS:  
4 mm<sup>2</sup> (12 AWG)**



**5 MODULE MACHINE CONTACTS:  
2.5 mm<sup>2</sup> (14 AWG)**

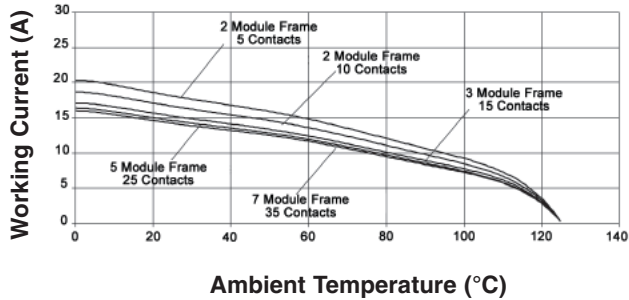


# EPIC<sup>®</sup> Rectangular Connectors

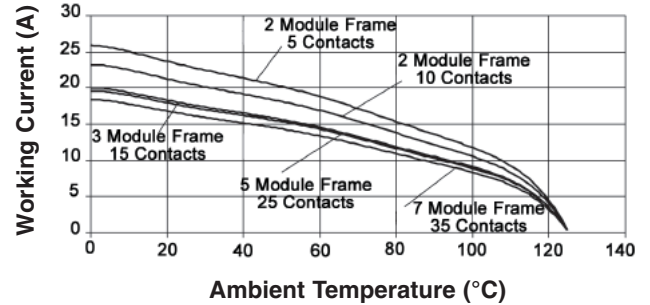
MC Series

## TECHNICAL DATA: DERATING CURVES

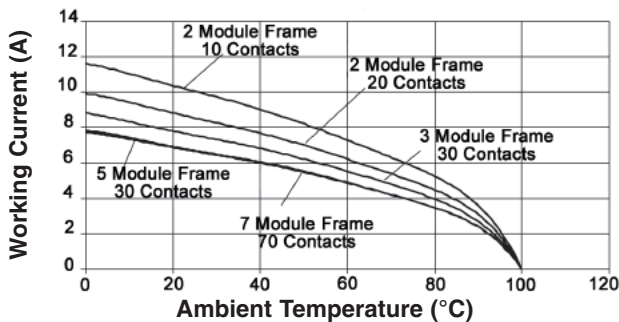
5 MODULE STAMPED CONTACTS:  
1.5 mm<sup>2</sup> (16 AWG)



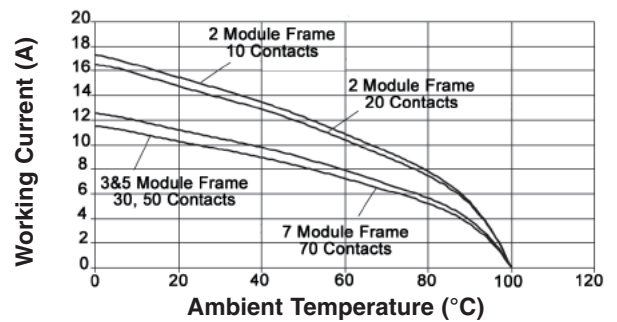
5 MODULE STAMPED CONTACTS:  
2.5 mm<sup>2</sup> (14 AWG)



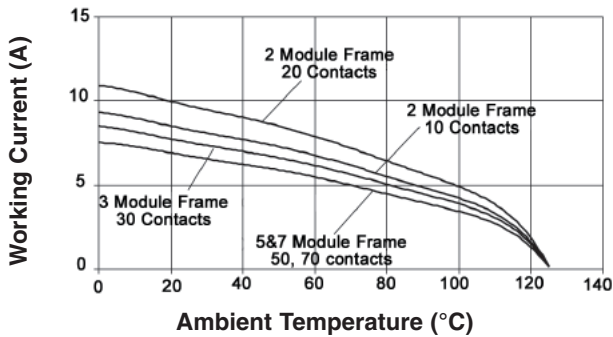
10 MODULE MACHINE CONTACTS:  
0.5 mm<sup>2</sup> (20 AWG)



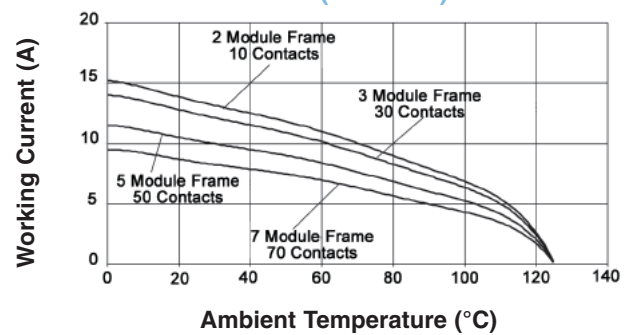
10 MODULE MACHINE CONTACTS:  
1.5 mm<sup>2</sup> (16 AWG)



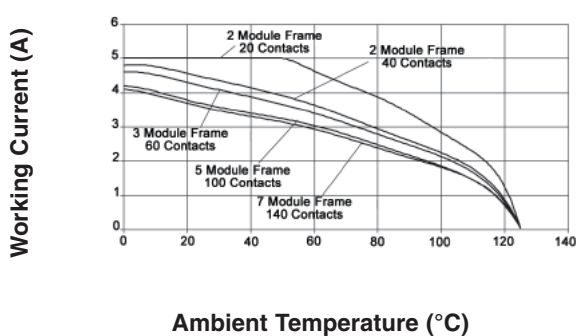
10 MODULE STAMPED CONTACTS:  
0.5 mm<sup>2</sup> (20 AWG)



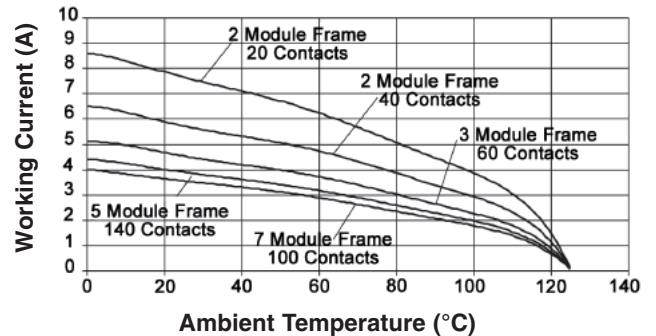
10 MODULE STAMPED CONTACTS:  
1.5 mm<sup>2</sup> (16 AWG)



20 MODULE STAMPED CONTACTS :  
0.25 mm<sup>2</sup> (24 AWG)



20 MODULE STAMPED CONTACTS:  
0.5 mm<sup>2</sup> (20 AWG)



# EPIC® Rectangular Connectors

MC Series

## CHOOSE YOUR MODULES

Modules	Plug	Receptacle	Rated Voltage	Rated Current	Page #
2 Contact Module: 2 Working Contacts	10344100	10345100	1000V	82A	331
2 Contact Module with ground	10344600	10345600	1000V	82A	331
3 Contact Coax Module	10399200	10399300	250V	-	332
3 Contact Module	10382000	10382100	630V	40A	333
3 Contact High Voltage Module	10399800	10399900	1000V	50A	334
4 Contact Module	10399000	10399100	630V	25A	335
4+PE Contact High Voltage Module	10383200	10383300	1000V	16A	336
5 Contact Module	10382200	10382300	400V	20A	337
10 Contact Module: Stamped & Formed	10383400	10383500	250V	10A	338
10 Contact Module: Machine Crimp	10382400	10382500	250V	10A	339
20 Contact Module	10383600	10383700	100V	4A	340
Dummy Module	10399400	10399500	-	-	341
4 Contact Cage Clamp Module	10399600	10399700	400V	14A	341
Profibus DP Module	10390400	10390500	30V	1A	341
Ethernet Module- RJ 45 Connectors + 4 Power Contacts	10344300	10345300	600V	10A	342
Universal Bus Modules	10390600	10390700	30V	1A	342
Pneumatic Modules: 1 Contact with 2.5 mm Hose diameter	44424004	44424005	145psi	-	342
Pneumatic Modules: 1 Contact with 4.0 mm Hose diameter	44424006	44424007	145psi	-	342
Pneumatic Modules: 2 Contacts with 2.5 mm Hose diameter	44424008	44424009	145psi	-	342
Pneumatic Modules: 2 Contacts with 4.0 mm Hose diameter	44424010	44424011	145psi	-	342

## CHOOSE YOUR FRAME BASED ON THE NUMBER OF MODULES

Frames	For Plugs	For Receptacles	Corresponding Housing	Page #
Frames for 2 modules	10381000	10381100	HBE 6 Series	343
Frames for 3 modules	10381200	10381300	HBE 10 Series	343
Frames for 5 modules	10381400	10381500	HBE 16 Series	344
Frames for 7 modules	10381600	10381700	HBE 24 Series	344
Frames for 10 modules	10381400(2X)	10381500(2X)	HBE 32 Series	345
Frames for 14 modules	10381600(2X)	10381700(2X)	HBE 48 Series	346

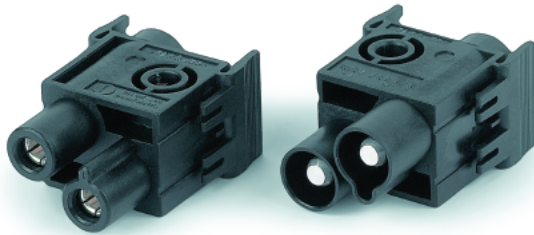
Modules snap into frame



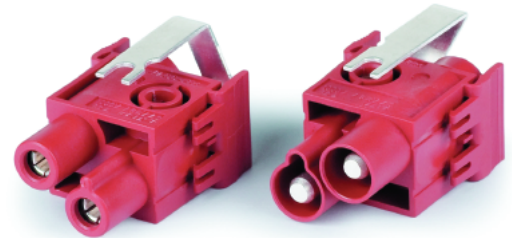
**Note:**  
Color of components may be different then shown.

### 2 CONTACT MODULES

#### 2 Working Contacts

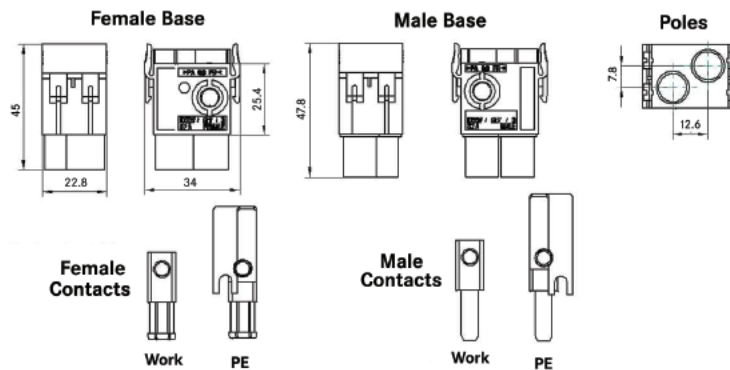


#### 1 Working Contact & 1 Ground



**Rated Voltage:**  
1000V

**Rated Current:**  
82A



All dimensions are in mm.

Description	Plug	Receptacle
2 Working Contacts	10344100	10345100
1 Working Contact & 1 Ground	10344600	10345600

### TECHNICAL DATA

**Termination Type:**                      mm<sup>2</sup>                      AWG

**Screw:**                                      4 - 25                      12 - 4

**Contacts:**

**Material:**                                    Basic material brass; 2μ Nickel and 2-3μ Silver (AG)

**Contact Material:**                        Silver plated

**Mating Cycles:**                            100 (higher mating cycles depending on the application)

**Contact Resistance:**                      1.5 -4 mΩ

### FEATURES

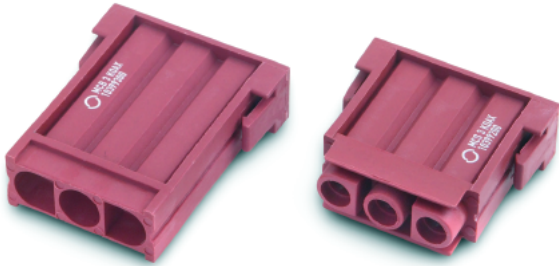
- The new module can be inserted into the standard EPIC® Modular Frames.
- The modules can be inserted or removed from the frame without a tool because of the snap hooks.
- These screw contact modules can be easily wired with a standard screwdriver.
- The flexibility of the modular series allows the arrangement of modules to fit requirements.
- This module takes up 2 slots in the modular frame.
- The high current modules require the usage of high profile HBE 16 and HBE 24 housings.

# EPIC® Rectangular Connectors



MC Series Plugs & Receptacles

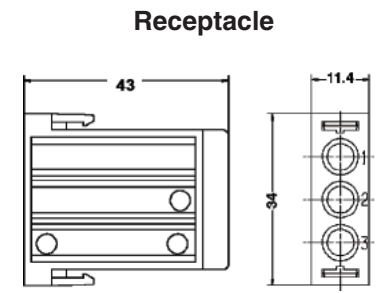
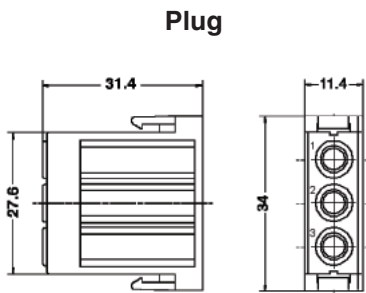
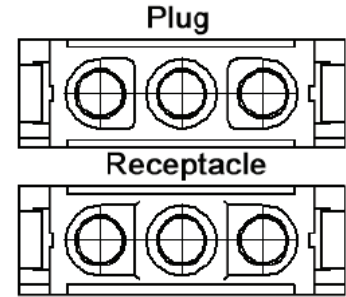
## 3 CONTACT COAX MODULES



**Rated Voltage:**  
250V

**Cable Sizes:**  
RG 58

**Impedance:**  
50 Ohm

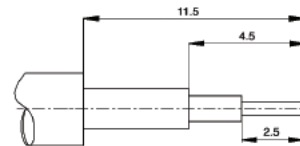


Plug	Receptacle
10399200	10399300

DIN 41612

Contacts Sold Separately

## COAX CONTACTS



Pin	Socket
11214200	11219200

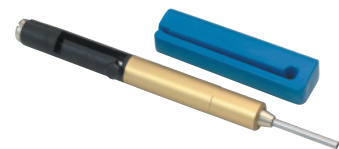
## TOOLS



**Locator**  
11147130



**Crimp Tool**  
11147000



**Removal Tool**  
11171100

# EPIC® Rectangular Connectors



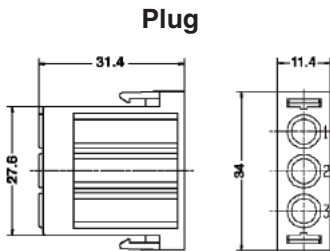
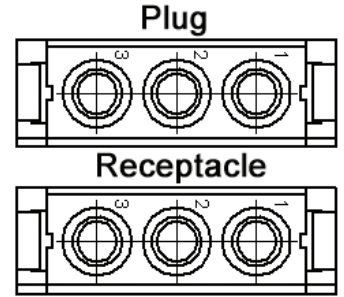
MC Series Plugs & Receptacles

## 3 CONTACT MODULES

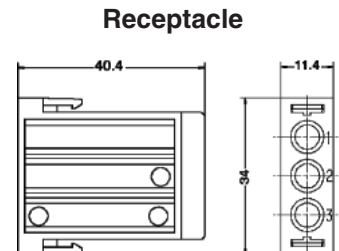


**Rated Voltage:**  
630V

**Rated Current:**  
40A

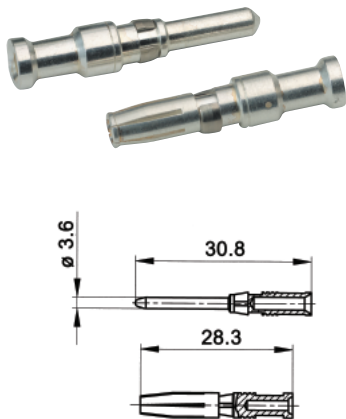


Plug	Receptacle
10382000	10382100



Contacts Sold Separately

## MACHINE CONTACTS: DIAMETER 3.6 MM



Bags of 100				
mm <sup>2</sup>	AWG	Silver		Stripping Length (mm)
		Pin	Socket	
1.5	16	1121070C	1121570C	10
2.5	14	1121060C	1121560C	10
4.0	12	1121000C	1121500C	10
6.0	10	1121010C	1121510C	10
10	8	1121020C	1121520C	10

Part number= 1 contact

## TOOLS



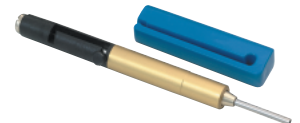
**Locator**  
11147210



**Crimp Dies**  
1.5 - 2.5: 11147110  
4.0 - 10: 11147120



**Crimp Tool**  
11147000



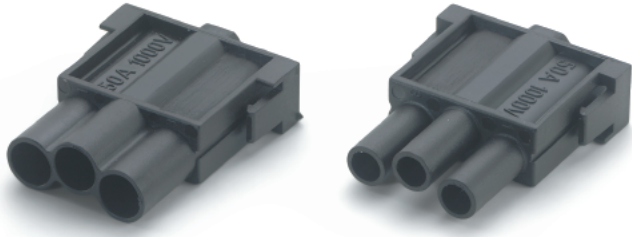
**Removal Tool**  
11171100

# EPIC® Rectangular Connectors



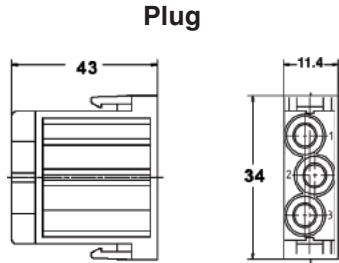
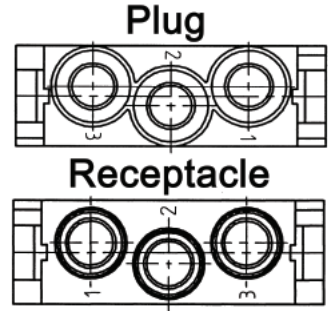
MC Series Plugs & Receptacles

## 3 CONTACT HIGH VOLTAGE MODULES

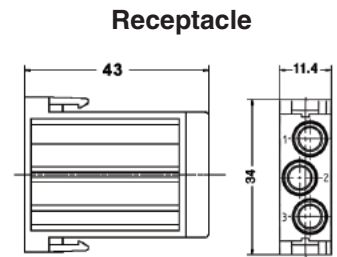


**Rated Voltage:**  
1000V

**Rated Current:**  
50A

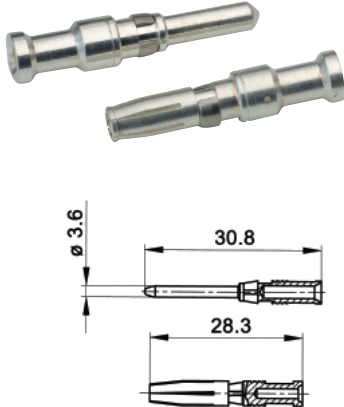


Plug	Receptacle
10399800	10399900



Contacts Sold Separately

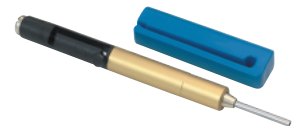
## MACHINE CONTACTS: DIAMETER 3.6 MM



Bags of 100				
mm <sup>2</sup>	AWG	Silver		Stripping Length (mm)
		Pin	Socket	
1.5	16	1121070C	1121570C	10
2.5	14	1121060C	1121560C	10
4.0	12	1121000C	1121500C	10
6.0	10	1121010C	1121510C	10
10	8	1121020C	1121520C	10

Part number= 1 contact

## TOOLS



**Locator**  
11147210

**Crimp Dies**  
1.5 - 2.5: 11147110  
4.0 - 10: 11147120

**Crimp Tool**  
11147000

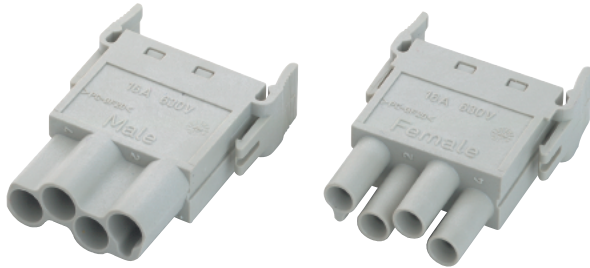
**Removal Tool**  
11171100

# EPIC® Rectangular Connectors



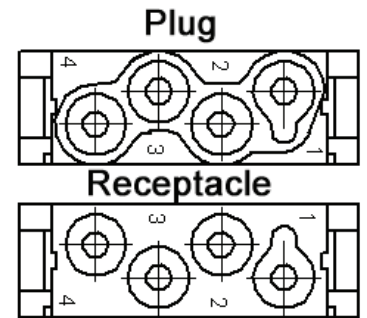
MC Series Plugs & Receptacles

## 4 CONTACT HE MODULES



**Rated Voltage:**  
630V

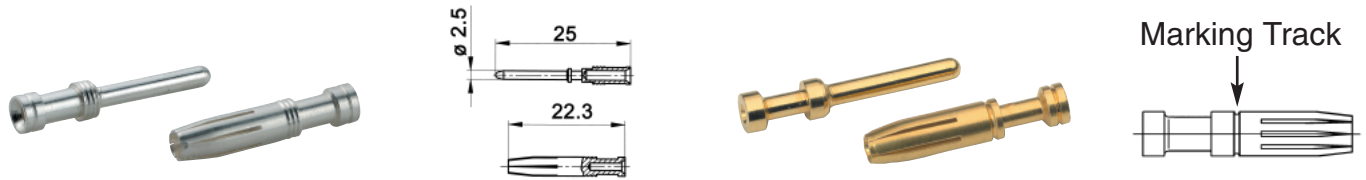
**Rated Current:**  
25A



Contacts Sold Separately

Plug	Receptacle
10399000	10399100

## MACHINE CONTACTS: DIAMETER 2.5 MM



Bags of 100							
mm <sup>2</sup>	AWG	Silver		Gold		Stripping Length (mm)	# of Marking Tracks
		Pin	Socket	Pin	Socket		
0.5	20	11190000	11195000	11192000	11197000	Pin=7.4, Socket =7.3	-
.75 - 1.0	18	11190100	11195100	11192100	11197100	Pin=7.4, Socket =7.3	1
1.5	16	11190200	11195200	11192200	11197200	Pin=7.4, Socket =7.3	2
2.5	14	11190300	11195300	-	-	Pin=7.4, Socket =7.3	3
4.0	12	11190400	11195400	-	-	Pin=7.4, Socket =7.3	-

Part number= 1 contact

## CRIMP TOOLS



**Crimp Tool**  
11147000



**Crimp Dies**  
11147100



**Locator**  
11147200



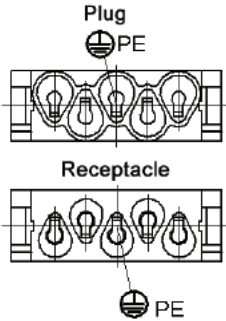
**Removal Tool**  
11182500

# EPIC® Rectangular Connectors



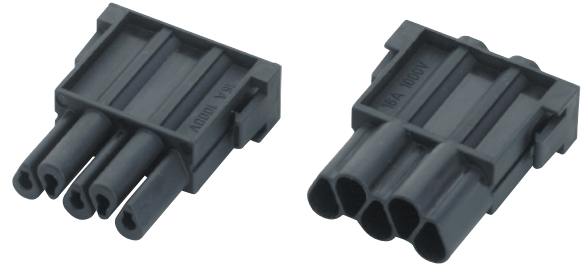
MC Series Plugs & Receptacles

## 4+PE CONTACT HIGH VOLTAGE MODULES



**Rated Voltage:**  
1000V

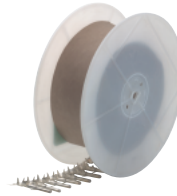
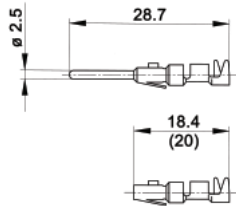
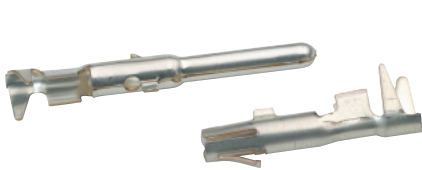
**Rated Current:**  
16A



Plug	Receptacle
10383200	10383300

Contacts Sold Separately

## STAMPED & FORMED CONTACTS: DIAMETER 2.5 MM



Reel feeds from the left.

Stripping Length:  
3.5 - 0.5

mm <sup>2</sup>	AWG	Bags of 100		Reels of 100		Reels of 200	
		Pin	Socket	Pin	Socket	Pin	Socket
0.5 - 1.5	20 - 16	11201000	11205000	-	-	11208000	11209000
1.5 - 2.5	16 - 14	11202000	11206000	11208500	11209500	-	-

Part number= 1 contact (bags) or 1 reel.

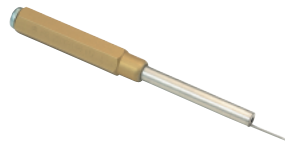
## TOOLS



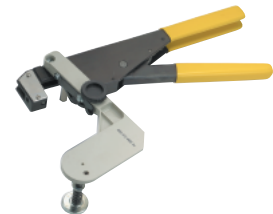
**Crimp Tool**  
11147000



**Locator**  
0.5 - 1.5: 11147300  
1.5 - 2.5: 11147310



**Removal Tool**  
11160000

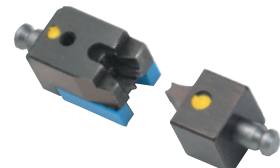


**Crimp Tool for Reel**  
11153500



**Crimp Dies**  
0.5 - 1.5: 11147180  
1.5 - 2.5: 11147190

**Crimp Dies for Reel:**  
0.5 - 1.5: 11153700  
1.5 - 2.5: 11153800



# EPIC® Rectangular Connectors



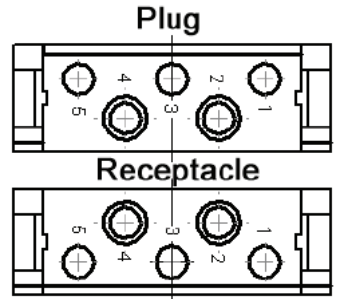
MC Series Plugs & Receptacles

## 5 CONTACT HIGH VOLTAGE MODULES



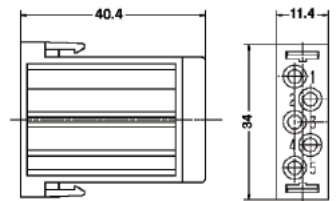
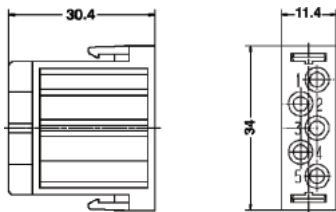
**Rated Voltage:**  
400V

**Rated Current:**  
20A



Plug

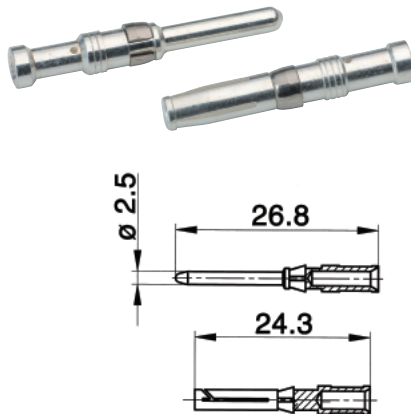
Receptacle



Plug	Receptacle
10382200	10382300

Contacts Sold Separately

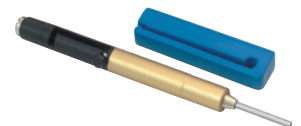
## MACHINE CONTACTS: DIAMETER 2.5 MM



Bags of 100					
mm <sup>2</sup>	AWG	Silver		Stripping Length (mm)	# of Marking Tracks
		Pin	Socket		
0.5	20	1121300C	1121800C	7.8	-
0.75 - 1.0	18	1121310C	1121810C	7.8	1
1.5	16	1121320C	1121820C	7.8	2
2.5	14	1121330C	1121830C	7.8	3
4.0	12	1121340C	1121840C	7.8	-

Part number= 1 contact

## CRIMP TOOLS



**Crimp Tool**  
11147000

**Crimp Dies**  
11147100

**Locator**  
11147200

**Removal Tool**  
11171000

# EPIC® Rectangular Connectors



MC Series Plugs & Receptacles

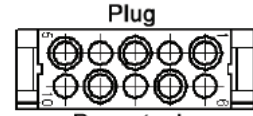
## 10 CONTACT MODULES: STAMPED & FORMED CONTACTS



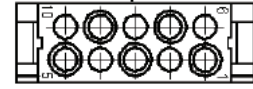
Plug

Rated Voltage:  
250V

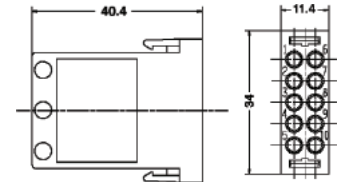
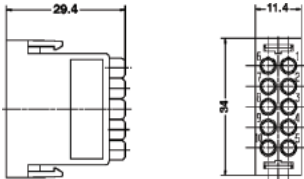
Rated Current:  
10A



Receptacle



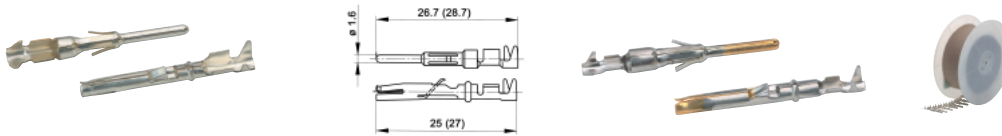
Receptacle



Plug	Receptacle
10383400	10383500

Contacts Sold Separately

## STAMPED & FORMED CONTACTS: DIAMETER 1.6 MM



mm <sup>2</sup>	Stripping Length (mm)
0.14 - 0.5	2.5 - 0.5
0.5 - 1.5	3.5 - 0.5
1.5 - 2.5	3.5 - 0.5

mm <sup>2</sup>	AWG	Bags of 100: Silver		Bags of 100: Gold		Reel of 100: Silver Left Hand Feed		Reel of 200: Silver Left Hand Feed	
		Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket
0.14 - 0.5	26 - 20	11241100	11231100	11243100	11233100	-	-	11240700	11230700
0.5 - 1.5	20 - 16	11221000	11236100	11221300	11238100	-	-	11220700	11235700
1.5 - 2.5	16 - 14	11223500	11228500	-	-	11223000	11228000	-	-

mm <sup>2</sup>	AWG	Reel of 2000: Right Hand Feed- Silver		Reel of 2000: Right Hand Feed- Gold		Reel of 2000: Left Hand Feed- Silver		Reel of 2000: Left Hand Feed- Silver	
		Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket
0.14 - 0.5	26 - 20	11240000	11230000	-	-	11240400	11230400	11230500	11240500
0.5 - 1.5	20 - 16	11220000	11235000	11220100	11235200	11226000	11226500	-	-
1.5 - 2.5	16 - 14	-	-	-	-	11222700	11227700	-	-

Part number= 1 contact (bags) or 1 reel.

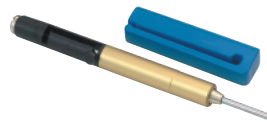
## CRIMP TOOLS



Crimp Tool  
11147000



Locator  
11147300



Removal Tool: 11161000



Crimp Tool for Reel:  
11153500

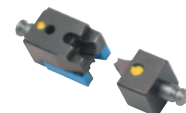


Crimp Dies

0.14-0.5:	11147170
0.5-1.5:	11147180
1.5-2.5:	11147190

Crimp Dies for Reel:

0.14-0.5:	11153600
0.5-1.5:	11153700
1.5-2.5:	11153800



# EPIC® Rectangular Connectors



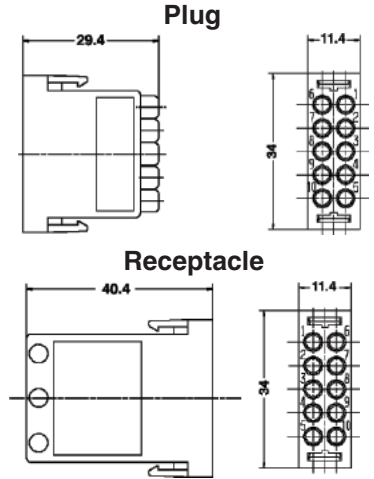
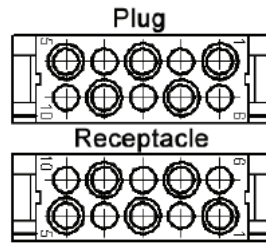
MC Series Plugs & Receptacles

## 10 CONTACT MODULES: MACHINE CRIMP CONTACTS



Contacts Sold Separately

Plug	Receptacle
10382400	10382500

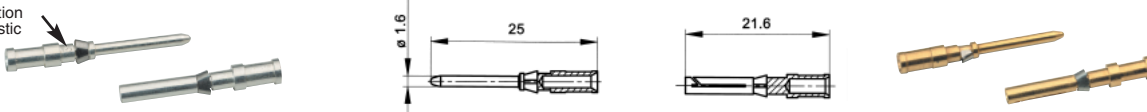


**Rated Voltage:**  
250V

**Rated Current:**  
10A

## MACHINE CONTACTS: DIAMETER 1.6 MM

Cross section characteristic



Bags of 100

mm <sup>2</sup>	AWG	Silver		Gold		Stripping Length (mm)	# of Marking Tracks
		Pin	Socket	Pin	Socket		
0.14 - 0.37	26 - 22	13162000	13163000	13162500	13163500	8	1
0.5	20	13162100	13163100	13162600	13163600	8	2
0.75 - 1.0	18	13162200	13163200	13162700	13163700	8	3
1.5	16	13162300	13163300	13162800	13163800	8	4
2.5	14	13162400	13163400	13162900	13163900	5.8	5

Part number= 1 contact

## CRIMP TOOLS



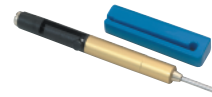
**Crimp Tool**  
11147000



**Crimp Dies**  
11147100



**Locator**  
11147200



**Removal Tool:**  
11161000

## FIBER OPTIC CONTACTS & TOOLS



Pin	Socket
11214100	11219100

**Fiber Optic Assembly Tool Set**  
11184700

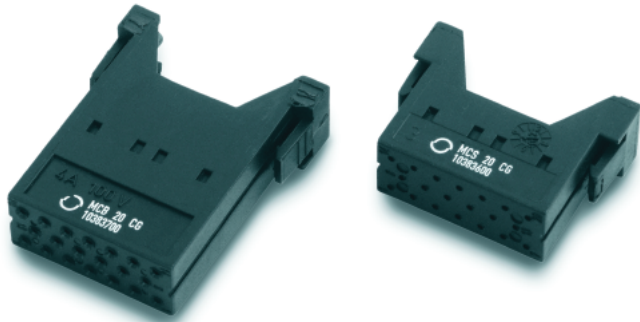


# EPIC® Rectangular Connectors



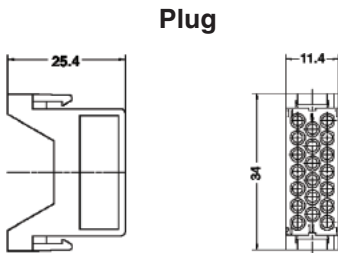
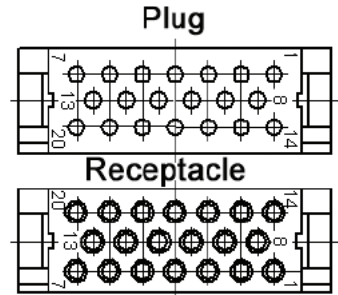
MC Series Plugs & Receptacles

## 20 CONTACT MODULES



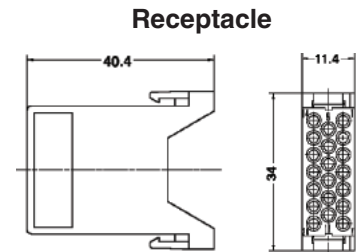
**Rated Voltage:**  
100V

**Rated Current:**  
4A



Plug	Receptacle
10383600	10383700

Contacts Sold Separately



## STAMPED & FORMED CONTACTS: DIAMETER 1.0 MM

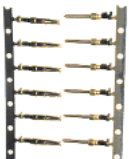


Reel of 500				
mm <sup>2</sup>	AWG	Gold		Stripping Length
		Pin	Socket	
.08 - 0.2	28 - 26	44429013	44429009	2.5 - 0.5
0.2 - .52	26 - 20	44429014	44429010	2.5 - 0.5

Reel feeds from the left

\* This conversion to AWG is approximate.

## THERMOCOUPLE CONTACTS



mm <sup>2</sup>	AWG	Strip of 25				Material	Polarity	Color Code	Stripping Length
		Type K		Type J					
		Pin	Socket	Pin	Socket				
0.25 - .52	24-20	TC-CH-P	TC-CH-S	-	-	Chromel	+	White	2.5 - 0.5
		-	-	TC-IR-P	TC-IR-S	Iron	+	Black	2.5 - 0.5
		TC-AL-P	TC-AL-S	-	-	Alumel	-	Green	2.5 - 0.5
		-	-	TC-CO-P	TC-CO-S	Constantan	-	Yellow	2.5 - 0.5

## TOOLS



**Crimp Tool**  
11158400



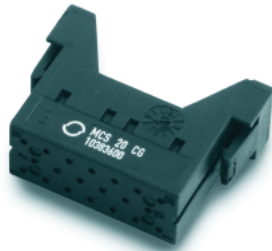
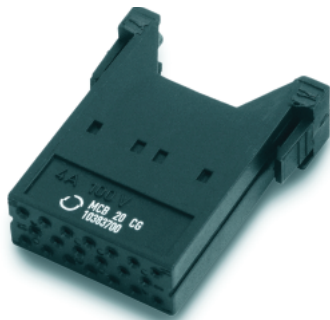
**Removal Tool**  
11132500

# EPIC® Rectangular Connectors



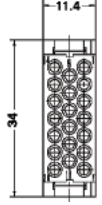
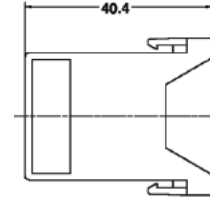
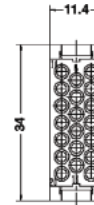
MC Series Plugs & Receptacles

## DUMMY MODULES: 0 CONTACTS



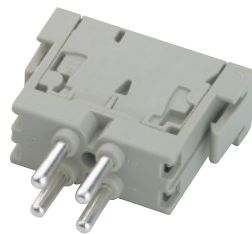
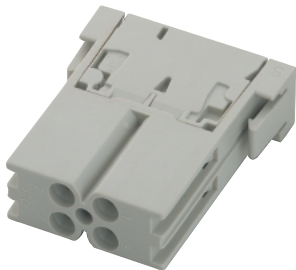
Plug

Receptacle



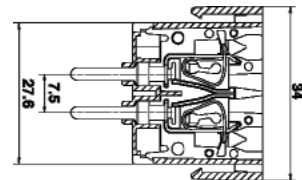
Plug	Receptacle
10399400	10399500

## CAGE CLAMP MODULES: 4 CONTACTS



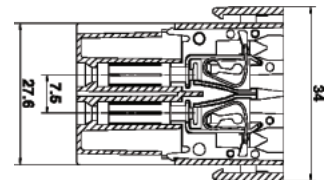
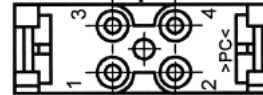
Plug

Plug



Receptacle

Receptacle



**Rated Voltage:**  
400V

**Rated Current:**  
14A

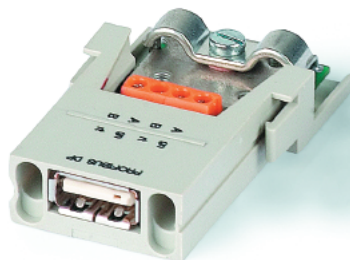
Plug	Receptacle
10399600	10399700

**Wire Gauge**

Single Wire: 4.0 mm<sup>2</sup>  
Fine Wire: 2.5 mm<sup>2</sup>



## PROFIBUS DP MODULES: 2 CONTACTS & SHIELD

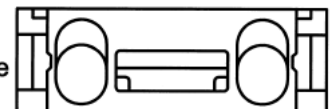
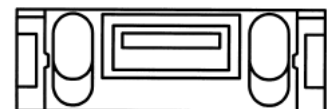


**Rated Voltage:**  
30V

**Rated Current:**  
1A

Plug

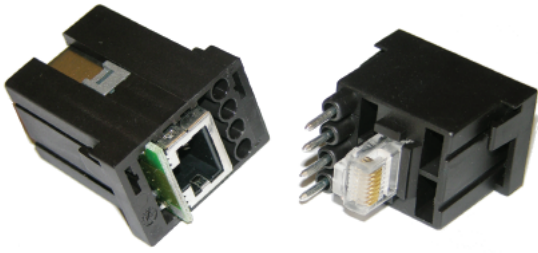
Receptacle



Mount in High Profile Housings only.

Plug	Receptacle
10390400	10390500

### ETHERNET MODULE- RJ 45 Connectors + 4 Power Contacts



**Power Contacts:**

**Rated Voltage:**  
600V

**Rated Current:**  
10A

Occupies two module positions in frame. Uses standard HD Series Machined Crimp Contacts for Power. RJ 45 plug not included.

RJ 45 connector part number- CE6326

Plug	Receptacle
10344300	10345300

### EPIC® Universal Bus Modules



Technical Data:

- Screw Terminated
- Transfer rate max. 1.5 MB/s for bus feed through
- Rated Voltage: 30V
- Rated Current: 1A

Plug: 4+Shield	Receptacle: 4+Shield
10390600	10390700

### EPIC® Pneumatic Modules

These modules are used for easy and fast connection of compressed air hoses. Applications include machine building, mini pneumatics, measurement and control technology.

Technical Data:

- Available with 1 or 2 Connector Pins
- For compressed air hoses with inner diameter of 2.5 mm or 4 mm. Outer diameter max. 8.0 mm
- Female Version has built in blocking valve
- Air pressure: Max. 10 bar (145 psi)
- Temperature Range: -20°C to 100°C



Part Number	Description	Contacts	Hose Diameter
44424004	Male	1	2.5 mm
44424005	Female with built in valve	1	2.5 mm
44424006	Male	1	4.0 mm
44424007	Female with built in valve	1	4.0 mm
44424008	Male	2	2.5 mm
44424009	Female with built in valve	2	2.5 mm
44424010	Male	2	4.0 mm
44424011	Female with built in valve	2	4.0 mm