Ethernet Series

Ethernet Series

Ethernet Series Etherplug Cordsets

PVC & PUR Cable ❖ 8 Pole

PVC Version					
Face View of Male	**# of Poles**	**Wire AWG Rating**	**Length**	**Part Number**	
				Male	**Female**
	8	24 60V 2A	2M 5M 10M	MDE45-8MP-2M MDE45-8MP-5M MDE45-8MP-10M	MDE45-8FP-2M MDE45-8FP-5M MDE45-8FP-10M

Polyurethane Version					
Face View of Male	**# of Poles**	**Wire AWG Rating**	**Length**	**Part Number**	
				Male	**Female**
	8	24 60V 2A	2M 5M 10M	MDE45P-8MP-2M MDE45P-8MP-5M MDE45P-8MP-10M	MDE45P-8FP-2M MDE45P-8FP-5M MDE45P-8FP-10M

For Cross-Over Color Code, add a "-CC" suffix (e.g. MDE45-8MP-2M-CC). Other cable lengths are available. Please consult the factory.

Specifications:

Body:	Oil Resistant Black PVC
	Yellow PUR
Insulator:	Polyamide
Contacts:	Copper Alloy with Gold Plating
Coupling Nut:	Nickel Plated Brass
Cable:	See Page 121 for specs.
Protection:	IP 67
Approvals:	U.S.: UL Recognized
	Canada: C-UL Recognized

Female Straight
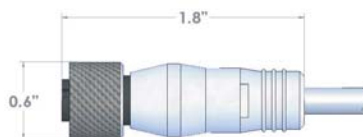
Male Straight
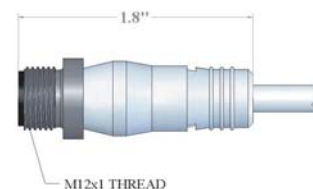
Mencom Standard Cable Color Code
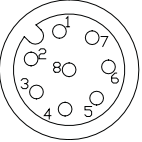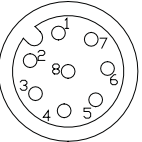
Micro	Color	Micro
6 4	White/Orange Orange	6 4
1 7	White/Blue Blue	1 7
5 8	White/Green Green	5 8
2 3	White/Brown Brown	2 3

Cross-Over Cable Color Code

Micro	Color	Micro
6 4	White/Orange Orange	5 8
1 7	White/Blue Blue	1 7
5 8	White/Green Green	6 4
2 3	White/Brown Brown	2 3

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Ethernet Series

Ethernet Series Etherplug Extension Cables

## PVC & PUR Cable ❖ Male to Male ❖ Male to Female

PVC Version					
Face View of Male	**# of Poles**	**Wire AWG Rating**	**Length**	**Part Number**	
				Male to Male	**Male to Female**
	8	24 60V 2A	2M 5M 10M	MDE45-8MMP-2M MDE45-8MMP-5M MDE45-8MMP-10M	MDE45-8MFP-2M MDE45-8MFP-5M MDE45-8MFP-10M

Polyurethane Version					
Face View of Male	**# of Poles**	**Wire AWG Rating**	**Length**	**Part Number**	
				Male to Male	**Male to Female**
	8	24 60V 2A	2M 5M 10M	MDE45P-8MMP-2M MDE45P-8MMP-5M MDE45P-8MMP-10M	MDE45P-8MFP-2M MDE45P-8MFP-5M MDE45P-8MFP-10M

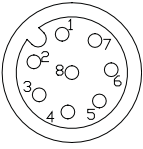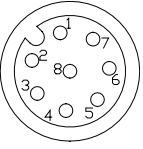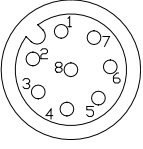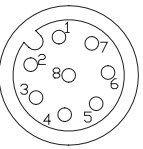Other cable lengths are available. Please consult the factory.

Male to Male

Female to Male

109
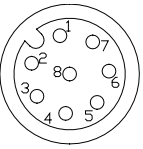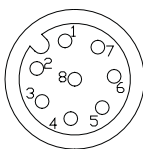
Mencom Corporation   TEL: 770-534-4585   www.mencom.com
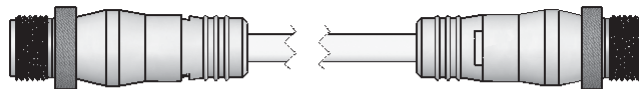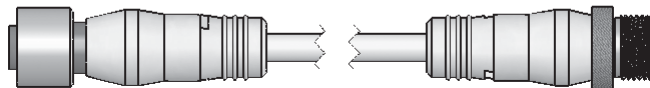
Ethernet Series Etherplug Receptacles

1/2″-14 NPT & 1/4″-18 NPT Threads ❖ PG Threads ❖ Metric Threads

Etherplug Receptacles with 12" Leads

Face View of Male	# of Poles	Wire AWG Rating	Part Number		Thread Type
			Male Receptacle	**Female Receptacle**	
	8	24 60V 2A	MDE45-8MR-4 MDE45-8MR-2 MDE45-8MR-PG9 MDE45-8MR-M16 MDE45-8MR-M20	MDE45-8FR-4 MDE45-8FR-2 MDE45-8FR-PG9 MDE45-8FR--M16 MDE45-8FR--M20	**1/4" - 18 NPT** **1/2" - 14 NPT** **PG 9** **M16 x 1.5** **M20 x 1.5**

Etherplug Receptacles with Cat 5 Cable

Face View of Male	# of Poles	Wire AWG Rating	Length	Part Number		Thread Type
				Male Receptacle	**Female Receptacle**	
	8	24 60V 2A	2M 5M 10M	MDE45-8MR-4-2M MDE45-8MR-4-5M MDE45-8MR-4-10M	MDE45-8FR-4-2M MDE45-8FR-4-5M MDE45-8FR-4-10M	**1/4" - 18 NPT**
	8	24 60V 2A	2M 5M 10M	MDE45-8MR-2-2M MDE45-8MR-2-5M MDE45-8MR-2-10M	MDE45-8FR-2-2M MDE45-8FR-2-5M MDE45-8FR-2-10M	**1/2" - 14 NPT**
	8	24 60V 2A	2M 5M 10M	MDE45-8MR-PG9-2M MDE45-8MR-PG9-5M MDE45-8MR-PG9-10M	MDE45-8FR-PG9-2M MDE45-8FR-PG9-5M MDE45-8FR-PG9-10M	**PG 9**
	8	24 60V 2A	2M 5M 10M	MDE45-8MR-M16-2M MDE45-8MR-M16-5M MDE45-8MR-M16-10M	MDE45-8FR--M16-2M MDE45-8FR--M16-5M MDE45-8FR--M16-10M	**M16 x 1.5**
	8	24 60V 2A	2M 5M 10M	MDE45-8MR-M20-2M MDE45-8MR-M20-5M MDE45-8MR-M20-10M	MDE45-8FR--M20-2M MDE45-8FR--M20-5M MDE45-8FR--M20-10M	**M20 x 1.5**

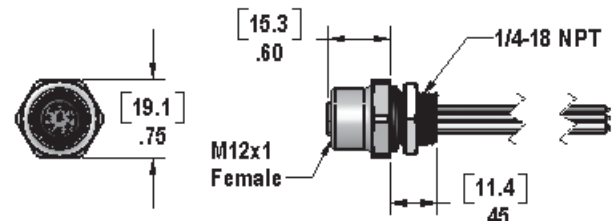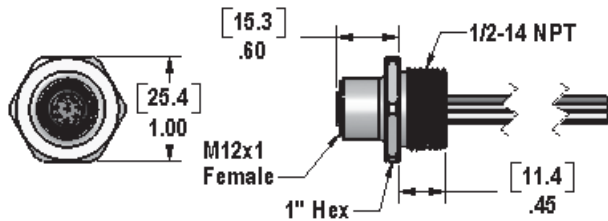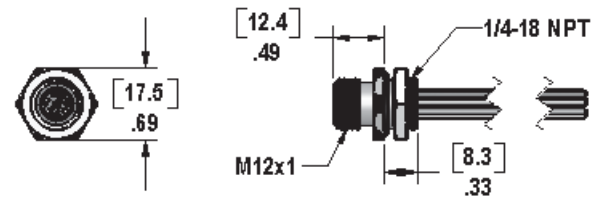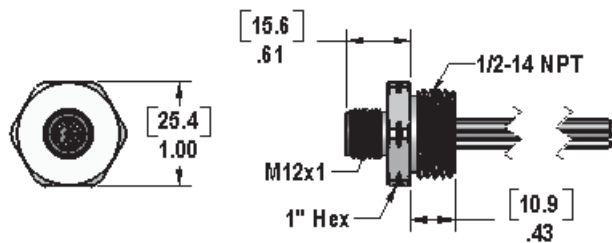Other cable lengths are available. Please consult the factory. For Color Code, see page 108.

Specifications:

Shell:	1/4″ NPT & PG 9: Nickel Plated Brass; 1/2″ NPT, M16 & M20: Clear Anodized Aluminum	Wires:	24 AWG 60V, 80ºC
		Contacts:	Copper Alloy with Gold Plating
Insulator:	Polyamide	O-Ring:	BUNA-N
Cable:	See PVC Cable specifications on page 121	Temperature:	-40ºC to +80ºC (-40ºF to +176ºF)
		Protection:	IP 67

1/2″-14 NPT & 1/4″-18 NPT Threads ❖ PG Threads ❖ Metric Threads
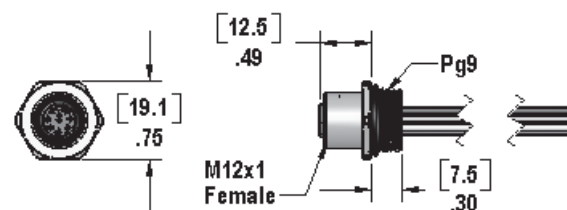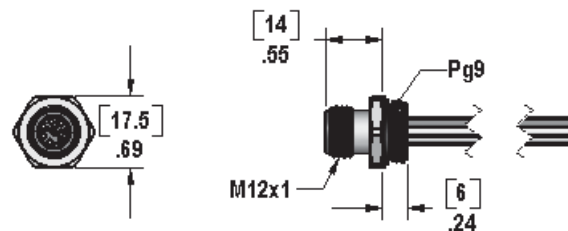

1/2″-14 NPT Male and Female Receptacles

1/4″-18 NPT Male and Female Receptacles
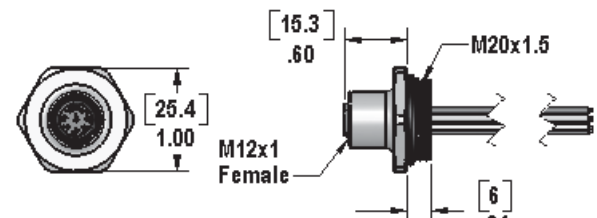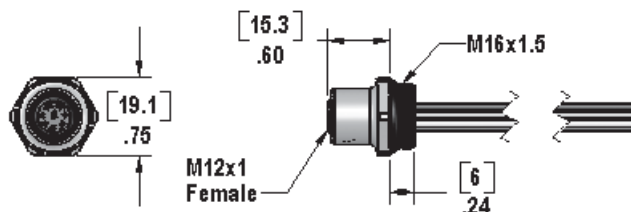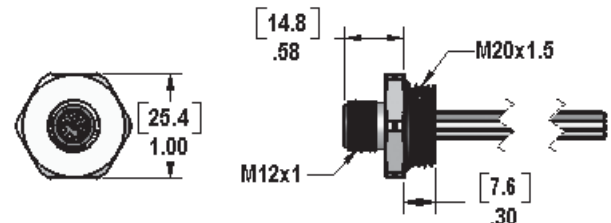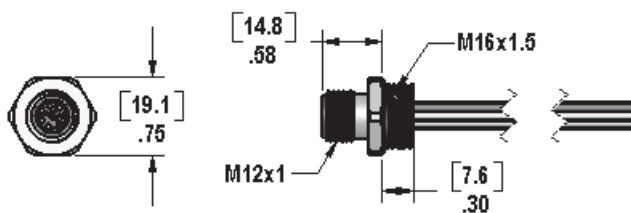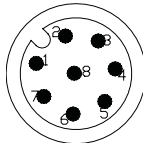

M16 x 1.5 Male and Female Receptacles
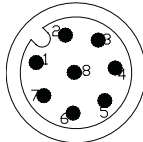

M20 x 1.5 Male and Female Receptacles

PG 9 Male and Female Receptacles

Ethernet Series

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Ethernet Series Etherplug Receptacles

Back Mount with 12″ Leads ❖ Back Mount with Cat 5 Cable

Etherplug Receptacle Back Mount with 12" Leads				
Face View of Female	# of Poles	Wire AWG Rating	Part Number	
			Male	Female
	8	24 60V 2A	MDE45-8MR-BM	MDE45-8FR-BM

Etherplug Receptacle Back Mount with Cat 5 Cable					
Face View of Female	# of Poles	Wire AWG Rating	Length	Part Number	
				Male	Female
	8	24 60V 1.5A	2M 5M 10M	MDE45-8MR-BM-2M MDE45-8MR-BM-5M MDE45-8MR-BM-10M	MDE45-8FR-BM-2M MDE45-8FR-BM-5M MDE45-8FR-BM-10M

Other cable lengths are available. Please consult the factory. For Color Code, see page 108.
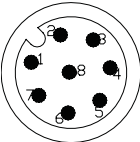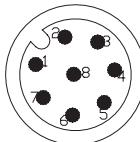
Specifications:

Shell:	Nickel Plated Brass
Insulator:	Polyamide
Cable:	See specifications on page 121
Wires:	24 AWG 60V, 80ºC
Contacts:	Copper Alloy with Gold Plating
O-Ring:	BUNA-N
Temperature:	-40ºC to +80ºC (-40ºF to +176ºF)
Protection:	IP 67
Approvals:	U.S.: UL Recognized
	Canada: C-UL Recognized

Ethernet Series

20.1 / .79

19.1 / .75

M12x1

20 / .79

19.1 / .75

Cut-out

15.4 / Ø.61

6.8 / .27
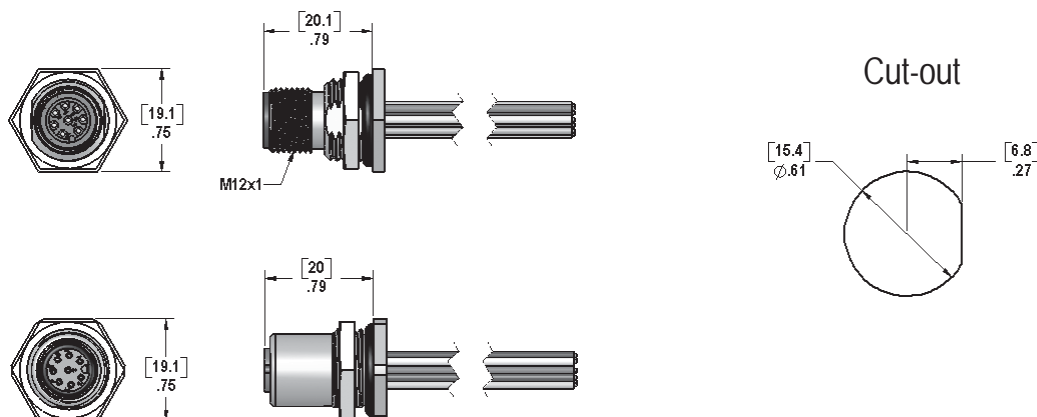
Ethernet Series Etherplug Receptacles

Back Mount to RJ45 with Cable ❖ 1/2″-14 NPT to RJ45 with Cat 5 Cable

Etherplug Back Mount Receptacle to RJ45 with Cat 5 Cable						
Face View of Female	**# of Poles**	**Wire AWG Rating**	**Wiring**	**Length**	**Part Number**	
			MDC to RJ45		**Male**	**Female**
	8	24 60V 1.5A	1 to 5 2 to 7 3 to 8 4 to 2 5 to 3 6 to 1 7 to 4 8 to 6	2M 5M 10M	MDE45-8MR-RJ45-BM-2M MDE45-8MR-RJ45-BM-5M MDE45-8MR-RJ45-BM-10M	MDE45-8FR-RJ45-BM-2M MDE45-8FR-RJ45-BM-5M MDE45-8FR-RJ45-BM-10M

Etherplug 1/2" - 14 NPT Receptacle to RJ45 with Cat 5 Cable						
Face View of Female	**# of Poles**	**Wire AWG Rating**	**Wiring**	**Length**	**Part Number**	
			MDC to RJ45		**Male**	**Female**
	8	24 60V 1.5A	1 to 5 2 to 7 3 to 8 4 to 2 5 to 3 6 to 1 7 to 4 8 to 6	2M 5M 10M	MDE45-8MR-RJ45-2-2M MDE45-8MR-RJ45-2-5M MDE45-8MR-RJ45-2-10M	MDE45-8FR-RJ45-2-2M MDE45-8FR-RJ45-2-5M MDE45-8FR-RJ45-2-10M

Other cable lengths are available. Please consult the factory.

Specifications:

Shell:	Back Mount : Nickel Plated Brass; 1/2″ NPT: Clear Anodized Aluminum
Insulator:	Polyamide
Cable:	See specifications on page 121
Contacts:	Copper Alloy with Gold Plating
O-Ring:	BUNA-N
Temperature:	-40ºC to +80ºC (-40ºF to +176ºF)
Protection:	IP 67
Approvals:	U.S.: UL Recognized; Canada: C-UL Recognized

Back Mount
Cut-out

Mencom Corporation   TEL: 770-534-4585   www.mencom.com
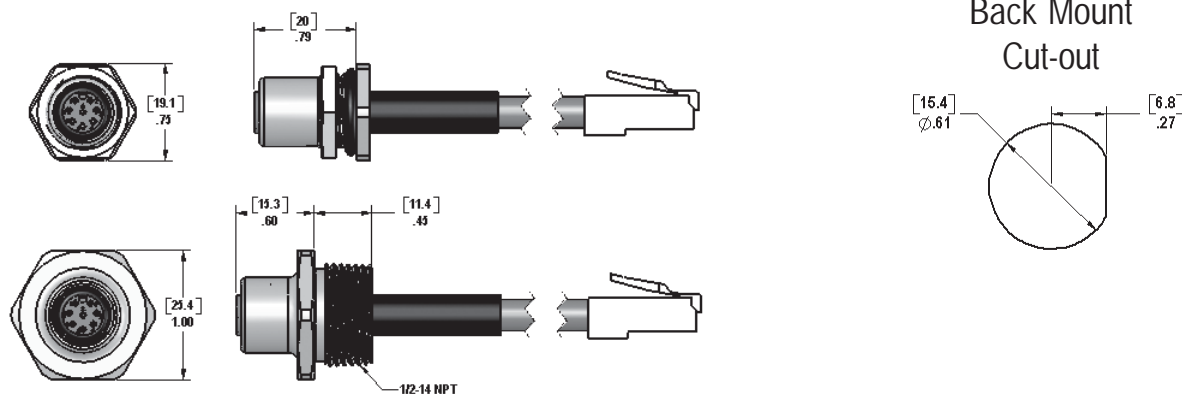
Ethernet Series

Ethernet Series Etherlink V3 Field Wireable

Male Plug

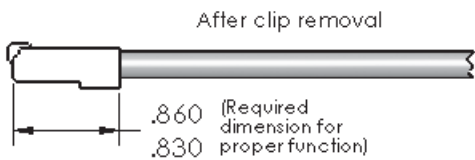| Etherlink V3 Field Wireable Male Plug			
Front View	# of Poles	Part Number	Side View
	8	E45V3-8MP-FW	

Specifications:
Body: Black Polyamide
Coupling Nut: Black Anodized Aluminum
O-Ring: BUNA-N
Grommets: NBR & TPE
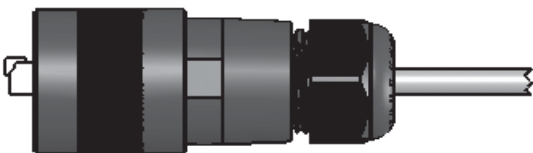Protection: IP 67

It is recommended that quality Mencom cables are used with the field wireable connectors to assure an accurate fit. However, if using another brand, the dimensions of the connector must meet the dimensions shown below.

STEP 1.) Remove clip by cutting or by bending it back and forth until it breaks.
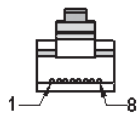
STEP 2.) With connector unassembled, push cable through dome nut, split apart the grommet and wrap it around the cable, then push the cable through the remainder of the connector.

STEP 3.) Push grommet back into the "fingers" of the shell. Rotate cable 90 degrees and pull it back into connector until it stops.   With slight tension on cable, tighten dome nut (3.75Nm recommended).

Ethernet Series Etherlink V3 Cordsets

PVC Version					
Front View	**# of Poles**	**Length**	**Part Number**		**Side View**
			Male	**Male to Male Extension**	
	8	2M 5M 10M	E45V3-8MP-2M E45V3-8MP-5M E45V3-8MP-10M	E45V3-8MMP-2M E45V3-8MMP-5M E45V3-8MMP-10M	

Polyurethane Version					
Front View	**# of Poles**	**Length**	**Part Number**		**Side View**
			Male	**Male to Male Extension**	
	8	2M 5M 10M	E45V3P-8MP-2M E45V3P-8MP-5M E45V3P-8MP-10M	E45V3P-8MMP-2M E45V3P-8MMP-5M E45V3P-8MMP-10M	

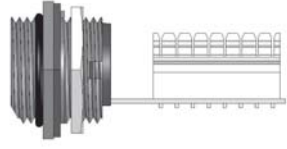| RJ45 Male to Male Plug					
Face View	**# of Poles**	**Wire AWG Rating**	**Length**	**Part Number**	
				PVC**	**PUR**
	8	24 60V 1.5A	3 FT 7 FT 10 FT 15 FT 25 FT	RJ45-3 RJ45-7 RJ45-10 RJ45-15 RJ45-25	RJ45P-3 RJ45P-7 RJ45P-10 RJ45P-15 RJ45P-25

Other cable lengths are available. Please consult the factory.

**Cable Specifications on Page 121 do not apply to these cables.
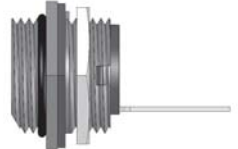
Ethernet Series

Ethernet Series Etherlink V3 Receptacles

Female Receptacle to Male Plug with Cable ❖ Female Receptacle to 110 Punchdown Block
❖ Female Receptacle to Female Receptacle ❖ Field Wireable Female Receptacle

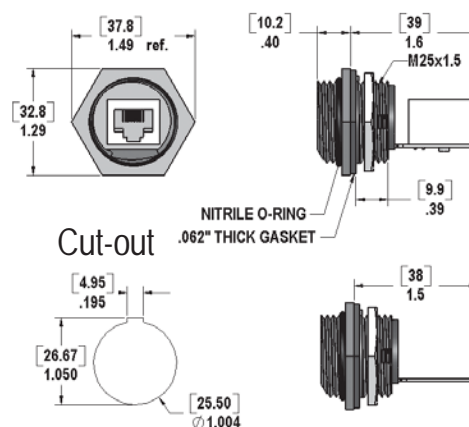| Etherlink V3 Female Receptacle to Male Plug with Cat 5 Cable					
Front View	# of Poles	Wire AWG Rating	Length	Part Number	Side View
	8	24 60V 1.5A	1 FT 3 FT 7 FT	E45V3-8FMR-1-M25 E45V3-8FMR-3-M25 E45V3-8FMR-7-M25	

Etherlink V3 Female Receptacle to 110 Punchdown Block				
Front View	# of Poles	Acceptable Wire Range	Part Number	Side View
	8	20 – 26AWG Solid Copper Wire	E45V3-8FR-110-M25	

Etherlink V3 Female Receptacle to Female Receptacle			
Front View	# of Poles	Part Number	Side View
	8	E45V3-8FFR-M25	

Etherlink V3 Field Wireable Female Receptacle			
Front View	# of Poles	Part Number	Side View
	8	E45V3-8FR-FW-M25	

Specifications:

Insulator:	Polyamide
Cable:	CAT 5 with PVC Jacket
Contacts:	Copper Alloy with Gold Plating
O-Ring:	BUNA-N
Temperature:	-40ºC to +80ºC (-40ºF to +176ºF)
Protection:	IP 67
Approvals:	U.S.: UL Recognized-Pending
	Canada: C-UL Recognized-Pending

Cut-out

NITRILE O-RING
.062" THICK GASKET

Etherlink V1 Field Wireable Male Plug			
Front View	# of Poles	Part Number	Side View
	8	E45V1-8MP-FW	

Specifications:

Body: Black Polyamide
Coupling Nut: Black Anodized Aluminum
O-Ring: BUNA-N
Grommets: NBR & TPE
Protection: IP 67

It is recommended that quality Mencom cables are used with the field wireable connectors to assure an accurate fit. However, if using another brand, the dimensions of the connector must meet the dimensions shown below.

STEP 1.) Remove clip by cutting or by bending it back and forth until it breaks.

STEP 2.) With connector unassembled, push cable through dome nut, split apart the grommet and wrap it around the cable, then push the cable through the remainder of the connector.

STEP 3.) Push grommet back into the "fingers" of the shell. Rotate cable 90 degrees and pull it back into connector until it stops.   With slight tension on cable, tighten dome nut (3.75Nm recommended).

Ethernet Series

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Ethernet Series Etherlink V1 Cordsets

Male Plugs ❖ Male to Male Extension Cables ❖RJ45 to Male Plug ❖ PVC & PUR Cable
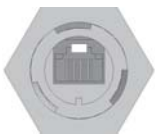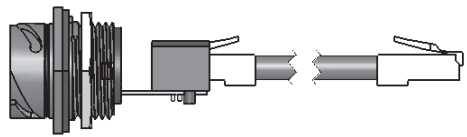
PVC Version					
Front View	**# of Poles**	**Length**	**Part Number**		**Side View**
			Male	**Male to Male Extension**	
	8	2M 5M 10M	E45V1-8MP-2M E45V1-8MP-5M E45V1-8MP-10M	E45V1-8MMP-2M E45V1-8MMP-5M E45V1-8MMP-10M	

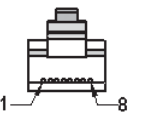| Polyurethane Version					
Front View	**# of Poles**	**Length**	**Part Number**		**Side View**
			Male	**Male to Male Extension**	
	8	2M 5M 10M	E45V1P-8MP-2M E45V1P-8MP-5M E45V1P-8MP-10M	E45V1P-8MMP-2M E45V1P-8MMP-5M E45V1P-8MMP-10M	

RJ45 Male to Male Plug					
Face View	**# of Poles**	**Wire AWG Rating**	**Length**	**Part Number**	
				PVC**	**PUR**
	8	24 60V 1.5A	3 FT 7 FT 10 FT 15 FT 25 FT	RJ45-3 RJ45-7 RJ45-10 RJ45-15 RJ45-25	RJ45P-3 RJ45P-7 RJ45P-10 RJ45P-15 RJ45P-25

Other cable lengths are available. Please consult the factory.

**Cable Specifications on Page 121 do not apply to these cables.

Ethernet Series Etherlink V1 Receptacles

Female Receptacle to Male Plug with Cable ❖ Female Receptacle to 110 Punchdown Block
❖ Female Receptacle to Female Receptacle ❖ Field Wireable Female Receptacle

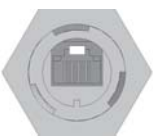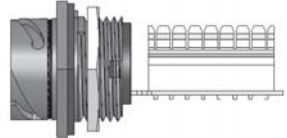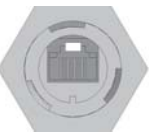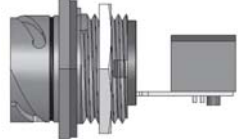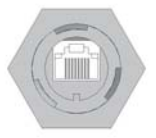| Etherlink V1 Female Receptacle to Male Plug with Cat 5 Cable					
Front View	# of Poles	Wire AWG Rating	Length	Part Number	Side View
	8	24 60V 1.5A	1 FT 3 FT 7 FT	E45V1-8FMR-1-M25 E45V1-8FMR-3-M25 E45V1-8FMR-7-M25	

Etherlink V1 Female Receptacle to 110 Punchdown Block				
Front View	# of Poles	Acceptable Wire Range	Part Number	Side View
	8	20 – 26AWG Solid Copper Wire	E45V1-8FR-110-M25	

Etherlink V1 Female Receptacle to Female Receptacle			
Front View	# of Poles	Part Number	Side View
	8	E45V1-8FFR--M25	

Etherlink V1 Field Wireable Female Receptacle			
Front View	# of Poles	Part Number	Side View
	8	E45V1-8FR-FW-M25	

Specifications:
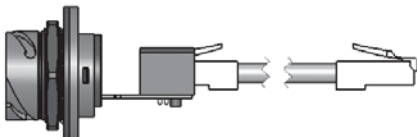
Insulator:	Polyamide
Cable:	CAT 5 with PVC Jacket
Contacts:	Copper Alloy with Gold Plating
O-Ring:	BUNA-N
Temperature:	-40ºC to +80ºC (-40ºF to +176ºF)
Protection:	IP 67
Approvals:	U.S.: UL Recognized-Pending
	Canada: C-UL Recognized-Pending

Cut-out

[15.4 / .61]   [36.7 / 1.44]
[32.8 / 1.29]
[11.6 / .46]
[4.95 / .195]
[26.67 / 1.050]
[25.50 / Ø1.004]
[36 / 1.42]

Ethernet Series

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Mencom Corporation   TEL: 770-534-4585   www.mencom.com

Ethernet Series Etherlink V1 Receptacles

Back Mount to Male Plug with Cable ❖ Back Mount to 110 Punchdown Block
❖ Back Mount to Female Receptacle ❖ Field Wireable Female Receptacle Back Mount

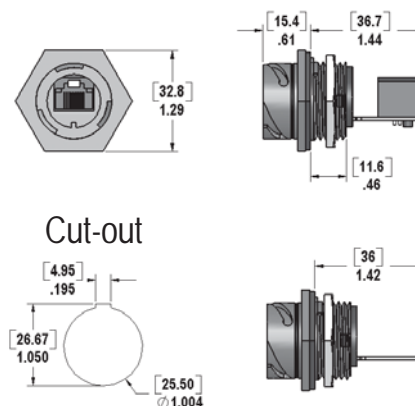| Etherlink V1 Female Receptacle Back Mount to Male Plug with Cat 5 Cable					
Front View	# of Poles	Wire AWG Rating	Length	Part Number	Side View
	8	24 60V 1.5A	1 FT 3 FT 7 FT	E45V1-8FMR-1-BM E45V1-8FMR-3-BM E45V1-8FMR-7-BM	

Etherlink V1 Female Receptacle Back Mount to 110 Punchdown Block				
Front View	# of Poles	Acceptable Wire Range	Part Number	Side View
	8	20 – 26AWG Solid Copper Wire	E45V1-8FR-110-BM	

Etherlink V1 Female Receptacle Back Mount to Female Receptacle			
Front View	# of Poles	Part Number	Side View
	8	E45V1-8FFR-BM	

Etherlink V1 Field Wireable Female Receptacle Back Mount			
Front View	# of Poles	Part Number	Side View
	8	E45V1-8FR-FW--BM	

Specifications:
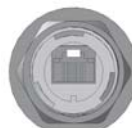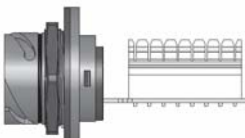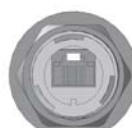
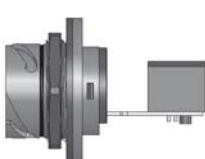|	
Insulator:	Polyamide
Cable:	CAT 5 with PVC Jacket
Contacts:	Copper Alloy with Gold Plating
O-Ring:	BUNA-N
Temperature:	-40ºC to +80ºC (-40ºF to +176ºF)
Protection:	IP 67
Approvals:	U.S.: UL Recognized-Pending
	Canada: C-UL Recognized-Pending

38.1
⌀1.50

35.4
1.40

30.1
1.18

Cut-out

2.5
.10

1
.04

12.4
.49

27.2
⌀1.07

16.7
.66

34.8
1.37

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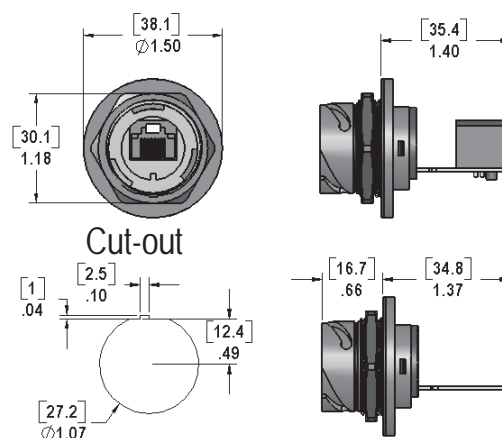
Ethernet Series

Ethernet Series Cable Specifications

	PVC Cable	**Polyurethane Cable**
Cable Construction:		
Conductors:	24 AWG, 7/32 Tinned copper. 0.61mm dia. nom.	24 AWG, 7/32 Tinned copper. 0.61mm dia. nom.
Conductor Insulation:	High density polyethylene. 1.05mm max dia.	High density polyethylene. 1.05mm max dia.
Conductor Pairing:	Color coded singles twisted into pairs. 2.10mm max dia.	Color coded singles twisted into pairs. 2.10mm max dia.
Cable:	4 pairs twisted together with tissue wrap. 4.14mm dia. nom.	4 pairs twisted together with tissue wrap. 4.14mm dia. nom.
Jacketing:	Teal PVC. .64mm nom. thickness. Cable dia. 5.7mm nom.	Black PUR. .51mm nom. thickness. Cable dia. 5.6mm nom.
Physical Properties:		
Operating Temperature:	Min -40°C, Max 60°C	Min -40°C, Max 75°C
Weight kg/km:	38	31
Resistance:	UV and oil resistant jacketing	UV and oil resistant jacketing

Electrical Characteristics:

		PVC Cable	**Polyurethane Cable**
Capacitance, Mutual:		13.5Pf/ft @ 1 MHz	13.5Pf/ft @ 1 MHz
Dielectric Withstanding, min:		900V RMS	1500V RMS
Voltage Rating, max:		30V	300V
DC Resistance, max:		26.0 Ohms	26.0 Ohms
Impedance	1-100 MHz	100 +/- 15 Ohms	100 +/- 15 Ohms
	100-350 MHz	100 +/- 20 Ohms	100 +/- 20 Ohms
SRL	1-20 MHz	23 dB	23 dB
	20-100 MHz	23 - 10 Log(F/20)	23 - 10 Log(F/20)
Return Loss	1-10 MHz	20 + 5 Log(F) dB min	20 + 5 Log(F) dB min
	10-20 MHz	25 Db min	25 Db min
	20-100 MHz	25 - 8.6 Log(F/20) dB min	25 - 8.6 Log(F/20) dB min
PS Next	1-100 MHz	71 - 15 Log(F/.772) min	71 - 15 Log(F/.772) min
Next	1-100 MHz	73 - 15 Log(F/.772) min	73 - 15 Log(F/.772) min
PS Elfext	1-100 MHz	67 - 20 Log(F/.772) min	67 - 20 Log(F/.772) min
Elfext	1-100 MHz	67 - 20 Log(F/.772) min	67 - 20 Log(F/.772) min
Delay	1-100 MHz	534 + 36/Sqrt(F)	534 + 36/Sqrt(F)
Delay Skew	1-100 MHz	<25Ns	<25Ns
LCL	1-100 MHz	-38dB min	-38dB min

Ethernet Series

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Ethernet Series Cable Specifications & RJ45 Kits

PVC ❖ Polyurethane

Attenuation:

PVC Cable

Frequency	spec 70m of cable (Cat 5e channel)	Attenuation Per meter
1.0	2.5	0.36
4.0	4.5	0.64
8.0	6.3	0.9
10.0	7.0	0.1
16.0	9.2	0.13
20.0	10.3	0.15
25.0	11.4	0.16
31.25	12.8	0.18
62.5	18.5	0.26
100.0	24.0	0.343

Polyurethane Cable

Frequency	spec 70m of cable (Cat 5e channel)	Attenuation Per meter
1.0	2.5	0.36
4.0	4.5	0.64
8.0	6.3	0.9
10.0	7.0	0.1
16.0	9.2	0.13
20.0	10.3	0.15
25.0	11.4	0.16
31.25	12.8	0.18
62.5	18.5	0.26
100.0	24.0	0.343

Note: All testing is conducted off the reel and without connectors attached.
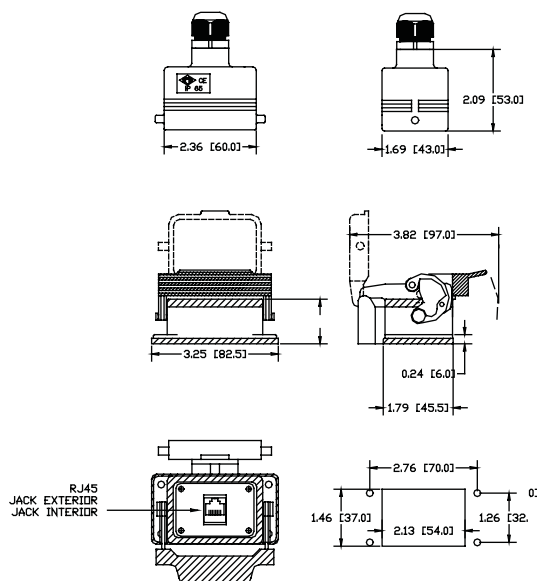
Complete Ethernet Connection System

Ethernet has become a more popular and accepted method of communication on the industrial plant floor. Mencom now offers a complete connection set that allows use of standard double-ended Ethernet cables.

Part Number: RJ45-CKIT
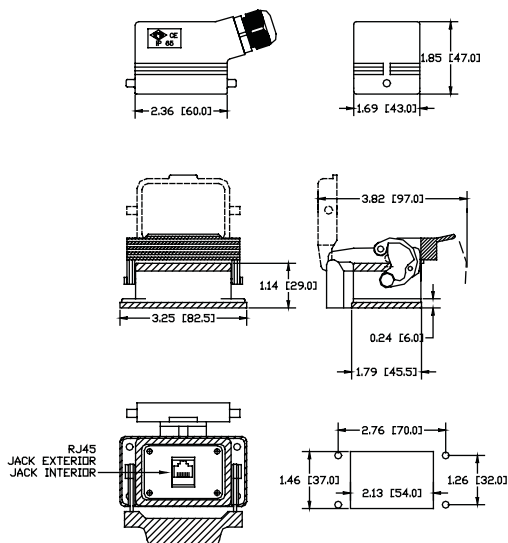
Part Number: RJ45-CVKIT

These units are designed to be used with Mencom RJ45 Patch Cords.

Part Numbers: RJ45-03   3 foot patch cord
RJ45-07   7 foot patch cord
RJ45-10   10 foot patch cord
RJ45-15   15 foot patch cord

Other lengths are available, please consult the factory.