



MICRO-CHANGE® CONNECTORS

SINGLE KEYWAY RECEPTACLES

Product Specifications

MECHANICAL

INSERT MATERIAL: NYLON 6/6
 SHELL MATERIAL: ANODIZED ALUMINUM
 CONTACT MATERIAL: COPPER ALLOY
 CONTACT PLATING: GOLD — 5µ IN. (MIN) OVER
 PALLADIUM/NICKEL — 20µ IN. (MIN)
 WIRE TYPE(S): 22 AWG; PVC INSULATED
 WIRE STRANDING: 26 X #36
 WIRE TEMP. RANGE: -20° TO 80°C
 O-RING: NITRILE RUBBER
 LOCKNUT: STEEL

ELECTRICAL

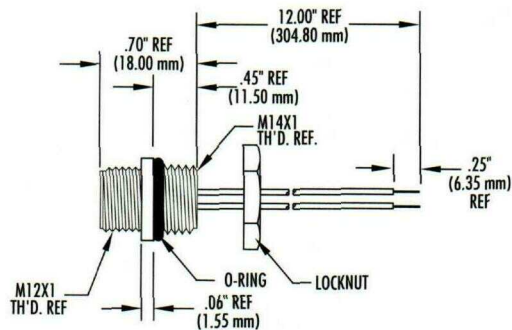
VOLTAGE RATING: 250V
 AMPERAGE: 4A
 CONTACT RESISTANCE: ≤5MΩ, (AFTER 100 MATE/UNMATE CYCLES —
 PER MIL STD. 1344, 3004.1)
 ISOLATION RESISTANCE: ≥1000MΩ

ENVIRONMENTAL

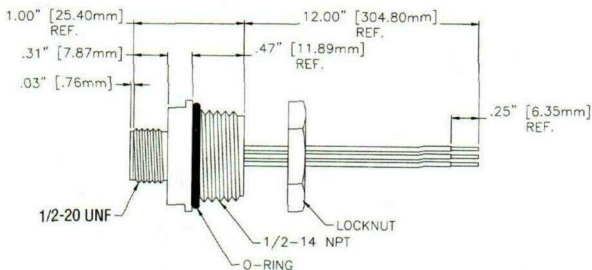
PROTECTION: IP 68, NEMA 6P - PER NEMA STD. 250
 HIGH PRESSURE
 WATER SPRAY: 1000 PSI

CERTIFICATIONS

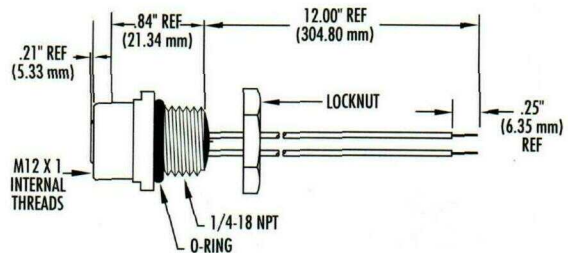
UL: UL LISTED, FILE NO. E152210 (5P UL RECOGNIZED)
 CSA: CSA CERTIFIED, FILE NO. LR6837
 VDE: SPACINGS TO VDE 0110 GROUP C (250VAC/300VDC)
 (3/4 POLE)



M14X1 MALE RECEPTACLE WITH EXTERNAL THREADS



1/2IN. NPT MALE RECEPTACLE WITH EXTERNAL THREADS



1/4IN. NPT FEMALE RECEPTACLE WITH INTERNAL THREADS

Receptacles with 12in. Leads

Poles	Face View Male	Wiring Code	M14x1 Male With External Threads	1/2in. NPT Male With External Threads	1/4in. NPT Female With Internal Threads
3		1-Brown 2-Not Used 3-Blue 4-Black	8R3E06A18A120	8R3006A18A120	8R3A00A18A120
4		1-Brown 2-White 3-Blue 4-Black	8R4E06A18A120	8R4006A18A120	8R4A00A18A120
5		1-Brown 2-White 3-Blue 4-Black 5-Gray	8R5E06A18A120	8R5006A18A120	8R5A00A18A120

Systems are a space-, time-, and cost-saving alternative to traditional hard wiring. With MPIS®, you eliminate knockouts, terminal strips, and sealing guards - protecting against potentially costly and destructive wiring errors. Optional L.E.D. displays make trouble-shooting fast and precise.

Quick-Change® Connectors Deliver heavy-duty power in harsh industrial environments. Used to quickly and safely replace motors from fractional through 5 H.P. on pumps, conveyors, cooling fans, mixers, grinders, industrial saws, and other equipment while protecting electrical connections from water, dust, oil and other contaminants.

Other Connector Products In heavy-duty power/control applications such as press controls, control circuit instrument panels, robotics, die blocks, and safety fences and gates, Brad Harrison® products have no equal. Control connectors are available in 3-12 pole configurations and are insulated with neoprene rubber. Brad Harrison® safety plugs protect employees by providing electrical lockout during maintenance of heavy industrial equipment. Dual round connectors feature a unique plug and receptacle design that prevents mismatching.

BRAD HARRISON® APPLICATION GUIDE

Product	Used in Conjunction With	Typical Applications
Mini-Change® Molded Connectors	18mm and 30mm tubular proximity sensors Limit switches Rectangular proximity and photoelectric sensors Solenoids	Sensors on conveyors Hydraulic valves Packing equipment Material handling equipment
Micro-Change® Molded Connectors	12mm and 18mm tubular proximity sensors Tubular photoelectric sensors Modular controls	Hydraulic or pneumatic cylinders Conveyors Pick 'n place robots
Nano-Change® Molded Connectors	8mm and smaller proximity sensors Miniature photoelectric sensors Miniature control components	Robotic end-arm tooling Gear tooth sensing Conveyors
Quick-Change® Molded Connectors	Fractional through 5 H.P. Industrial motors	Conveyors Mixers, grinders, choppers Pumps Industrial saws
DIN 43650 Molded Connectors	18, 11, 10, 9.4, and 8.0mm Valve and actuator connections	Hydraulic or pneumatic cylinders Material handling equipment Packing equipment
Multi-Port Interconnect Systems (MPIS®)	8, 12 and 18mm proximity sensors Miniature controls Limit switches Solenoids	Suitable for applications where consolidation of wiring is desirable
Control Connectors	Press controls/run button bars Process controls	Forging and welding presses Automated assembly lines
Safety Plugs	Die blocks Safety fences/gates	Forging and welding presses Barricades to work areas
Dual Round Connectors	Press controls Process controls	Forging and welding presses Automated assembly lines

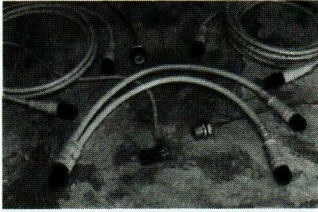


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REPRESENTATIVE TODAY!**

SEE PAGES 2-7



MICRO-CHANGE® CONNECTORS



Used in conjunction with 12mm and 18mm tubular proximity sensors, tubular photoelectric sensors and modular controls. Available in 2-6 pole configurations, single and dual keyway designs, and with mechanically keyed male and female components to eliminate mismatching and control system damage. Epoxy-potted receptacles keep moisture and other destructive contaminants from entering the wiring chamber. Provide NEMA 6P and IP 68 protection.

DUAL KEYWAY PLUGS AND CABLE ASSEMBLIES

Product Specifications

MECHANICAL

PLUG FACE MATERIAL:	NYLON 6/6
MOLDED BODY MATERIAL:	PVC
CONTACT MATERIAL:	COPPER ALLOY
CONTACT PLATING:	GOLD — 5 μ IN. (MIN) OVER PALLADIUM/NICKEL — 20 μ IN. (MIN)
COUPLING NUT MATERIAL:	ZINC DIECAST, EPOXY-COAT (ALSO AVAILABLE IN STAINLESS STEEL OR NON-METALLIC)
O-RING:	NITRILE RUBBER
CABLE TYPE:	22 AWG: PVC INSULATED, METALLIC BRAID, STRANDED COPPER CONDUCTORS, YELLOW PVC JACKETED, 300V, 105°C, UL RECOGNIZED, CSA CERTIFIED
CABLE TEMP RANGE:	-20° TO 105°C
CABLE STRANDING:	22 AWG: 65 X #36
CABLE DIAMETER:	22 AWG: 2/C — .23IN. 3/C — .23IN. 4/C — .25IN. 5/C — .26IN. 6/C — .29IN.
CABLE STRAIN RELIEF:	35 POUNDS MIN. — PER UL STD. 514

ELECTRICAL

VOLTAGE RATING:	250V
VOLTAGE RATING:	4A
CONTACT RESISTANCE:	$\leq 5M\Omega$, (AFTER 500 MATE/UNMATE CYCLES — PER MIL STD. 1344, 3004.1)
ISOLATION RESISTANCE:	$\geq 1000M\Omega$

ENVIRONMENTAL

PROTECTION:	IP 68, NEMA 6P — PER NEMA STD. 250
CORROSION RESISTANCE:	500 HOUR SALT SPRAY — PER MIL. STD. 202F
VIBRATION RESISTANCE:	10 – 500 HZ @ 10g — PER MIL STD. 202F, 204D, CONDITION A
HIGH PRESSURE WATER SPRAY:	1000 PSI

CERTIFICATIONS

UL:	UL LISTED, FILE NO. E152210
CSA:	CSA CERTIFIED, FILE NO. LR6837
VDE:	SPACINGS TO VDE 0110 GROUP C (250VAC/300VDC)