TIA-1005-A M.I.C.E Rated Product Selection Guide

PANDUIT®

infrastructure for a connected world

TIA-1005-A M.I.C.E Rated Product Selection Guide

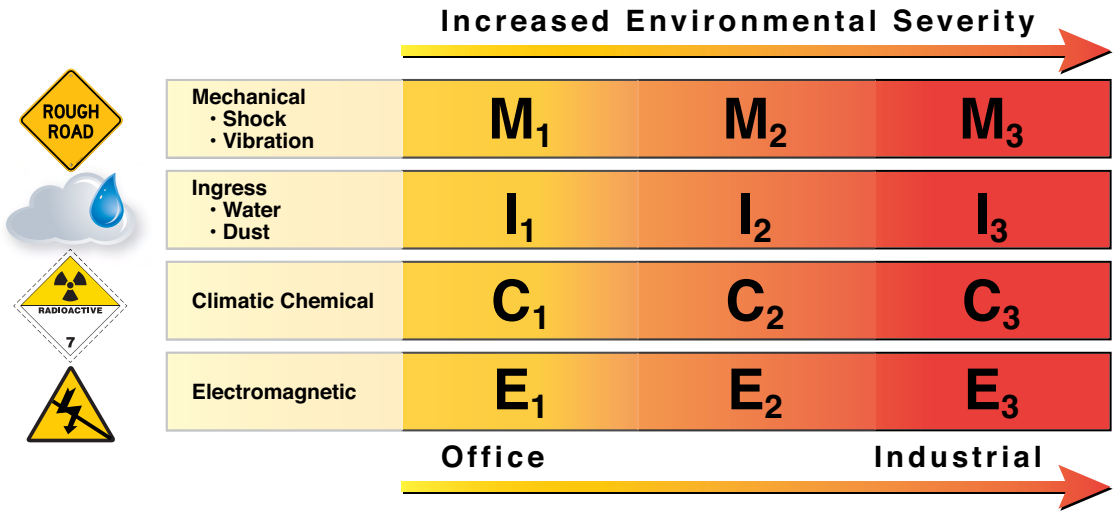
When designing the physical infrastructure to support network communications in a manufacturing location, TIA-1005-A is a standard that must be considered.

According to the TIA-1005-A standard, there are three basic types of industrial areas:

- Factory Floor
- Work Area
- Automation Island

Designing for the manufacturing environment requires an intimate knowledge of these areas to ensure the infrastructure supports the different environments found on the plant floor. Considerations such as shock and vibration, handling of water or dust, temperature, washdown areas, exposure to acids or oil mixtures and electromagnetic noise must be taken into account when selecting solutions to support these harsh enviroments.

Environmental classifications and ratings based on Mechanical, Ingress, Climatic/Chemical, Electro Magnetic (M.I.C.E) attributes provide a method of categorizing the environmental classes required for each of the industrial areas and are rated as 1 = low, 2 = medium, and 3 = high.



Whether you are designing for the factory floor, work area or automation island, Panduit offers solutions that meet the TIA-1005-A M.I.C.E guidelines. This selection guide provides the industrial physical infrastructure designer with detailed M.I.C.E information about each of Panduit's network products typically considered in industrial environments. For an expanded offering of level 1 parts that may be used in your industrial network, visit panduit.com/networkpartsamerica or the online catalog at panduit.com.

For additional information on M.I.C.E ratings contact our technical support team at techsupport@panduit.com or call 800-777-3300.

For more information about the TIA-1005-A standard, visit tiaonline.com.

LEGEND:
- ● = Acceptable for use in Enviroment
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NOTE:
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*Tensile Connected: This aspect of environmental classification is installation specific and should be considered in association with IEC 61918 and the appropriate component specification. The 300 and 500 N numbers were used as a reference to differentiate the levels.

		MICE (Final Rating)				Detailed MICE Rating																									
						Mechanical												Ingress		Climatic/Chemical										EMI	
						M_2						M_3						I_2	I_3	C_2						C_3				E_2	E_3
						100 ms-1	7mm/20ms-1	300N	1100N/150mm	10J		250 ms-1	15mm/50 ms-1	2	2200N/150mm	30J				-25°C to +70°C	1,0 °C/min	See C3	< 5,0 ppm			-40°C to +70°C	3,0 °C/min	1120 W/m²	< 500 ppm		
		M	I	C	E	shock	vibration	*Tensile Connected	compression	impact resistance	torsion	shock	vibration	*Tensile Connected	compression	impact resistance	torsion	IP 54/65	IP 67	operation temp.	temp. change	sun radiation	oil resistance	res. liquid chemicals	res. gaseous agents	operation temp.	temp. change	sun radiation	oil resistance	res. liquid chemicals	res. gaseous agents		
Part Number	**Product Description**																														
Copper Cable																															
Category 7																															
PSMD7004BL-LED	Copper cable, Category 7, Marine MUD-resistant, 4-pair, 22/1 AWG, S/FTP, LSZH, 1640 ft./500m reel.	2	—	2	2	●	●	—	●	●	●							—			●		●	c	c	●		●				●	
Category 6A																															
ISX6X04A*-LED	Copper cable, industrial, Category 6A 4-pair, 24/7 AWG stranded, S/FTP, PUR, 1640 ft./500m reel.	2	—	2	2	●	●	—	●	●	●							—			●		●	c	c	●		●				●	
ISFCH6X04A*-UG	Copper cable, industrial, 600V, Category 6A, 4-pair, 24/7 AWG stranded, SF/UTP, CM, 1000 ft./305m reel.	2	—	2	2	●	●	—	●	●	●							—			●		●	c	c	●		●				●	
ISFCH6X04B*-UG	Copper cable, industrial, 600V, Category 6A, 4-pair, 24/7 AWG stranded, SF/UTP, CM, 1000 ft./305m reel.	2	—	2	2	●	●	—	●	●	●							—			●		●	c	c	●		●				●	
PUP6AV04*-G	Copper cable, Category 6A, 4-pair, 23 AWG stranded, UTP, CMP, 1,000 ft./305m reel.	1	—	1	1	x	—	x	x	x	x							—		x	x	x	x	x	x							x	
Category 6																															
PSM6004*-LED	Copper cable, industrial, Category 6, 4-pair, 22/1 AWG, S/FTP, LSZH, 1640 ft./500m reel.	2	—	2	2	●	●	—	●	●	●							—			●		●	c	c	●		●				●	
ISX6004A*-LED	Copper cable, industrial, Category 6, 4-pair, 24/7 AWG stranded, S/FTP, PUR, 1640 ft./500m reel.	2	—	2	2	●	●	—	●	●	●							—			●		●	c	c	●		●				●	
IFRH6C04*-UG	Copper cable, industrial, 600V, Category 6, 4-pair, 23/1 AWG, F/UTP, CMR, Black, 1000 f.t/305m reel.	2	—	2	2	●	●	—	●	●	●							—		-20	●		●	c	c			●				●	
IURH6004*-UG	Copper cable, industrial, 600V, Category 6, 4-pair, 23/1 AWG, U/UTP, CMR, Black, 1000 ft./305m reel.	2	—	2	2	●	●	—	●	●	●							—		-20	●		●	c	c			●				●	
IUC6C04A*-CEG	Copper cable, industrial, Category 6, 4-pair, 24/7 AWG stranded, U/UTP, CM, 1000 ft./305m reel.	2	—	2	2	●	●	—	●	●	●							—		-20	●		●	c	c			●				●	
Category 5e																															
ISFCH5C02A*-XG	Copper cable, industrial, Category 5e, 2-pair, 24/7 AWG stranded, SF/UTP, CM, 1000 ft./305m reel.	2	—	2	2	●	●	—	●	●	●							—			●		●	c	c	●		●				●	
ISFCH5C04A*-XG	Copper cable, industrial, Category 5e, 4-pair, 24/7 AWG stranded, SF/UTP, CM, 1000 ft./305m reel.	2	—	2	2	●	●	—	●	●	●							—			●		●	c	c	●		●				●	
ISFCH5C04A*-XG	Copper cable, industrial, Category 5e, 4-pair, 24/7 AWG stranded, SF/UTP, CM, 1000 ft./305m reel.	2	—	2	2	●	●	—	●	●	●							—			●		●	c	c	●		●				●	
ISFX5502A*-LED	Copper cable, industrial, Category 5e, 2-pair, 24/7 AWG stranded, SF/UTP, PUR, 1640 ft./500m reel.	2	—	2	2	●	●	—	●	●	●							—			●		●	c	c	●		●				●	
IFC5C04B*-CEG	Copper cable, industrial, Category 5e, 4-pair, 26/7 AWG stranded, F/UTP, CM, 1000 ft./305m reel.	2	—	2	2	●	●	—	●	●	●							—		-20	●		●	c	c			●				●	
IFRH5C02*-UG	Copper cable, industrial, 600V, Category 5e, 2-pair, 24/1 AWG solid, F/UTP, CMR, 1000 ft./305m reel.	2	—	2	2	●	●	—	●	●	●							—		-20	●		●	c	c			●				●	
IFRH5C04*-UG	Copper cable, industrial, 600V, Category 5e, 4-pair, 24/1 AWG solid, F/UTP, CMR, 1000 ft./305m reel.	2	—	2	2	●	●	—	●	●	●							—		-20	●		●	c	c			●				●	
IURHA5C04*-UG	Copper cable, industrial 600V armored, Category 5e, 4-pair, 24/1 AWG, U/UTP, CMR, 1000 ft./305m reel.	3	—	2	2							●	●	—	●	●	●	—		-20	●		●	c	c			●				●	
IURHT5C04*-UG	Copper cable, industrial 600V PLTC, Category 5e, 4-pair, 22/1 AWG, U/UTP, CMR, 1000 ft./305m reel.	2	—	2	2	●	●	—	●	●	●							—		-20	●		●	c	c			●				●	
IUC5C04A*-CEG	Copper cable, industrial, Category 5e, 4-pair, 24/7 AWG stranded, U/UTP, CM, 1000 ft./305m reel.	2	—	2	2	●	●	—	●	●	●							—		-20	●		●	c	c			●				●	

* Available in multiple colors.

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Part Number	Product Description	MICE (Final Rating)				Detailed MICE Rating																									
						Mechanical											Ingress		Climatic/Chemical											EMI	
						M_2						M_3					I_2	I_3	C_2						C_3					E_2	E_3
		M	I	C	E	100 ms-1	7mm/20ms-1	300N	1100N/150mm	10J		250 ms-1	15mm/50 ms-1	2	2200N/150mm	30J			-25°C to +70°C	1,0 °C/min	See C3	< 5,0 ppm			-40°C to +70°C	3,0 °C/min	1120 W/m²	< 500 ppm				
						shock	vibration	*Tensile Connected	compression	impact resistance	torsion	shock	vibration	*Tensile Connected	compression	impact resistance	torsion	IP 54/65	IP 67	operation temp.	temp. change	sun radiation	oil resistance	res. liquid chemicals	res. gaseous agents	operation temp.	temp. change	sun radiation	oil resistance	res. liquid chemicals	res. gaseous agents		
Copper Connectivity																															
Category 6A																															
IAEBH6XS	IndustrialNet™, Category 6A, Shielded Connector.	3	3	2	2							•	•	—	•	•	•		•	-20	•		•	c	c			•			•	
IAEBH6X	IndustrialNet™, Category 6A, UTP Connector.	3	3	2	2							•	•	—	•	•	•		•	-20	•		•	c	c			•			•	
CJSM6X88TG	Category 6A, RJ45, 8-position, 8-wire, marine universal module.	2	1	1	2	•	•	—	x	x	—							x			x		x	x	x	•					•	
CJ6X88TG*	Category 6A, RJ45, 8-position, 8-wire, universal module.	1	1	1	1	x	x	x	x	x	x							x		x	x	x	x	x	x						x	
ISPS688FA	IndustrialNet™, Category 6A, 8-Position, Shielded, Field Terminable, RJ45 Modular Plug (conductor diameter 1.0 – 1.6mm).	1	1	1	2	•	•	—	x	x	—							x			x		x	x	x	•					•	
ISPS688FAS	IndustrialNet™, Category 6A, 8-Position, Shielded, Field Terminable, RJ45 Modular Plug (conductor diameter 0.85 – 1.0mm).	1	1	1	2	•	•	—	x	x	—							x			x		x	x	x	•					•	
ISPS6A88MFA	IndustrialNet™, Category 6A, Field Terminable, M12 X-Code Plug.	3	3	1	2							•	•	—	•	•	—		•	•							•	•	•	•	c	•	
IAEBHV56XS	Industrial variant 5 STP category 6A bulkhead connector.	3	3	2	2							•	•	—	•	•	•		•	-20	•		•	c	c			•			•	
MPSIV56XT	Industrial variant 5 STP category 6A RJ45 modular plug.	3	3	2	2							•	•	—	•	•	•		•	-20	•		•	c	c			•			•	
Category 6																															
IAEBH6S	IndustrialNet™, Category 6, Shielded Connector.	3	3	2	2							•	•	—	•	•	•		•	-20	•		•	c	c			•			•	
IAEBH6	IndustrialNet™, Category 6, UTP Connector.	3	3	2	2							•	•	—	•	•	•		•	-20	•		•	c	c			•			•	
CJSM688TG	Category 6, RJ45, 8-position, 8-wire, marine universal module.	2	1	1	2	•	•	—	x	x	—							x			x	x	x	x	x	•					•	
ISJ688TG	IndustrialNet™, Category 6, Shielded Connector, for use in bulkhead assembly IAEBH6S.	3	3	2	2							•	•	—	•	•	•		•	-20	•		•	c	c			•			•	
IJ688TG	IndustrialNet™, Category 6, UTP Connector, for use in bulkhead assembly IAEBH6.	3	3	2	2							•	•	—	•	•	•		•	-20	•		•	c	c			•			•	
IAEBHC6	IndustrialNet™, Category 6, UTP Coupler Connector.	3	3	2	2							•	•	—	•	•	•		•	-20	•		•	c	c			•			•	
IAEBHUSBAA	IndustrialNet™, USB 2.0 Female A to Female A Coupler Module.	3	3	2	2							•	•	—	•	•	•		•	-20	•		•	c	c			•			•	
Category 5e																															
IAEBH5ES	IndustrialNet™, Category 5e, Shielded Connector.	3	3	2	2							•	•	—	•	•	•		•	-20	•		•	c	c			•				
IAEBH5E	IndustrialNet™, Category 5e, UTP Connector.	3	3	2	2							•	•	—	•	•	•		•	-20	•		•	c	c			•				
ISJ5E88TG	IndustrialNet™, Category 5e, Shielded Connector, for use in bulkhead assembly IAEBH5ES.	3	3	2	2							•	•	—	•	•	•		•	-20	•		•	c	c			•				
IJ5E88TG	IndustrialNet™, Category 5e, UTP Connector, for use in bulkhead assembly IAEBH5E.	3	3	2	2							•	•	—	•	•	•		•	-20	•		•	c	c			•				
IAEBHC5E	IndustrialNet™, Category 5e, UTP Coupler Connector.	3	3	2	2							•	•	—	•	•	•		•	-20	•		•	c	c			•				
MPSI588T	Category 5e, 24 AWG, shielded modular plug with bulkhead.	3	3	2	2							•	•	—	•	•	•		•	-20	•		•	c	c			•				
MPI588T	Category 5e, 24 AWG, shielded modular plug with bulkhead.	3	3	2	2							•	•	—	•	•	•		•	-20	•		•	c	c			•				
ISPS5E44MFA	IndustrialNet™, Category 5e, M12 D-Code, Field Terminable Modular Plug.	3	3	1	2							•	•	—	•	•	—		•	•							•	•	•	•	c	•	

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(continued)

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		MICE (Final Rating)				Detailed MICE Rating																									
						Mechanical											Ingress		Climatic/Chemical											EMI	
						M_2						M_3					I_2	I_3	C_2						C_3					E_2	E_3
						100 ms-1	7mm/20ms-1	300N	1100N/150mm	10J		250 ms-1	15mm/50 ms-1	2	2200N/150mm	30J			-25°C to +70°C	1,0 °C/min	See C3	< 5,0 ppm			-40°C to +70°C	3,0 °C/min	1120 W/m²	< 500 ppm				
		M	I	C	E	shock	vibration	*Tensile Connected	compression	impact resistance	torsion	shock	vibration	*Tensile Connected	compression	impact resistance	torsion	IP 54/65	IP 67	operation temp.	temp. change	sun radiation	oil resistance	res. liquid chemicals	res. gaseous agents	operation temp.	temp. change	sun radiation	oil resistance	res. liquid chemicals	res. gaseous agents		
Part Number	**Product Description**																														
Copper Connectivity (continued)																															
USB																															
IAPCMUSBAA*	Industrial Mini-Com® USB 2.0 Female A/Female A Coupler.	1	1	1	1	x	x	—	x	x	—						x		x	x	x	x	x	x						x	
M12 Adapters																															
ICAM12DRJS	IndustrialNet™, M12 D-Code Female to RJ45 Jack, Panel Mount Adapter.	1	1	1	2	●	●	—	x	x	—						x	x	●	●	x	●	c	c						●	
ICAM12XRJS	IndustrialNet™, M12 X-Code Female to RJ45 Jack, Panel Mount Adapter	1	1	1	2	●	●	—	x	x	—						x	x	●	●	x	●	c	c						●	
ICAM12X90RJS	IndustrialNet™, M12 X-Code, Female to 90° RJ45 Jack, Panel Mount Adapter.	1	1	1	2	●	●	—	x	x	—						x	x	●	●	x	●	c	c						●	
Connectivity Accessories																															
ISPS688FAS-WM	Cateogory 6A replacement wire managers for RJ45 plug for use with ISPS688FAS.	—	—	—	—	—	—	—	—	—	—						—		—	—	—	—	—	—						—	
ISPS688FA-WM	Cateogory 6A replacement wire managers for RJ45 plug for use with ISPS688FA.	—	—	—	—	—	—	—	—	—	—						—		—	—	—	—	—	—						—	
IAEBHV5C	Industrial variant 5 bulkhead connector cap.	3	3	2	2							●	●	—	●	●	●		●	-20	●		●	c	c			●			●	
MPIV5C	Industrial variant 5 bulkhead modular plug cap.	3	3	2	2							●	●	—	●	●	●		●	-20	●		●	c	c			●			●	
Copper Patch Cords																															
Category 6A																															
ISTP6X**	IndustrialNet™, Category 6A, Shielded, Patch Cord with Caps.	3	3	2	2							●	●	—	●	●	●		●	-20	●		●	c	c			●			●	
ISTP6XR**	IndustrialNet™, Category 6A, Shielded, Patch Cord Hybrid with Cap.	3	3	2	2							●	●	—	●	●	●		●	-20	●		●	c	c			●			●	
UTP6A***	Category 6A, UTP patch cord.	1	1	1	1	x	x	x	x	x	x							x		x	x	x	x	x	x						x	
ICX^	IndustrialNet™, Category 6A, M12 X-Code, Overmolded Cordsets.	3	3	2	2							●	●	—	●	●	●		●		●		●	c	c	●		●			●	
Category 6																															
ISTPSP**	IndustrialNet™, Category 6, Shielded, Stranded Patch Cord with Caps.	3	3	2	2							●	●	—	●	●	●		●	-20	●		●	c	c			●			●	
ISTPSPNC**	IndustrialNet™, Category 6, Shielded, Stranded Patch Cord.	3	3	2	2							●	●	—	●	●	●		●	-20	●		●	c	c			●			●	
IUTPSP**	IndustrialNet™, Category 6, UTP, Stranded Patch Cord with Caps	3	3	2	2							●	●	—	●	●	●		●	-20	●		●	c	c			●			●	
IUTPSPNC**	IndustrialNet™, Category 6, UTP, Stranded Patch Cord.	3	3	2	2							●	●	—	●	●	●		●	-20	●		●	c	c			●			●	
Category 5e																															
ISTPCHY**	IndustrialNet™, Category 5e, Shielded, Stranded Patch Cord with Caps.	3	3	2	2							●	●	—	●	●	●		●	-20	●		●	c	c			●			●	
ISTPCHNCY**	IndustrialNet™, Category 5e, Shielded, Stranded Patch Cord.	3	3	2	2							●	●	—	●	●	●		●	-20	●		●	c	c			●			●	
ISTPHCH**	IndustrialNet™, Category 5e, Shielded, 600V, Patch Cord.	1	1	1	2	●	●	—	x	x	●							x		-20	x	x	x	x	x						●	
IUTPCHY**	IndustrialNet™, Category 5e, UTP, Stranded Patch Cord with Caps.	3	3	2	2							●	●	—	●	●	●		●	-20	●		●	c	c			●			●	
IUTPCHNCY**	IndustrialNet™, Category 5e, UTP, Stranded Patch Cord.	3	3	2	2							●	●	—	●	●	●		●	-20	●		●	c	c			●			●	
ICD^	IndustrialNet™, Category 5e, M12 D-Code, Overmolded Cordsets.	3	3	2	2							●	●	—	●	●	●		●		●		●	c	c	●		●			●	

* Available in multiple colors. ** Available in multiple lengths. *** Available in multiple colors and lengths. **** Available in muliple colors and fiber counts. ^Available in multiple configurations and lengths.

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						Mechanical											Ingress		Climatic/Chemical											EMI	
						M_2						M_3					I_2	I_3	C_2						C_3					E_2	E_3
						100 ms-1	7mm/20ms-1	300N	1100N/150mm	10J		250 ms-1	15mm/50 ms-1	2	2200N/150mm	30J			-25°C to +70°C	1,0 °C/min	See C3	< 5,0 ppm			-40°C to +70°C	3,0 °C/min	1120 W/m²	< 500 ppm				
		M	I	C	E	shock	vibration	*Tensile Connected	compression	impact resistance	torsion	shock	vibration	*Tensile Connected	compression	impact resistance	torsion	IP 54/65	IP 67	operation temp.	temp. change	sun radiation	oil resistance	res. liquid chemicals	res. gaseous agents	operation temp.	temp. change	sun radiation	oil resistance	res. liquid chemicals	res. gaseous agents		
Part Number	**Product Description**																														
Fiber Distribution Cable																															
FSPD6****	Fiber indoor DCF cable, riser (OFNR), LSZH-3 (60332-3), 62.5µm multimode OM1 (available in 2, 4, 8 or 12-fibers).	1	—	1	3	•	•	•		x	•				•			—		x	•		•	c	c			•				•
FSAD6****	Fiber indoor DCF cable, riser (OFNR), LSZH-3 (60332-3), 62.5µm multimode OM1 (available in 2, 4, 6, 8 or 12-fibers).	1	—	1	3	•	•	•		x	•				•			—		x	•		•	c	c			•				•
FSPD5****	Fiber indoor DCF cable, riser (OFNR), LSZH-3 (60332-3), 50µm multimode OM2 (available in 2, 4, 8 or 12-fibers).	1	—	1	3	•	•	•		x	•				•			—		x	•		•	c	c			•				•
FSAD5****	Fiber indoor DCF cable, riser (OFNR), LSZH-3 (60332-3), 50µm multimode OM2, (available in 2, 4, 6, 8 or 12-fibers).	1	—	1	3	•	•	•		x	•				•			—		x	•		•	c	c			•				•
FOADX08	Fiber indoor DCF cable, riser (OFNR), LSZH-3 (60332-3), 50µm multimode OM3, 8-fiber.	1	—	1	3	•	•	•		x	•	•			•			—		x	•		•	c	c			•				•
FOADZ****	Fiber indoor DCF cable, riser (OFNR), LSZH-3 (60332-3), 50µm multimode OM4 (available in 2, 4, 6, 8 or 12-fibers).	1	—	1	3	•	•	•		x	•				•			—		x	•		•	c	c			•				•
FSAD9****	Fiber indoor DCF cable, riser (OFNR), LSZH-3 (60332-3), 9µm singlemode OS2 (available in 2, 4, 6, 8 or 12-fibers).	1	—	1	3	•	•	•		x	•				•			—		x	•		•	c	c			•				•
FSPD9****	Fiber indoor DCF cable, riser (OFNR), LSZH-3 (60332-3), 9µm singlemode OS2 (available in 2, 4, 8 or 12-fibers).	1	—	1	3	•	•	•		x	•				•			—		x	•		•	c	c			•				•
FCCSR10BL	DCF (Dielectric Conduited Fiber) cable strain relief.	—	—	—	—	—	—	—	—	—	—							—		—	—	—	—	—	—						—	
Fiber Connectivity																															
IAEF7JMA	IndustrialNet™ LC Duplex Fiber Optic Bulkhead Adapter.	—	3	2	3							•	•	—	•	•	•		•	-20	•		•	c	c							•
Fiber Patch Cords and Pigtails																															
IAEF617P-7PM**	Industrial LC to LC multimode duplex patch cord – 62.5/125µm.	3	3	2	3							•	•	—	•	•	•		•	-20	•		•	c	c			•				•
IAEF617P-NM**	Industrial LC to pigtail multimode duplex pigtail – 62.5/125µm.	3	3	2	3							•	•	—	•	•	•		•	-20	•		•	c	c			•				•
Pre-Configured Micro Data Center																															
MDC48D	Pre-configured micro data center, 24 RU, includes two side panels, network cabling, patch panels, cable management, grounding, casters, shock pallet and ramp.	1	1	c	2	x	x	—	—	x	—							x		x	x	x	x	x	x						•	
MDC79	Pre-configured micro data center, 42 RU, includes two side panels, network cabling, patch panels, cable management, grounding, and casters.	1	1	c	2	x	x	—	—	x	—							x		x	x	x	x	x	x						•	
MDC79D	Pre-configured micro data center, 42 RU, includes two side panels, network cabling, patch panels, cable management, grounding, casters, shock pallet and ramp.	1	1	c	2	x	x	—	—	x	—							x		x	x	x	x	x	x						•	
Pre-Configured Industrial Distribution Frames																															
ZDF242430	Pre-configured industrial distribution frame enclosure, 12U, ready for two access or two distribution switches.	1	2	c	—	x	x	—	—	x	—							•		x	•	•	•	•	•						—	
ZDF242430-6	Pre-configured industrial distribution frame enclosure, 12U, 316 stainless steel, ready for two access or two distribution switches.	1	2	c	—	x	x	—	—	x	—							•		x	•	•	•	•	•						—	
ZDF48-RA	Pre-configured industrial distribution frame enclosure ready for two access and two distribution switches.	1	2	c	—	x	x	—	—	x	—							•		x	•	•	•	•	•						—	
ZDF48-6RA	Pre-configured industrial distribution frame enclosure, 316 stainless steel, ready for two access and two distribution switches.	1	2	c	—	x	x	—	—	x	—							•		x	•	•	•	•	•						—	

* Available in multiple colors. ** Available in multiple lengths. *** Available in multiple colors and lengths. **** Available in muliple colors and fiber counts.

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Part Number	Product Description	MICE (Final Rating)				Detailed MICE Rating																									
						Mechanical												Ingress		Climatic/Chemical										EMI	
						M_2						M_3						I_2	I_3	C_2						C_3				E_2	E_3
						100 ms-1	7mm/20ms-1	300N	1100N/150mm	10J		250 ms-1	15mm/50 ms-1	2	2200N/150mm	30J				-25°C to +70°C	1,0 °C/min	See C3	< 5,0 ppm			-40°C to +70°C	3,0 °C/min	1120 W/m²	< 500 ppm		
		M	I	C	E	shock	vibration	*Tensile Connected	compression	impact resistance	torsion	shock	vibration	*Tensile Connected	compression	impact resistance	torsion	IP 54/65	IP 67	operation temp.	temp. change	sun radiation	oil resistance	res. liquid chemicals	res. gaseous agents	operation temp.	temp. change	sun radiation	oil resistance	res. liquid chemicals	res. gaseous agents		
Network Zone System																															
24" x 24" Enclosures – Category 6A Connectivity and Fiber Uplink Patch Cords and Adaptors																															
Z22C-SS	Pre-configured network zone system, 24" x 24", mild steel enclosure, for two industrial switches, includes (8) Category 6A STP copper patch cords and jacks, (2) MM LC fiber patch cords with (6) LC adaptors, backplane and cable management.	1	2	1	2	x	x	—	—	x	—							•		x	•	•	•	•	•					•	
Z22U-S14S	Universal network zone system, 24" x 24", mild steel enclosure, for one industrial switch, includes (8) Category 6A STP copper patch cords and jacks, (2) MM LC fiber uplink patch cords with (6) adaptors and redundant power supplies.	1	2	c	2	x	x	—	—	x	—							•		x	•	•	•	•	•					•	
Z22U-S15S	Universal network zone system, 24" x 24", mild steel enclosure, for one industrial switch, includes (8) Category 6A STP copper patch cords and jacks, (2) MM LC fiber uplink patch cords with (6) adaptors, redundant power supplies and maintenance-free UPS.	1	2	c	2	x	x	—	—	x	—							•		x	•	•	•	•	•					•	
24" x 24" Enclosures – Category 6 Connectivity and Fiber Uplink Patch Cords and Adaptors																															
Z22C-S	Pre-Configured network zone system, 24" x 24", mild steel enclosure, for two industrial switches, includes (8) Category 6 UTP copper patch cords and jacks, (2) MM LC fiber patch cords with (6) LC adaptors, backplane and cable management.	1	2	1	1	x	x	—	—	x	—							•		x	•	•	•	•	•					x	
Z22U-S14	Universal network zone system, 24" x 24", mild steel enclosure, for one industrial switch, includes (8) Category 6 UTP copper patch cords and jacks, (2) MM LC fiber uplink patch cords with (6) adaptors and redundant power supplies.	1	2	c	1	x	x	—	—	x	—							•		x	•	•	•	•	•					x	
Z22U-S15	Universal network zone system, 24" x 24", mild steel enclosure, for one industrial switch, includes (8) Category 6 UTP copper patch cords and jacks, (2) MM LC fiber uplink patch cords with (6) adaptors, redundant power supplies and maintenance-free UPS.	1	2	c	1	x	x	—	—	x	—							•		x	•	•	•	•	•					x	

(continued)

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		MICE (Final Rating)				Detailed MICE Rating																									
						Mechanical												Ingress		Climatic/Chemical										EMI	
						M_2						M_3						I_2	I_3	C_2						C_3				E_2	E_3
						100 ms-1	7mm/20ms-1	300N	1100N/150mm	10J		250 ms-1	15mm/50 ms-1	2	2200N/150mm	30J				-25°C to +70°C	1,0 °C/min	See C3	< 5,0 ppm			-40°C to +70°C	3,0 °C/min	1120 W/m²	< 500 ppm		
		M	I	C	E	shock	vibration	*Tensile Connected	compression	impact resistance	torsion	shock	vibration	*Tensile Connected	compression	impact resistance	torsion	IP 54/65	IP 67	operation temp.	temp. change	sun radiation	oil resistance	res. liquid chemicals	res. gaseous agents	operation temp.	temp. change	sun radiation	oil resistance	res. liquid chemicals	res. gaseous agents		
Part Number	**Product Description**																														
Network Zone System (continued)																															
24" x 36" Enclosures – Category 6A Connectivity and Fiber Uplink Patch Cords and Adaptors																															
Z23U-S24S	Universal network zone system, 24" x 36", mild steel enclosure, for two industrial switches, includes (16) Category 6A STP copper patch cords and jacks, (4) MM LC fiber uplink patch cords with (6) adaptors and redundant power supplies.	1	2	c	2	x	x	—	—	x	—							•		x	•	•	•	•	•					•	
Z23U-S25S	Universal network zone system, 24" x 36", mild steel enclosure, for two industrial switches, includes (16) Category 6A STP copper patch cords and jacks, (4) MM LC fiber uplink patch cords with (6) adaptors, redundant power supplies and (2) maintenance-free UPS.	1	2	c	2	x	x	—	—	x	—							•		x	•	•	•	•	•					•	
24" x 36" Enclosures - Category 6 Connectivity and Fiber Uplink Patch Cords and Adaptors																															
Z23C-S	Pre-Configured network zone system, 24" x 36", mild steel enclosure, for two industrial switches, includes (16) Category 6 UTP copper patch cords and jacks, (4) MM LC fiber patch cords with (6) adaptors, backplane and cable management.	1	2	1	1	x	x	—	—	x	—							•		x	•	•	•	•	•					x	
Z23U-S24	Universal network zone system, 24" x 36", mild steel enclosure, for two industrial switches, includes (16) Category 6 UTP copper patch cords and jacks, (4) MM LC fiber uplink patch cords with (6) adaptors and redundant power supplies.	1	2	c	1	x	x	—	—	x	—							•		x	•	•	•	•	•					x	
Z23U-S25	Universal network zone system, 24" x 36", mild steel enclosure, for two industrial switches, includes (16) Catetory 6 UTP copper patch cords and jacks, (4) MM LC fiber uplink patch cords with (6) adaptors, redundant power supplies and (2) maintenance-free UPS.	1	2	c	1	x	x	—	—	x	—							•		x	•	•	•	•	•					x	

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		MICE (Final Rating)				Detailed MICE Rating																									
						Mechanical												Ingress		Climatic/Chemical												EMI	
						M_2						M_3						I_2	I_3	C_2						C_3						E_2	E_3
						100 ms-1	7mm/20ms-1	300N	1100N/150mm	10J		250 ms-1	15mm/50 ms-1	2	2200N/150mm	30J				-25°C to +70°C	1,0 °C/min	See C3	< 5,0 ppm			-40°C to +70°C	3,0 °C/min	1120 W/m²	< 500 ppm				
		M	I	C	E	shock	vibration	*Tensile Connected	compression	impact resistance	torsion	shock	vibration	*Tensile Connected	compression	impact resistance	torsion	IP 54/65	IP 67	operation temp.	temp. change	sun radiation	oil resistance	res. liquid chemicals	res. gaseous agents	operation temp.	temp. change	sun radiation	oil resistance	res. liquid chemicals	res. gaseous agents		
Part Number	**Product Description**																																
DIN Rail Mount and Fiber Uplink Kits																																	
FDME8RG	IndustrialNet™, 8-port, DIN Rail Fiber Optic Enclosure.	1	1	1	3	—	x	—	x	x	—							x		x	x	x	x	x	x								•
CADIN1*	1-port, DIN rail mount adapter with label.	—	1	—	—	—	—	—	—	—	—							x		—	—	—	—	—	—							—	
CDPP8RG	IndustrialNet™ 8-Port DIN Rail Mount Copper Patch Panel, RG.	—	—	1	1	x	x	—	x	x	—							—		x	x	x	x	x	x							x	
IAEFKSC	Industrial Ethernet enclosure fiber uplink kit – SC to MT/RJ.	—	2	1	—	—	—	—	—	—	—							•		x	—	—	—	—	—							—	
IAEFKSP	Industrial Ethernet enclosure fiber uplink splice kit – MT-RJ or SC.	—	2	1	—	—	—	—	—	—	—							•		x	—	—	—	—	—							—	•
Uninterruptible Power Supply																																	
UPS00100DC	Uninterruptible Power Supply (UPS), 100 Watts for 5 minutes, 24-48 VDC in/out, DIN rail mount.	1	1	1	—	—	—	—	—	—	—							—		—	—	—	—	—	—							—	
UPS003LSM	UPS load sense module.	1	1	1	—	—	—	—	—	—	—							—		—	—	—	—	—	—							—	
Data Access Port and Accessories																																	
IAPNG5EWH	Category 5e, IndustrialNet™ Data Access Port.	—	2	1	—	x	x	—	x	x	—							x		x	x	x	x	x	x							—	
IAPHF2MWH-X	Mini-Com®, 2-Position 1/3-Size Insert.	—	—	—	—	—	—	—	—	—	—							—		—	—	—	—	—	—							—	
IAPCMBWH-X	Mini-Com®, 1-port, Blank Module Insert for use with IndustrialNet™ Data Access Port.	—	—	—	—	—	—	—	—	—	—							—		—	—	—	—	—	—							—	
IAPHB2MWH-X	Mini-Com®, 1/3-size, Flat Insert, for use with IndustrialNet™ Data Access Port.	1	1	1	1	x	x	—	x	x	—							x		x	x	x	x	x	x							x	
IAPHD15HDCWH	15-pin, high-density female/female D-subminiature coupler, 1/3-size insert, for use with IndustrialNet™ Data Access Port.	1	1	1	1	x	x	—	x	x	—							x		x	x	x	x	x	x							x	
IAPHD15HDSCWH	15-pin, high-density, field terminated, D-subminiature Coupler in 1/3-size insert, for use with IndustrialNet™ Data Access Port.	1	1	1	1	x	x	—	x	x	—							x		x	x	x	x	x	x							x	
IAPHD9CWH	9-pin, female/female, D-subminiature coupler in 1/3-size insert, for use with IndustrialNet™ Data Access Port.	1	1	1	1	x	x	—	x	x	—							x		x	x	x	x	x	x							x	
Faceplates																																	
IAEFP1	Vertical, stainless steel, single gang faceplate accepts one IndustrialNet™ Bulkhead Connector or Adapter.	—	3	—	—	—	—	—	—	—	—								•	—	—	—	—	—	—							—	
IAEFP2-2G	Vertical, stainless steel, double gang faceplate accepts two IndustrialNet™ Bulkhead Connectors or Adapters.	—	3	—	—	—	—	—	—	—	—								•	—	—	—	—	—	—							—	
Zone Cabling Accessories																																	
PZNDVK	Zone cabling drain and vent kit, NEMA 4X rating.	—	3	—	—	—	—	—	—	—	—								•	—	—	—	—	—	—							—	
PZNF1	Zone cabling compression fitting, NEMA 6P cable diameter 0.115-0.250" (2.92mm-6.4mm).	—	2	—	—	—	—	—	—	—	—							•		—	—	—	—	—	—							—	
PZNF2	Zone cabling compression fitting, NEMA 6P cable diameter 0.230-0.395" (6.4mm-10mm).	—	2	—	—	—	—	—	—	—	—							•		—	—	—	—	—	—							—	
PZNF3	Zone cabling compression fitting, NEMA 6P cable diameter 0.170-0.450" (4.3mm-11.4mm).	—	2	—	—	—	—	—	—	—	—							•		—	—	—	—	—	—							—	

* Available in multiple colors.

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