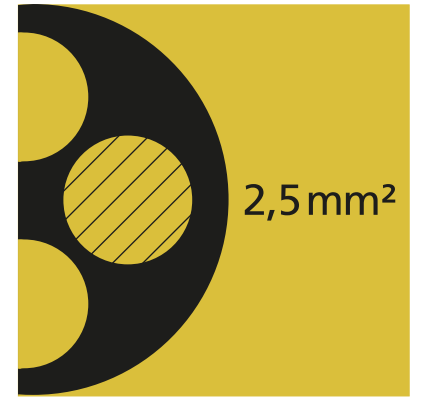


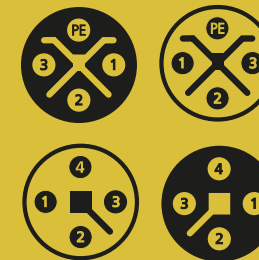
12 A

630V_{AC} | 63V_{DC}

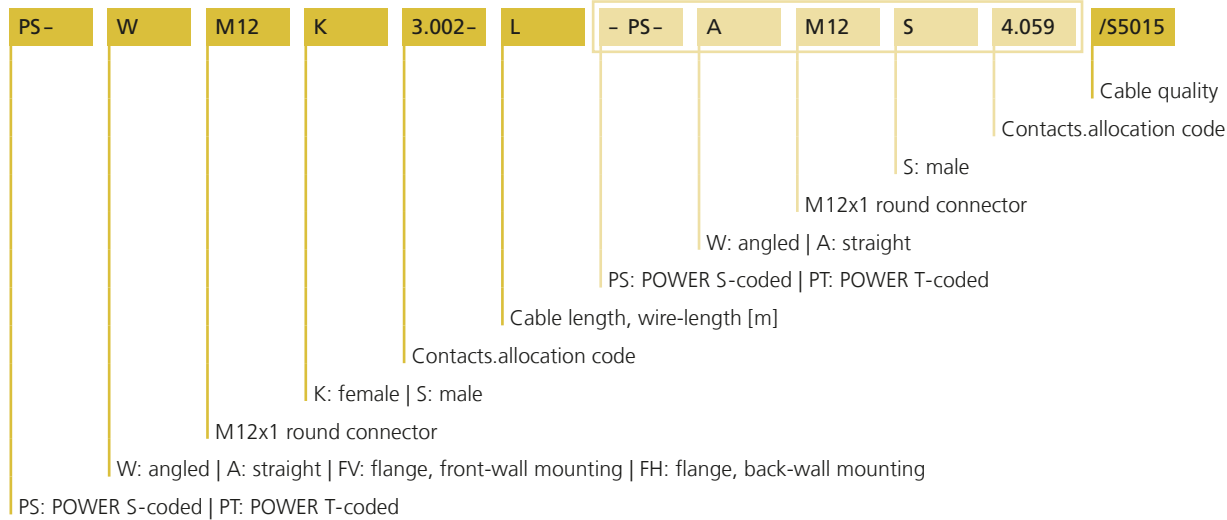
M12x1 POWER



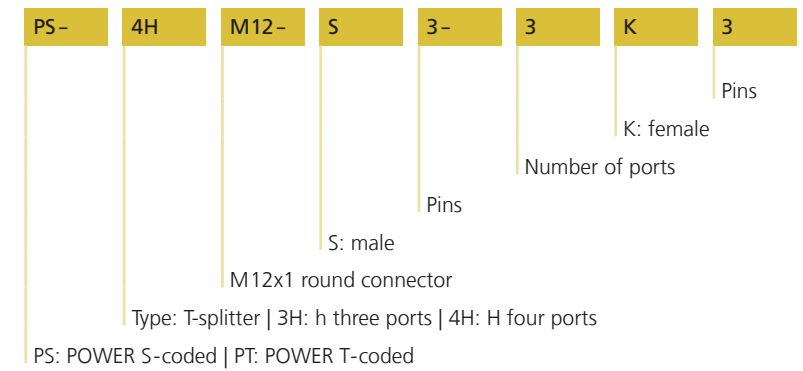
IP67



Nomenclature of patched connectors, receptacles



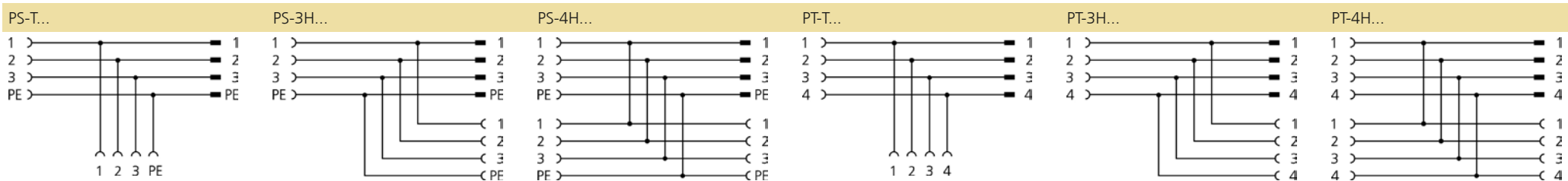
Nomenclature of POWER junctions



Cable Short description

S5015 | PUR Flexible PUR/PP power-cable for high mechanical stresses. Halogen-free, flame retardant, high drag-chain capability, oil- and chemical resistant, UL-style. Wire cross-section 1,5 mm².

S5025 | PUR Flexible PUR/PP power-cable for high mechanical stresses. Halogen-free, flame retardant, high drag-chain capability, oil- and chemical resistant, UL-style. Wire cross-section 2,5mm².















Nearly actual size












M12x1 POWER

Technical data	Connector	Receptacle	T-, h-, H-splitter	Field-wireable
Insulation resistance	$\geq 10^8 \Omega$	$\geq 10^8 \Omega$	$\geq 10^8 \Omega$	$\geq 10^8 \Omega$
Resistance	$\leq 5 \text{ m}\Omega$	$\leq 5 \text{ m}\Omega$	$\leq 5 \text{ m}\Omega$	$\leq 3 \text{ m}\Omega$
Ambient temperature product	-30°C...+90°C	-40°C...+85°C	-30°C...+90°C	-30°C...+90°C
Contact material	Metal, CuZn, gold-plated	Metal, gold-plated	Metal, gold-plated	Metal, gold-plated
Contact-carrier material	Plastic, PA, BK	Plastic, PA	Plastic, PA, BK	Plastic, PA
Grip body material	Plastic, TPU, BK	Plastic, TPU	Plastic, TPU	Plastic, PA
Coupling nut material	Metal, CuZn, nickel-plated	Metal, nickel-plated		
Sealing (female) material	FPM/FKM			
Receptacle housing material		Zinc die-cast, nickel-plated		
Standards	IEC 61076-2-111		IEC 61076-2-101	IEC 61076-2-111
Degree of protection (mounted)	IP65, IP67, IP68	IP67	IP65, IP67, IP68	IP67
Mechanical life-cycle	>100 mating cycles	>100 mating cycles	>100 mating cycles	>100 mating cycles
Degree of pollution	2	3	2	3
Clamping area				8...10mm
Connecting cross-section				1.50mm ²












M12x1 POWER from ESCHA stands for a reliable power transmission via the standardized M12x1-interface. Devices with S-coding (AC-applications up to 630V) and T-coding (DC-applications up to 63V) transmit currents up to 12A. A broad product range with extension- and connection cables as well as H-, h-, and T-junctions facilitates a serial wiring structure at field level. The connection cross-section up to 2.5 mm² of all M12x1 POWER products is a unique feature. In contrast to small cross-sections, this feature enables a large extension of power distribution and – especially in case of DC-distribution – a slight voltage drop.

		Body					Cable			UL	Item description	L = cable length*		
		Pins	U[max]	I[max]	Cod	Material	Color	2m / 1m	5m / 2m			10m / 5m		
	Extension cable female, M12x1, straight	2+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-AM12K3.002-L/S5015	8064011	8064012	8064013		
		3+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-AM12K4.155-L/S5015	8068091	8068092	8068093		
	Extension cable female, M12x1, angled	2+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-WM12K3.002-L/S5015	8064014	8064015	8064016		
		3+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-WM12K4.155-L/S5015	8068095	8068096	8068097		
	Extension cable male, M12x1, straight	2+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-AM12S3.002-L/S5015	8064017	8064018	8064019		
		3+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-AM12S4.155-L/S5015	8068098	8068106	8068107		
	Extension cable male, M12x1, angled	2+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-WM12S3.002-L/S5015	8064020	8064021	8064022		
		3+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-WM12S4.155-L/S5015	8068108	8068109	8068110		
	Connection cable female, M12x1, straight	2+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-AM12K3.002-L-PS-AM12S3.002/S5015	8063999	8064000	8064001		
		3+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-AM12K4.155-L-PS-AM12S4.155/S5015	8068297	8068131	8068132		
	Connection cable female, M12x1, straight	2+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-AM12K3.002-L-PS-WM12S3.002/S5015	8064002	8064003	8064004		
		3+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-AM12K4.155-L-PS-WM12S4.155/S5015	8068298	8068134	8068135		
	Connection cable female, M12x1, angled	2+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-AM12K3.002-L-PS-WM12S3.002/S5015	8064002	8064003	8064004		
		3+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-AM12K4.155-L-PS-WM12S4.155/S5015	8068298	8068134	8068135		
	Connection cable female, M12x1, angled	2+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-WM12K3.002-L-PS-AM12S3.002/S5015	8064008	8064009	8064010		
		3+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-WM12K4.155-L-PS-AM12S4.155/S5015	8068301	8068140	8068141		
	Connection cable female, M12x1, angled	2+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-WM12K3.002-L-PS-WM12S3.002/S5015	8064005	8064006	8064007		
		3+PE	630V _{AC} 600V _{AC} (UL)	12A	S	PUR	BK	•	PS-WM12K4.155-L-PS-WM12S4.155/S5015	8068299	8068137	8068138		
	Receptacle female, M12x1, straight	2+PE	630V	16A	S				PS-FVM12K3.031-0,2	8064859				
		3+PE	630V	12A	S				PS-FVM12K4.165-0,2	8067075				
	Wire contact Front wall-mounting													






* Standard cable-lengths for extension cables: 2m, 5m, or 10m. For connection cables: 1m, 2m, or 5m. Wire length for POWER receptacles: 0.2m. Other cable- and wire lengths are available upon request.



		Body				Cable				L = cable length*		
		Pins	U[max]	I[max]	Cod	Material	Color	UL	Item description	2m / 1m	5m / 2m	10m / 5m
	Receptacle female, M12x1, straight Wire contact Back wall-mounting	2+PE	630V	16A	S				PS-FHM12K3.031-0,2	8064861		
		3+PE	630V	12A	S				PS-FHM12K4.165-0,2	8067077		
	Receptacle male, M12x1, straight Wire contact Front wall-mounting	2+PE	630V	16A	S				PS-FVM12S3.031-0,2	8064858		
		3+PE	630V	12A	S				PS-FVM12S4.165-0,2	8067074		
	Receptacle male, M12x1, straight Wire contact Back wall-mounting	2+PE	630V	16A	S				PS-FHM12S3.031-0,2	8064860		
		3+PE	630V	12A	S				PS-FHM12S4.165-0,2	8067076		
	Connector field-wireable female, M12x1, straight Screw-/clamp contact	4	630V	12A	S				PS-WAKC4K	8063400		
	Connector field-wireable male, M12x1, straight Screw-/clamp contact	4	630V	12A	S				PS-WASC4K	8063399		
	T-splitter	3+PE	630V _{AC} 600V _{AC} (UL)	12A	S				PS-TM12-S4-LK4	8062858		
	h-splitter	3+PE	630V _{AC} 600V _{AC} (UL)	12A	S				PS-3HM12-S4-LK4	8062859		
	H-splitter	3+PE	630V _{AC} 600V _{AC} (UL)	12A	S				PS-4HM12-S4-3K4	8062860		
	Extension cable female, M12x1, straight	4	63V	12A	T	PUR	BK	•	PT-AM12K4-L/S5015	8063986	8063987	8063988
				12A	T	PUR	BK	•	PT-AM12K4-L/S5025	8063962	8063963	8063964
	Extension cable female, M12x1, angled	4	63V	12A	T	PUR	BK	•	PT-WM12K4-L/S5015	8063989	8063990	8063991
				12A	T	PUR	BK	•	PT-WM12K4-L/S5025	8063965	8063966	8063967
	Extension cable male, M12x1, straight	4	63V	12A	T	PUR	BK	•	PT-AM12S4-L/S5015	8063992	8063993	8063994
				12A	T	PUR	BK	•	PT-AM12S4-L/S5025	8063968	8063969	8063970

* Standard cable-lengths for extension cables: 2m, 5m, or 10m. For connection cables: 1m, 2m, or 5m. Wire length for POWER receptacles: 0.2m. Other cable- and wire lengths are available upon request.

		Body				Cable			UL	Item description	L = cable length*		
		Pins	U[max]	I[max]	Cod	Material	Color	2m / 1m			5m / 2m	10m / 5m	
	Extension cable male, M12x1, angled	4	63V	12A	T	PUR	BK	•	PT-WM12S4-L/S5015	8063998	8063997	8063995	
				12A	T	PUR	BK		PT-WM12S4-L/S5025	8063971	8063972	8063973	
	Connection cable female, M12x1, straight	4	63Vdc	12A	T	PUR	BK	•	PT-AM12K4-L-PT-AM12S4/S5015	8063974	8063975	8063976	
				12A	T	PUR	BK		PT-AM12K4-L-PT-AM12S4/S5025	8063950	8063951	8063952	
	Connection cable female, M12x1, straight	4	63Vdc	12A	T	PUR	BK	•	PT-AM12K4-L-PT-AM12S4/S5015	8063977	8063978	8063979	
				12A	T	PUR	BK		PT-AM12K4-L-PT-WM12S4/S5025	8063953	8063954	8063955	
	Connection cable female, M12x1, angled	4	63Vdc	12A	T	PUR	BK	•	PT-AM12K4-L-PT-WM12S4/S5015	8063977	8063978	8063979	
				12A	T	PUR	BK		PT-AM12K4-L-PT-WM12S4/S5025	8063953	8063954	8063955	
	Connection cable female, M12x1, angled	4	63Vdc	12A	T	PUR	BK	•	PT-WM12K4-L-PT-AM12S4/S5015	8063983	8063984	8063985	
				12A	T	PUR	BK		PT-WM12K4-L-PT-AM12S4/S5025	8063959	8063960	8063961	
	Connection cable female, M12x1, straight	4	63Vdc	12A	T	PUR	BK	•	PT-WM12K4-L-PT-AM12S4/S5015	8063980	8063981	8063982	
				12A	T	PUR	BK		PT-WM12K4-L-PT-WM12S4/S5025	8063956	8063957	8063958	
	Connection cable female, M12x1, angled	4	63Vdc	12A	T	PUR	BK	•	PT-WM12K4-L-PT-WM12S4/S5015	8063980	8063981	8063982	
				12A	T	PUR	BK		PT-WM12K4-L-PT-WM12S4/S5025	8063956	8063957	8063958	
	Receptacle female, M12x1, straight	4	63V	12A	T				PT-FVM12K4-0,2	8064855			
	Wire contact Front wall-mounting												
	Receptacle female, M12x1, straight	4	63V	12A	T				PT-FHM12K4-0,2	8064857			
	Wire contact Back wall-mounting												
	Receptacle male, M12x1, straight	4	63V	12A	T				PT-FVM12S4-0,2	8064854			
	Wire contact Front wall-mounting												
	Receptacle male, M12x1, straight	4	63V	12A	T				PT-FHM12S4-0,2	8064856			
	Wire contact Back wall-mounting												

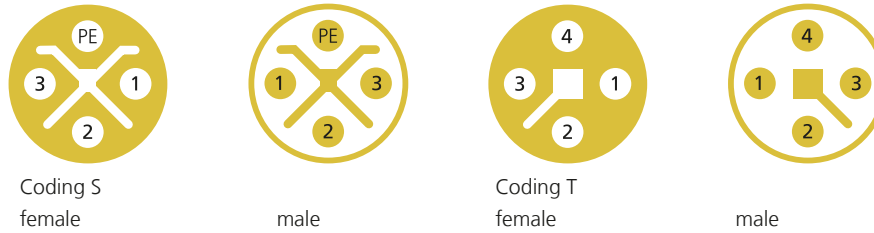
* Standard cable-lengths for extension cables: 2m, 5m, or 10m. For connection cables: 1m, 2m, or 5m. Wire length for POWER receptacles: 0.2m. Other cable- and wire lengths are available upon request.

		Body				Cable			L = cable length*			
		Pins	U[max]	I[max]	Cod	Material	Color	UL	Item description	2m / 1m	5m / 2m	10m / 5m
	Connector field-wireable female, M12x1, straight Screw-/clamp contact	4	63V	12A	T				PT-WAKC4K	8063398		
	Connector field-wireable male, M12x1, straight Screw-/clamp contact	4	63V	12A	T				PT-WASC4K	8063397		
	T-splitter	4	63V	12A	T				PT-TM12-S4-LK4	8067897		
	h-splitter	4	63V	12A	T				PT-3HM12-S4-LK4	8067900		
	H-splitter	4	63V	12A	T				PT-4HM12-S4-3K4	8067903		

		Wire	Wire color	Conductor structure	ø [mm]	Item description	L = 100m
	PUR, Control line,	2+PE	BN, BU, GN/YE	extra finely stranded class 6	8,50	LiF9YH-11YH 3G1,5	8064082
	POWER,	3+PE	GY, BK, BN, GN/YE	extra finely stranded class 6	9,60	LiF9YH-11YH 4G1,5	8070663
	S5015 1,5 mm²	4	BN, WH, BU, BK	extra finely stranded class 6	9,60	LiF9YH-11YH 4x1,5	8064083
	PUR, Control line,	4	BN, WH, BU, BK	extra finely stranded class 6	11,00	LiF9YH-11YH 4x2,5	8064084
	POWER,						
	S5025 2,5 mm²						

* Standard cable-lengths for extension cables: 2m, 5m, or 10m. For connection cables: 1m, 2m, or 5m. Wire length for POWER receptacles: 0.2m. Other cable- and wire lengths are available upon request.

Pinout



Pins	Coding	Allocation code	Contact										
			1	2	3	4							
2+PE	S	3.002	BN		BU	GN/YE							
2+PE	S	3.031	BK		BK	GN/YE							
3+PE	S	4.155	BN	BK	GY	GN/YE							
4	T		BN	WH	BU	BK							

General wiring instructions

The correct installation of the round connector and a professional wiring are the precondition for properties of a relevantly tight and reliable electrical connection guaranteed by the manufacturer. In order to avoid damage to a round connector and cable, the minimum bending radius of the cable (r_{min}) is to be observed during the wiring.

Data lines are high-performance products. Avoid any mechanical influences like squeezing, edgy snapping and tractive forces during mounting and operating to ensure a permanent and safe data transmission. Be careful while mounting at sub-zero temperatures, as plastics boast different features at low temperatures and the end product might be damaged. When using cable ties for cable bundling or permanent wiring, the ties must not cut into or deform the cable to avoid short circuits, cable interruptions or a reduction of the dielectric strength.

In case of cord sets double ended, sufficient cable length between the connections should be observed in order to absorb the generated energy during movement. The use of cable loops, spiral lines or cable chains guarantees a high life cycle of the round connector system.

