

PROFINET 678 fixed installation, type A
SPECIAL PROFINET 678 UL flexible application, type B, UL approval



ELETTROTEKKABEL® SPECIAL PROFINET 678 UL



Construction:

CONDUCTOR:	(PROFINET 678): SOLID TINNED COPPER CONDUCTOR (PROFINET 678 UL): STRANDED TINNED COPPER CONDUCTOR, 7X0,16 mm - 26/7 AWG
INSULATION:	PE COMPOUND
COLOUR CORES:	WHITE/BLUE, WHITE/ORANGE, WHITE/GREEN, WHITE/BROWN
STRANDING:	CORES TWISTED IN PAIRS, PAIRS TWISTED TOGETHER
WRAPPING:	ALUMINIUM TAPE (PROFINET 678)
WRAPPING:	PETP FOIL (PROFINET 678 UL):
SCREEN:	TINNED COPPER BRAID (PROFINET 678)
SCREEN:	ALUMINIUM TAPE + PETP FOIL AND TINNED COPPER BRAID (PROFINET 678 UL)
OUTER SHEATH:	GREEN (SIMILAR RAL 6018), PVC COMPOUND

Technical data:

PEAK OPERATING VOLTAGE:	MAX. 350 V (PROFINET 678)
NOMINAL VOLTAGE:	125 V (PROFINET 678 UL)
TEST VOLTAGE:	(PROFINET 678) CORE/CORE 1,5 kV CORE/SCREEN 1,2 kV
TEST VOLTAGE:	(PROFINET 678 UL) CORE/CORE 700 V x 1 min CORE/SCREEN 700 V x 1 min
TEMPERATURE RANGE	(PROFINET 678):
FIXED LAYING:	-30 UP TO+70°C
FLEXIBLE INSTALLATION:	-5 UP TO+70°C
TEMPERATURE RANGE	(PROFINET 678 UL):
FIXED LAYING:	-30 UP TO+80°C
FLEXIBLE APPLICATION:	-5 UP TO+50°C
MIN. BENDING RADIUS:	
FIXED LAYING:	5 x D
SPORADIC MOVEMENT:	10 x D (PROFINET 678 UL)
OHMIC RESISTANCE AT 20°C MAX. Ω/km:	MAX. 150, ACC. TO VDE 0812 (PROFINET 678)
MAX. DC CONDUCTOR RESISTANCE:	140 Ω/km (PROFINET 678 UL)
CAPACITANCE AT 800 Hz:	48 pF/m (PROFINET 678 UL)
MAX. CAPACITANCE UNBALANCE:	1600 pF/km (PROFINET 678 UL)
PROPAGATION VELOCITY AT 100 MHz:	APPROX. 75% (PROFINET 678 UL)
CHARACTERISTIC IMPEDANCE:	(PROFINET 678) 100Ω (± 10%) ACC. TO EN 50288-2-2, CAT 5E ACC. TO EN 50173-1
CHARACTERISTIC IMPEDANCE:	(PROFINET 678 UL) 100Ω (± 15%), CAT 5E
MIN. INSULATION RESISTANCE:	5 GΩ x km (PROFINET 678 UL)
TRANSFER IMPEDANCE:	10 MΩ/m AT 1 MHz, 4 MΩ/m AT 10 MHz 4 MΩ/m AT 30 MHz, 2 MΩ/m AT 100 MHz (PROFINET 678 UL)
STANDARD REFERENCE:	IEC 61156-3, EN 50288-1, EN 50288-2-2 ISO IEC 11801

Resistance:



FLAME RETARDANT ACC. TO:
UL 1581 1061, CSA FT1, IEC 60332-1
STANDARD REQUIREMENTS **(PROFINET 678 UL)**



OIL RESISTANCE ACC. TO:
DIN VDE 0473 PART. 811-2-1 IEC 60811-2-1
(PROFINET 678)
EN 50363-4-1, IEC 60811-2-1, DIN VDE 0472-803
UL 13 (60°C), ACC. TO ICEA S-82-552 AND NEMA WC55
(PROFINET 678 UL)



SUNLIGHT RESISTANT ACC. TO:
UL 1581 1200 STANDARD REQUIREMENT
(PROFINET 678 UL)

Features:

(UL) AWM STYLE 1598 - 2571 30 V 80°C **(PROFINET 678 UL)**

ROHS AND CE APPROVAL



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FREQUENCY (MHZ)	ATTENUATION (DB/100 M)		NEXT (DB)		PS NEXT (DB)		PS EL-FEXT (DB/100M)		PS ACR (DB/100 M)		RETURN LOSS (DB)	
	MAX. - STD	TYPICAL	MIN. - STD	TYPICAL	MIN.	MIN.	MIN - STD	TYPICAL	MIN.	TYPICAL	MIN. STD	TYPICAL
1	3,2	2,5	65,3	71	62,3	69	60,8	69	62,1	68,5	-	29
4	6	5,2	56,3	63	53,3	61	48,8	57	50,3	57,8	24,1	32
10	9,5	8,4	50,3	58	47,3	56	40,8	51	40,8	49,6	25	32
16	12,1	11	47,2	56	44,2	54	36,7	47	35,1	45	25	32
20	13,6	12,5	45,8	54	42,8	52	34,8	45	32,2	41,5	25	32
31,25	17,1	16	42,9	50	39,9	48	30,9	42	25,8	34	23,6	30
62,5	24,8	23,6	38,4	45	35,4	43	24,9	36	13,6	21,4	21,5	28
100	32	29,9	35,3	43	32,3	41	20,8	32	3,3	13,1	20,1	26
155,52		37,4		40		38	-	26	-	2,6	-	24
200		42,8		37		35	-	22	-	-	-	23

PROFINET 678 UL

Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	AWG no. *)
39290CEX042M01	4 x 2 x 0,14	6,2	33	49	26
39300BEX042A26	4 x 2 x 0,14	6,2	33	54	26

Other dimension and colours available on request.