

UNITRONIC® BUS FF-844 H1 PVC

DS 382200005

valid from: 2018-03-31

Application

UNITRONIC® BUS FF incorporates a complete cabling solution for the implementation of field automation and field control. Fieldbus is a Digital, Serial, Multidrop, data bus for communication with low level industrial control and instrumentation devices such as transducers, actuators, and local controllers.

Design

Conductor	18 AWG tinned copper conductor with maximum DCR – 23.5 Ohms/km at 20 °C.
Standard	FF 844
Insulation	cross linked polyethylene insulated, blue & orange
Shielding	individual and overall shielded with polyester backed aluminium tape.
Inner sheath	special PVC with fire retardant low smoke properties
Outer sheath	special PVC with Fire Retardant low smoke properties. Colour Orange.
Armouring	GI Armoured – either wire or strip. (Unarmoured version also available)

Electrical properties

Nominal voltage	300 V
Test voltage	1000 V AC core to core
Characteristic impedance	100Ω +/- 20Ω @ 31.25 kHz
Max propagation delay change	7.8 KHz to 39 KHz = 1.7 μS/KM
Attenuation	< 3 dB/km @ 39 kHz wire to shield capacitance unbalance - the difference in capacitance between one wire (+) and the shield and the other wire (-) and the shield FF-844 - No more than 4pF/meter Sample length = 30 meter of cable.
Jacket resistance	1Mohm/330 meter – tested in water 500 V for 1 min.

Mechanical properties

Min. bending radius	fixed installation: unarmoured 10 x OD armoured 18 x OD steel braided 13 x OD.
Temperature range	fixed installation: -30 °C up to +90 °C max. conductor temperature

Flame and other tests

Flammability	in acc. with IEC 60332-1
Oxygen index	>29 % in acc. to IS 10810 Part - 58
Temperature index	>250°C in acc. to IS 10810 Part - 64
Smoke density	Max. 40% in acc. to IS 10810 Part - 63
Acid gas generation	Max. 20% by weight as per IS 10810 Part - 59

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Special properties

This product conforms to RoHS directive (Restriction of the use of certain hazardous substances)

Article number	Number of cores and mm ² per conductor	Nominal outer diameter (mm)	Copper weight (kg/km) Approx.	Weight (kg/km) Approx.
UNITRONIC® BUS FF-844 H1 PVC - YC3OR				
382200005	1P 18AWG	8.6	15.4	90.3
382200029	2P 18AWG	14.7	30.7	220.4
382200053	3P 18AWG	15.7	46.1	278.0
382200077	4P 18AWG	17.4	61.4	349.2
382200101	5P 18AWG	19.2	76.8	423.1
382200125	6P 18AWG	21.0	92.1	489.8
382200149	7P 18AWG	21.0	107.5	538.3
382200173	8P 18AWG	23.8	122.8	625.5
382200197	9P 18AWG	26.0	138.2	708.9
382200221	10P 18AWG	27.4	153.5	785.2
382200245	11P 18AWG	27.4	168.9	833.8
382200269	12P 18AWG	28.3	184.2	892.9
382200289	13P 18AWG	30.0	199.6	974.6
382200297	14P 18AWG	30.0	214.9	1023.2
382200305	15P 18AWG	31.7	230.3	1092.5
382200313	16P 18AWG	31.7	245.6	1141.1
382200321	17P 18AWG	33.6	261.0	1227.9
382200329	18P 18AWG	33.6	276.4	1276.5
382200337	19P 18AWG	33.6	291.7	1325.1
382200345	20P 18AWG	35.8	307.1	1417.9
382200353	21P 18AWG	35.8	322.4	1466.5
382200361	22P 18AWG	37.8	337.8	1541.5
382200369	23P 18AWG	37.8	353.1	1590.1
382200377	24P 18AWG	39.9	368.5	1684.7
382200385	25P 18AWG	39.9	383.8	1733.3
UNITRONIC® BUS FF-844 H1 PVC - YC3SSAYC3OR				
382200054	3P 18AWG	20.7	46.1	768.0
382200078	4P 18AWG	22.2	61.4	873.9
382200102	5P 18AWG	24.2	76.8	1012.1
382200126	6P 18AWG	26.2	92.1	1148.4
382200150	7P 18AWG	26.2	107.5	1197.0
382200174	8P 18AWG	29.2	122.8	1382.8
382200198	9P 18AWG	31.6	138.2	1549.4
382200222	10P 18AWG	32.8	153.5	1648.3
382200246	11P 18AWG	32.8	168.9	1696.8
382200270	12P 18AWG	33.7	184.2	1783.2
382200290	13P 18AWG	35.6	199.6	1935.1
382200298	14P 18AWG	35.6	214.9	1983.7
382200306	15P 18AWG	37.5	230.3	2128.2
382200314	16P 18AWG	37.5	245.6	2176.8
382200322	17P 18AWG	39.4	261.0	2320.0
382200330	18P 18AWG	39.4	276.4	2368.6
382200338	19P 18AWG	39.4	291.7	2417.2
382200346	20P 18AWG	41.6	307.1	2578.8
382200354	21P 18AWG	41.6	322.4	2627.4
382200362	22P 18AWG	44.0	337.8	2814.4
382200370	23P 18AWG	44.0	353.1	2863.0
382200378	24P 18AWG	46.3	368.5	3049.9
382200386	25P 18AWG	46.3	383.8	3098.5
UNITRONIC® BUS FF-844 H1 PVC - YC3SSAYC3UVAROR				
382200056	3P 18AWG	20.7	46.1	768.0
382200080	4P 18AWG	22.2	61.4	873.9
382200104	5P 18AWG	24.2	76.8	1012.1
382200128	6P 18AWG	26.2	92.1	1148.4
382200152	7P 18AWG	26.2	107.5	1197.0
382200176	8P 18AWG	29.2	122.8	1382.8
382200200	9P 18AWG	31.6	138.2	1549.4
382200224	10P 18AWG	32.8	153.5	1648.3
382200248	11P 18AWG	32.8	168.9	1696.8
382200272	12P 18AWG	33.7	184.2	1783.2
382200292	13P 18AWG	35.6	199.6	1935.1
382200300	14P 18AWG	35.6	214.9	1983.7
382200308	15P 18AWG	37.5	230.3	2128.2
382200316	16P 18AWG	37.5	245.6	2176.8
382200324	17P 18AWG	39.4	261.0	2320.0
382200332	18P 18AWG	39.4	276.4	2368.6

Article number	Number of cores and mm ² per conductor	Nominal outer diameter (mm)	Copper weight (kg/km) Approx.	Weight (kg/km) Approx.
382200340	19P 18AWG	39.4	291.7	2417.2
382200348	20P 18AWG	41.6	307.1	2578.8
382200356	21P 18AWG	41.6	322.4	2627.4
382200364	22P 18AWG	44.0	337.8	2814.4
382200372	23P 18AWG	44.0	353.1	2863.0
382200380	24P 18AWG	46.3	368.5	3049.9
382200388	25P 18AWG	46.3	383.8	3098.5
UNITRONIC® BUS FF-844 H1 PVC - YC3SWAYC3OR				
382200006	1P 18AWG	13.2	15.4	330.0
382200030	2P 18AWG	19.7	30.7	634.9
UNITRONIC® BUS FF-844 H1 PVC - YC3SWAYC3UVAROR				
382200008	1P 18AWG	13.2	15.4	330.0
382200032	2P 18AWG	19.7	30.7	634.9
UNITRONIC® BUS FF-844 H1 PVC - YC3SYC3OR				
382200011	1P 18AWG	12.6	15.4	222.3
382200035	2P 18AWG	18.9	30.7	443.1
382200059	3P 18AWG	20.3	46.1	532.7
382200083	4P 18AWG	21.8	61.4	620.2
382200107	5P 18AWG	23.8	76.8	728.5
382200131	6P 18AWG	25.8	92.1	832.0
382200155	7P 18AWG	25.8	107.5	880.6
382200179	8P 18AWG	28.8	122.8	1027.9
382200203	9P 18AWG	31.2	138.2	1158.2
382200227	10P 18AWG	32.4	153.5	1249.9
382200251	11P 18AWG	32.4	168.9	1298.5
382200275	12P 18AWG	33.3	184.2	1370.7
UNITRONIC® BUS FF-844 H1 PVC - YC3SYC3UVAROR				
382200012	1P 18AWG	12.6	15.4	222.3
382200036	2P 18AWG	18.9	30.7	443.1
382200060	3P 18AWG	20.3	46.1	532.7
382200084	4P 18AWG	21.8	61.4	620.2
382200108	5P 18AWG	23.8	76.8	728.5
382200132	6P 18AWG	25.8	92.1	832.0
382200156	7P 18AWG	25.8	107.5	880.6
382200180	8P 18AWG	28.8	122.8	1027.9
382200204	9P 18AWG	31.2	138.2	1158.2
382200228	10P 18AWG	32.4	153.5	1249.9
382200252	11P 18AWG	32.4	168.9	1298.5
382200276	12P 18AWG	33.3	184.2	1370.7
UNITRONIC® BUS FF-844 H1 PVC - YC3UVAROR				
382200007	1P 18AWG	8.6	15.4	90.3
382200031	2P 18AWG	14.7	30.7	220.4
382200055	3P 18AWG	15.7	46.1	278.0
382200079	4P 18AWG	17.4	61.4	349.2
382200103	5P 18AWG	19.2	76.8	423.1
382200127	6P 18AWG	21.0	92.1	489.8
382200151	7P 18AWG	21.0	107.5	538.3
382200175	8P 18AWG	23.8	122.8	625.5
382200199	9P 18AWG	26.0	138.2	708.9
382200223	10P 18AWG	27.4	153.5	785.2
382200247	11P 18AWG	27.4	168.9	833.8
382200271	12P 18AWG	28.3	184.2	892.9
382200291	13P 18AWG	30.0	199.6	974.6
382200299	14P 18AWG	30.0	214.9	1023.2
382200307	15P 18AWG	31.7	230.3	1092.5
382200315	16P 18AWG	31.7	245.6	1141.1
382200323	17P 18AWG	33.6	261.0	1227.9
382200331	18P 18AWG	33.6	276.4	1276.5
382200339	19P 18AWG	33.6	291.7	1325.1
382200347	20P 18AWG	35.8	307.1	1417.9
382200355	21P 18AWG	35.8	322.4	1466.5
382200363	22P 18AWG	37.8	337.8	1541.5
382200371	23P 18AWG	37.8	353.1	1590.1
382200379	24P 18AWG	39.9	368.5	1684.7
382200387	25P 18AWG	39.9	383.8	1733.3