



Caledonian

FIREGUARD PVC Sheathed Fire Retardant RS485 Databus Cables





Caledonian

Caledonian FIREGUARD PVC Sheathed Fire Retardant RS485 Databus Cables

Company Profile

Caledonian. established in 1978.offers one of the most complete lines of fiber and copper cabling system solutions with over hundreds of different cabling system products. . Our superior products provide leading edge within every cable series and for every application.

Among the national and international standards with which our cables could comply are: BS - British Standard; LPCB Fire Performance Standard. ISO Standard etc. Caledonian Cables offers a comprehensive stock of cables and cabling products through its nationwide network of resellers and distributors. Caledonian Cables has continually expanded its global presence in Europe and Asia.

Caledonian & Addison. produces a wide range of cables for communication. power and electronics in its primary plants in UK. Italy and Spain. To stay in front. we continually keep expanding our manufacturing capabilities in more low cost region such as Romania. Taiwan. Malaysia etc. This low-cost manufacturing facilities enable us provide a flexible. scalable global system that delivers superior operational performance and optimal results for our customers.

Our extensive global network of manufacturing facilities gives us significant scale and the flexibility to fulfill our customer requirements. This global presence provides design and consultancy solutions that are combined with core cable manufacturing. logistic services. and vertically integrated with our ecommerce technologies. to optimize customer operations by lowering costs and reducing time to market.



Caledonian & Addison has been respected for its high standards of quality. excellent service level. competitive pricing and a unique and innovative spirit. With our latest technologies. we are both inspired and well-positioned to meet the changing needs of our customers. We have the resources to diversify and to enhance our product lines and services. We understand the need for change and with our accurate planning. we are ready for the future and the promise of new marketing opportunities. Our tradition of growth through excellence is assured.

Our Design Centers work closely with customers to constantly improve its standard range of products and technologies and to develop customized. country and industry-specific solutions. Caledonian & Addison has established an extensive network of design. manufacturing. and logistics facilities in the world's major markets to serve the growing outsourcing needs of both multinational and regional customers.

Table of Contents

PVC Sheathed Fire Retardant RS485 Screened Databus Cables

Foam PE Insulated, PVC Sheathed, Overall Aluminum/Polyester Tape Screened Multipair RS 485 Databus Cables.....	5
Foam Skin PE Insulated, PVC Sheathed, Overall Aluminum/Polyester Tape Screened Multipair RS 485 Databus Cables.....	8
Foam PE Insulated, PVC Sheathed, Overall Aluminum/Polyester Tape & Copper Wire Braid Double Screened Multipair RS 485 Databus Cables.....	11
Foam Skin PE Insulated, PVC Sheathed, Overall Aluminum/Polyester Tape & Copper Wire Braid Double Screened Multipair RS 485 Databus Cables.....	14
Foam PE Insulated, PVC Sheathed, Individual Aluminum/Polyester Tape Screen & Overall Copper Wire Braid Screened Multipair RS 485 Databus Cables.....	17
Foam Skin PE Insulated, PVC Sheathed, Individual Aluminum/Polyester Tape Screen & Overall Copper Wire Braid Screened Multipair RS 485 Databus Cables.....	20
Foam PE Insulated, PVC Sheathed, Overall Copper Wire Braid Screened Multipair RS 485 Databus Cables.....	23
Foam Skin PE Insulated, PVC Sheathed, Overall Copper Wire Braid Screened Multipair RS 485 Databus Cables.....	26

PVC Sheathed Fire Retardant RS485 Screened & GSWB Databus Cables

Foam PE Insulated, PVC Sheathed, Overall Aluminum/Polyester Tape Screened, Galvanized Steel Wire Braided Multipair RS 485 Databus Cables.....	29
Foam Skin PE Insulated, PVC Sheathed, Overall Aluminum/Polyester Tape Screened, Galvanized Steel Wire Braided Multipair RS 485 Databus Cables.....	32
Foam PE Insulated, PVC Sheathed, Overall Aluminum/Polyester Tape & Copper Wire Braid Double Screened, Galvanized Steel Wire Braided Multipair RS 485 Databus Cables.....	35
Foam Skin PE Insulated, PVC Sheathed, Overall Aluminum/Polyester Tape & Copper Wire Braid Double Screened, Galvanized Steel Wire Braided Multipair RS 485 Databus Cables.....	38

Foam PE Insulated, PVC Sheathed, Individual Aluminum/Polyester Tape & Overall Copper Wire Braid Screened, Galvanized Steel Wire Braided Multipair RS 485 Databus Cables.....	41
Foam Skin PE Insulated, PVC Sheathed, Individual Aluminum/Polyester Tape & Overall Copper Wire Braid Screened, Galvanized Steel Wire Braided Multipair RS 485 Databus Cables.....	44
Foam PE Insulated, PVC Sheathed, Overall Copper Wire Braid Screened, Galvanized Steel Wire Braided Multipair RS 485 Databus Cables.....	47
Foam Skin PE Insulated, PVC Sheathed, Overall Copper Wire Braid Screened, Galvanized Steel Wire Braided Multipair RS 485 Databus Cables.....	50

PVC Sheathed Fire Retardant RS485 Screened & GSWA Databus Cables

Foam PE Insulated, PVC Sheathed, Overall Aluminum/Polyester Tape Screened, Galvanized Steel Wire Armoured Multipair RS 485 Databus Cables.....	53
Foam Skin PE Insulated, PVC Sheathed, Overall Aluminum/Polyester Tape Screened, Galvanized Steel Wire Armoured Multipair RS 485 Databus Cables.....	56
Foam PE Insulated, PVC Sheathed, Overall Aluminum/Polyester Tape & Copper Wire Braid Double Screened, Galvanized Steel Wire Armoured Multipair RS 485 Databus Cables.....	59
Foam Skin PE Insulated, PVC Sheathed, Overall Aluminum/Polyester Tape & Copper Wire Braid Double Screened, Galvanized Steel Wire Armoured Multipair RS 485 Databus Cables.....	62
Foam PE Insulated, PVC Sheathed, Individual Aluminum/Polyester Tape & Overall Copper Wire Braid Screened, Galvanized Steel Wire Armoured Multipair RS 485 Databus Cables.....	65
Foam Skin PE Insulated, PVC Sheathed, Individual Aluminum/Polyester Tape & Overall Copper Wire Braid Screened, Galvanized Steel Wire Armoured Multipair RS 485 Databus Cables.....	68
Foam PE Insulated, PVC Sheathed, Overall Copper Wire Braid Screened, Galvanized Steel Wire Armoured Multipair RS 485 Databus Cables.....	71
Foam Skin PE Insulated, PVC Sheathed, Overall Copper Wire Braid Screened, Galvanized Steel Wire Armoured Multipair RS 485 Databus Cables.....	74
Technical Information.....	78

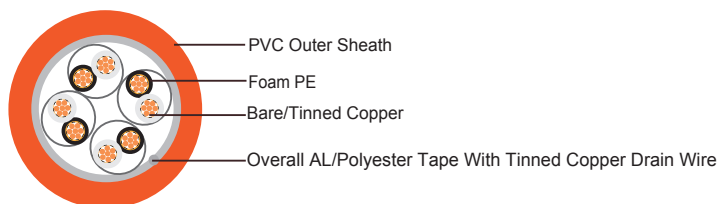


Caledonian

PVC Fire Retardant RS485 Screened Databus Cables

Foam PE Insulated, PVC Sheathed, Overall Aluminum/Polyester Tape Screened Multipair RS 485 Databus Cables

RE-02Y(St)Y



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.

CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Aluminum/polyester tape with tinned copper drain wire.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

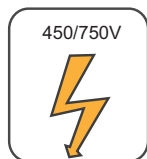
Cable Code	No. of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	kg/km
RE-02Y(St)Y 1×2×0.22	1	0.22	7/0.2	0.55	0.40	4.0	21
RE-02Y(St)Y 2×2×0.22	2	0.22	7/0.2	0.55	0.40	7.1	42
RE-02Y(St)Y 4×2×0.22	4	0.22	7/0.2	0.55	0.40	8.3	68
RE-02Y(St)Y 1×2×0.5	1	0.50	16/0.2	0.55	0.40	4.6	32
RE-02Y(St)Y 2×2×0.5	2	0.50	16/0.2	0.55	0.40	8.2	68
RE-02Y(St)Y 4×2×0.5	4	0.50	16/0.2	0.55	0.40	9.8	115
RE-02Y(St)Y 1×2×0.75	1	0.75	24/0.2	0.55	0.40	5.1	40
RE-02Y(St)Y 2×2×0.75	2	0.75	24/0.2	0.55	0.40	9.1	84
RE-02Y(St)Y 4×2×0.75	4	0.75	24/0.2	0.55	0.40	10.9	144



Caledonian

PVC Fire Retardant RS485 Screened Databus Cables

Cable Code	No. of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	kg/km
RE-02Y(St)Y 1×2×1	1	1.00	30/0.2	0.55	0.40	5.2	49
RE-02Y(St)Y 2×2×1	2	1.00	30/0.2	0.55	0.40	9.5	105
RE-02Y(St)Y 4×2×1	4	1.00	30/0.2	0.55	0.40	11.2	182



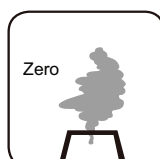
Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Halogen Free
IEC60754-1
EN50267-2-1



Low Toxicity
NES 02-713/NF C 20-454



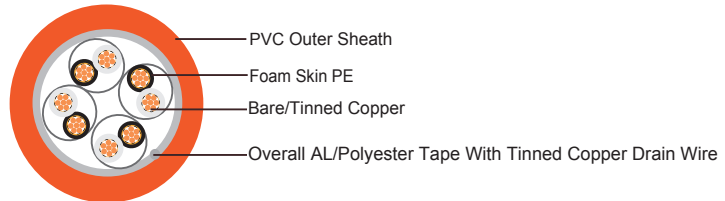
Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Foam Skin PE Insulated, PVC Sheathed, Overall Aluminum/Polyester Tape Screened Multipair RS 485 Databus Cables

RE-02YS(St)Y



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.



CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam skin PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Aluminum/polyester tape with tinned copper drain wire.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

Cable Code	No. of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	kg/km
RE-02YS(St)Y 1×2×0.22	1	0.22	7/0.2	0.55	0.40	4.0	21
RE-02YS(St)Y 2×2×0.22	2	0.22	7/0.2	0.55	0.40	7.1	42
RE-02YS(St)Y 4×2×0.22	4	0.22	7/0.2	0.55	0.40	8.3	68
RE-02YS(St)Y 1×2×0.5	1	0.50	16/0.2	0.55	0.40	4.6	32
RE-02YS(St)Y 2×2×0.5	2	0.50	16/0.2	0.55	0.40	8.2	68
RE-02YS(St)Y 4×2×0.5	4	0.50	16/0.2	0.55	0.40	9.8	115
RE-02YS(St)Y 1×2×0.75	1	0.75	24/0.2	0.55	0.40	5.1	40
RE-02YS(St)Y 2×2×0.75	2	0.75	24/0.2	0.55	0.40	9.1	84
RE-02YS(St)Y 4×2×0.75	4	0.75	24/0.2	0.55	0.40	10.9	144

Cable Code	No. of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	kg/km
RE-02YS(St)Y 1×2×1	1	1.00	30/0.2	0.55	0.40	5.2	49
RE-02YS(St)Y 2×2×1	2	1.00	30/0.2	0.55	0.40	9.5	105
RE-02YS(St)Y 4×2×1	4	1.00	30/0.2	0.55	0.40	11.2	182



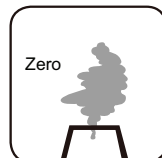
Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Halogen Free
IEC60754-1
EN50267-2-1



Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

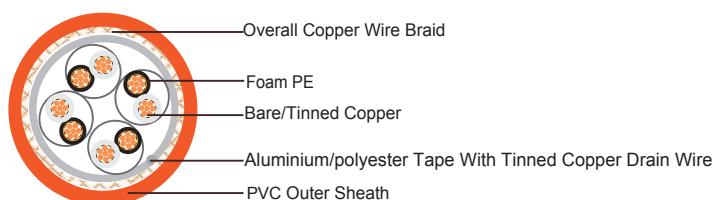


Caledonian

PVC Fire Retardant RS485 Screened Databus Cables

Foam PE Insulated, PVC Sheathed, Overall Aluminium/Polyester Tape & Copper Wire Braid Double Screened Multipair RS 485 Databus Cables

RE-02Y(St)CY



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.

CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Aluminium/polyester tape+copper wire braid.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

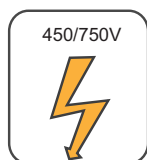
Cable Code	No. of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	kg/km
RE-02Y(St)CY 1×2×0.22	1	0.22	7/0.2	0.55	0.40	4.5	34
RE-02Y(St)CY 2×2×0.22	2	0.22	7/0.2	0.55	0.40	7.5	67
RE-02Y(St)CY 4×2×0.22	4	0.22	7/0.2	0.55	0.40	8.8	97
RE-02Y(St)CY 1×2×0.5	1	0.50	16/0.2	0.55	0.40	5.1	48
RE-02Y(St)CY 2×2×0.5	2	0.50	16/0.2	0.55	0.40	8.7	97
RE-02Y(St)CY 4×2×0.5	4	0.50	16/0.2	0.55	0.40	10.3	150
RE-02Y(St)CY 1×2×0.75	1	0.75	24/0.2	0.55	0.40	5.6	57
RE-02Y(St)CY 2×2×0.75	2	0.75	24/0.2	0.55	0.40	9.7	116
RE-02Y(St)CY 4×2×0.75	4	0.75	24/0.2	0.55	0.40	11.4	182



Caledonian

PVC Fire Retardant RS485 Screened Databus Cables

Cable Code	No. of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	kg/km
RE-02Y(St)CY 1×2×1	1	1.00	30/0.2	0.55	0.40	5.7	67
RE-02Y(St)CY 2×2×1	2	1.00	30/0.2	0.55	0.40	10.0	138
RE-02Y(St)CY 4×2×1	4	1.00	30/0.2	0.55	0.40	11.8	222



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



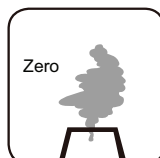
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



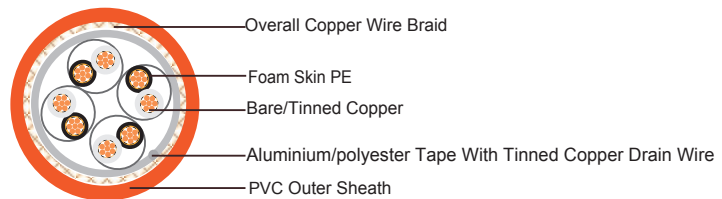
Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

Foam Skin PE Insulated, PVC Sheathed, Overall Aluminium/polyester Tape & Copper Wire Braid Double Screened Multipair RS 485 Databus Cables

RE-02YS(St)CY



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.



CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam skin PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Aluminium/polyester tape+copper wire braid.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

Cable Code	No.of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	kg/km
RE-02YS(St)CY 1×2×0.22	1	0.22	7/0.2	0.55	0.40	4.5	34
RE-02YS(St)CY 2×2×0.22	2	0.22	7/0.2	0.55	0.40	7.5	67
RE-02YS(St)CY 4×2×0.22	4	0.22	7/0.2	0.55	0.40	8.8	97
RE-02YS(St)CY 1×2×0.5	1	0.50	16/0.2	0.55	0.40	5.1	48
RE-02YS(St)CY 2×2×0.5	2	0.50	16/0.2	0.55	0.40	8.7	97
RE-02YS(St)CY 4×2×0.5	4	0.50	16/0.2	0.55	0.40	10.3	150
RE-02YS(St)CY 1×2×0.75	1	0.75	24/0.2	0.55	0.40	5.6	57
RE-02YS(St)CY 2×2×0.75	2	0.75	24/0.2	0.55	0.40	9.7	116
RE-02YS(St)CY 4×2×0.75	4	0.75	24/0.2	0.55	0.40	11.4	182

Cable Code	No. of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	kg/km
RE-02YS(St)CY 1×2×1	1	1.00	30/0.2	0.55	0.40	5.7	67
RE-02YS(St)CY 2×2×1	2	1.00	30/0.2	0.55	0.40	10.0	138
RE-02SY(St)CH 4×2×1	4	1.00	30/0.2	0.55	0.40	11.8	222



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



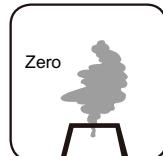
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

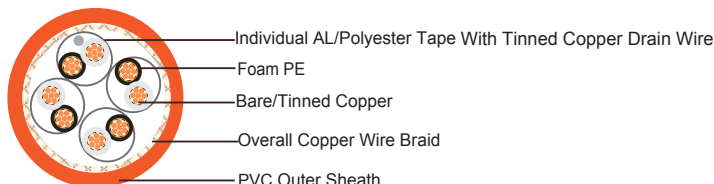


Caledonian

PVC Fire Retardant RS485 Screened Databus Cables

Foam PE Insulated, PVC Sheathed, Individual Aluminium/polyester Tape & Overall Copper Wire Braid Screened Multipair RS 485 Databus Cables

RE-02Y(St)CY PiMF



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.

CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Individual Screen: Individual aluminium/polyester tape.

Overall Screen: Copper wire braid.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

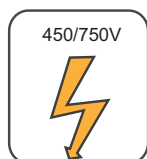
Cable Code	No. of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	kg/km
RE-02Y(St)CY PiMF 1×2×0.22	1	0.22	7/0.2	0.55	0.40	4.4	35
RE-02Y(St)CY PiMF 2×2×0.22	2	0.22	7/0.2	0.55	0.40	7.5	69
RE-02Y(St)CY PiMF 4×2×0.22	4	0.22	7/0.2	0.55	0.40	8.8	106
RE-02Y(St)CY PiMF 1×2×0.5	1	0.50	16/0.2	0.55	0.40	5.0	49
RE-02Y(St)CY PiMF 2×2×0.5	2	0.50	16/0.2	0.55	0.40	8.7	100
RE-02Y(St)CY PiMF 4×2×0.5	4	0.50	16/0.2	0.55	0.40	10.3	159
RE-02Y(St)CY PiMF 1×2×0.75	1	0.75	24/0.2	0.55	0.40	5.5	58
RE-02Y(St)CY PiMF 2×2×0.75	2	0.75	24/0.2	0.55	0.40	9.7	119
RE-02Y(St)CY PiMF 4×2×0.75	4	0.75	24/0.2	0.55	0.40	11.2	174



Caledonian

PVC Fire Retardant RS485 Screened Databus Cables

Cable Code	No. of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	kg/km
RE-02Y(St)CY PiMF 1×2×1	1	1.00	30/0.2	0.55	0.40	5.6	68
RE-02Y(St)CY PiMF 2×2×1	2	1.00	30/0.2	0.55	0.40	10.0	142
RE-02Y(St)CY PiMF 4×2×1	4	1.00	30/0.2	0.55	0.40	11.8	234



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



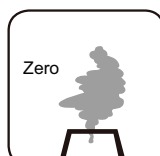
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



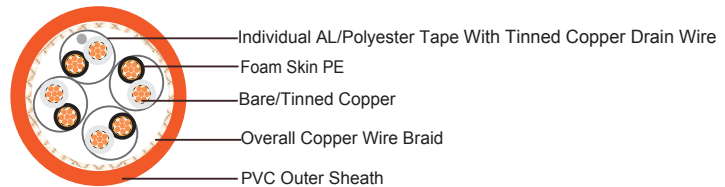
Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

Foam Skin PE Insulated, PVC Sheathed, Individual Aluminium/polyester Tape & Overall Copper Wire Braid Screened Multipair RS 485 Databus Cables

RE-02YS(St)CY PiMF



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard..



CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam skin PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Individual Screen: Individual aluminium/polyester tape.

Overall Screen: Copper wire braid.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

Cable Code	No. of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	kg/km
RE-02YS(St)CY PiMF 1×2×0.22	1	0.22	7/0.2	0.55	0.40	4.4	35
RE-02YS(St)CY PiMF 2×2×0.22	2	0.22	7/0.2	0.55	0.40	7.5	69
RE-02YS(St)CY PiMF 4×2×0.22	4	0.22	7/0.2	0.55	0.40	8.8	106
RE-02YS(St)CY PiMF 1×2×0.5	1	0.50	16/0.2	0.55	0.40	5.0	49
RE-02YS(St)CY PiMF 2×2×0.5	2	0.50	16/0.2	0.55	0.40	8.7	100
RE-02YS(St)CY PiMF 4×2×0.5	4	0.50	16/0.2	0.55	0.40	10.3	159
RE-02YS(St)CY PiMF 1×2×0.75	1	0.75	24/0.2	0.55	0.40	5.5	58
RE-02YS(St)CY PiMF 2×2×0.75	2	0.75	24/0.2	0.55	0.40	9.7	119

Cable Code	No. of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	kg/km
RE-02YS(St)CY PiMF 4×2×0.75	4	0.75	24/0.2	0.55	0.40	11.2	174
RE-02YS(St)CY PiMF 1×2×1	1	1.00	30/0.2	0.55	0.40	5.6	68
RE-02YS(St)CY PiMF 2×2×1	2	1.00	30/0.2	0.55	0.40	10.0	142
RE-02YS(St)CY PiMF 4×2×1	4	1.00	30/0.2	0.55	0.40	11.8	234



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



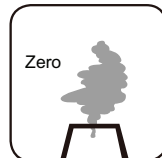
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

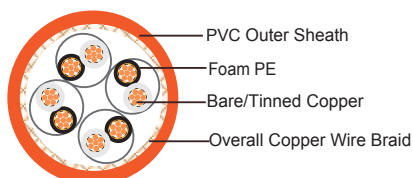


Caledonian

PVC Fire Retardant RS485 Screened Databus Cables

Foam PE Insulated, PVC Sheathed, Overall Copper Wire Braid Screened Multipair RS 485 Databus Cables

RE-02YCY



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.

CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Copper wire braid.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

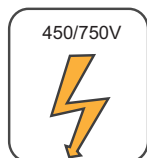
Cable Code	No. of pair	Nominal Cross Sectional Area	No./Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	kg/km
RE-02YCY 1×2×0.22	1	0.22	7/0.2	0.55	0.40	4.3	31
RE-02YCY 2×2×0.22	2	0.22	7/0.2	0.55	0.40	7.3	61
RE-02YCY 4×2×0.22	4	0.22	7/0.2	0.55	0.40	8.5	91
RE-02YCY 1×2×0.5	1	0.50	16/0.2	0.55	0.40	4.9	44
RE-02YCY 2×2×0.5	2	0.50	16/0.2	0.55	0.40	8.5	91
RE-02YCY 4×2×0.5	4	0.50	16/0.2	0.55	0.40	10.0	142
RE-02YCY 1×2×0.75	1	0.75	24/0.2	0.55	0.40	5.4	53
RE-02YCY 2×2×0.75	2	0.75	24/0.2	0.55	0.40	9.5	109
RE-02YCY 4×2×0.75	4	0.75	24/0.2	0.55	0.40	11.2	174



Caledonian

PVC Fire Retardant RS485 Screened Databus Cables

Cable Code	No.of pair	Nominal Cross Sectional Area	No./Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	kg/km
RE-02YCY 1×2×1	1	1.00	30/0.2	0.55	0.40	5.5	63
RE-02YCY 2×2×1	2	1.00	30/0.2	0.55	0.40	9.8	131
RE-02YCY 4×2×1	4	1.00	30/0.2	0.55	0.40	11.5	213



450/750V

Rated Voltage



EIA/TIA 485

Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



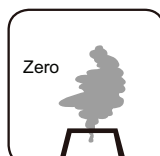
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

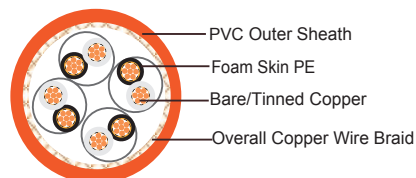


Zero

Halogen Free
IEC60754-1
EN50267-2-1

Foam Skin PE Insulated, PVC Sheathed, Overall Copper Wire Braid Screened Multipair RS 485 Databus Cables

RE-02YSCY



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.



CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam skin PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Copper wire braid.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

Cable Code	No. of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	kg/km
RE-02YSCY 1×2×0.22	1	0.22	7/0.2	0.55	0.40	4.3	31
RE-02YSCY 2×2×0.22	2	0.22	7/0.2	0.55	0.40	7.3	61
RE-02YSCY 4×2×0.22	4	0.22	7/0.2	0.55	0.40	8.5	91
RE-02YSCY 1×2×0.5	1	0.50	16/0.2	0.55	0.40	4.9	44
RE-02YSCY 2×2×0.5	2	0.50	16/0.2	0.55	0.40	8.5	91
RE-02YSCY 4×2×0.5	4	0.50	16/0.2	0.55	0.40	10.0	142
RE-02YSCY 1×2×0.75	1	0.75	24/0.2	0.55	0.40	5.4	53
RE-02YSCY 2×2×0.75	2	0.75	24/0.2	0.55	0.40	9.5	109

Cable Code	No. of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	kg/km
RE-02YSCY 4×2×0.75	4	0.75	24/0.2	0.55	0.40	11.2	174
RE-02YSCY 1×2×1	1	1.00	30/0.2	0.55	0.40	5.5	63
RE-02YSCY 2×2×1	2	1.00	30/0.2	0.55	0.40	9.8	131
RE-02YSCY 4×2×1	4	1.00	30/0.2	0.55	0.40	11.5	213



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



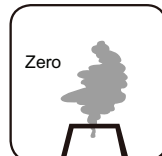
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

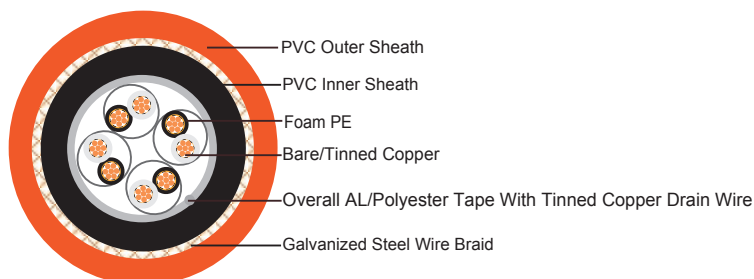


Caledonian

PVC Fire Retardant RS485 Screened & GSWB Databus Cable

Foam PE Insulated, PVC Sheathed, Overall Aluminum/polyester Tape Screened, Galvanized Steel Wire Braided Multipair RS 485 Databus Cables

RE-02Y(St)YSWBY



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.

CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Aluminum/polyester tape with tinned copper drain wire.

Inner Sheath: Thermoplastic PVC compound.

Armour: Galvanized steel wire braid.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Steel Wire Braid Armour Diameter	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02Y(St)YSWBY 1×2×0.22	1	0.22	7/0.2	0.55	0.5	0.40	5.7	56
RE-02Y(St)YSWBY 2×2×0.22	2	0.22	7/0.2	0.55	0.5	0.40	8.5	102
RE-02Y(St)YSWBY 4×2×0.22	4	0.22	7/0.2	0.55	0.5	0.40	9.6	142
RE-02Y(St)YSWBY 1×2×0.5	1	0.50	16/0.2	0.55	0.5	0.40	6.3	70
RE-02Y(St)YSWBY 2×2×0.5	2	0.50	16/0.2	0.55	0.5	0.40	9.6	131
RE-02Y(St)YSWBY 4×2×0.5	4	0.50	16/0.2	0.55	0.5	0.40	11	188
RE-02Y(St)YSWBY 1×2×0.75	1	0.75	24/0.2	0.55	0.5	0.40	6.7	81



Caledonian

PVC Fire Retardant RS485 Screened & GSWB Databus Cable

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Steel Wire Braid Armour Diameter	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02Y(St)YSWBY 2×2×0.75	2	0.75	24/0.2	0.55	0.5	0.40	10.4	154
RE-02Y(St)YSWBY 4×2×0.75	4	0.75	24/0.2	0.55	0.5	0.40	12	227
RE-02Y(St)YSWBY 1×2×1	1	1.00	30/0.2	0.55	0.5	0.40	6.8	87
RE-02Y(St)YSWBY 2×2×1	2	1.00	30/0.2	0.55	0.5	0.40	10.7	166
RE-02Y(St)YSWBY 4×2×1	4	1.00	30/0.2	0.55	0.5	0.40	12.3	249



450/750V

Rated Voltage

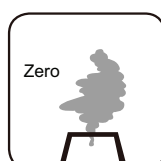


EIA/TIA 485

Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Zero

Halogen Free
IEC60754-1
EN50267-2-1



Low Toxicity
NES 02-713/NF C 20-454



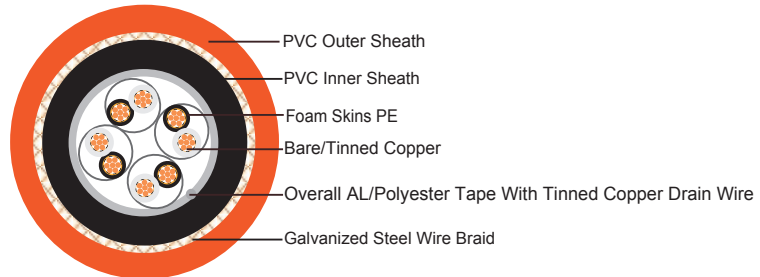
Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Foam Skin PE Insulated, PVC Sheathed, Overall Aluminum/polyester Tape Screened, Galvanized Steel Wire Braided Multipair RS 485 Databus Cables

RE-02YS(St)YSWBY



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.



CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam skin PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Aluminum/polyester tape with tinned copper drain wire.

Inner Sheath: Thermoplastic PVC compound.

Armour: Galvanized steel wire braid.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

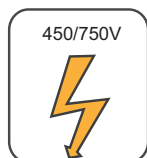
ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Steel Wire Braid Armour Diameter	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YS(St)YSWBY 1×2×0.22	1	0.22	7/0.2	0.55	0.5	0.40	5.7	56
RE-02YS(St)YSWBY 2×2×0.22	2	0.22	7/0.2	0.55	0.5	0.40	8.5	102
RE-02YS(St)YSWBY 4×2×0.22	4	0.22	7/0.2	0.55	0.5	0.40	9.6	142
RE-02YS(St)YSWBY 1×2×0.5	1	0.50	16/0.2	0.55	0.5	0.40	6.3	70
RE-02YS(St)YSWBY 2×2×0.5	2	0.50	16/0.2	0.55	0.5	0.40	9.6	131
RE-02YS(St)YSWBY 4×2×0.5	4	0.50	16/0.2	0.55	0.5	0.40	11	188

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Steel Wire Braid Armour Diameter	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YS(St)YSWBY 1×2×0.75	1	0.75	24/0.2	0.55	0.5	0.40	6.7	81
RE-02YS(St)YSWBY 2×2×0.75	2	0.75	24/0.2	0.55	0.5	0.40	10.4	154
RE-02YS(St)YSWBY 4×2×0.75	4	0.75	24/0.2	0.55	0.5	0.40	12	227
RE-02YS(St)YSWBY 1×2×1	1	1.00	30/0.2	0.55	0.5	0.40	6.8	87
RE-02YS(St)YSWBY 2×2×1	2	1.00	30/0.2	0.55	0.5	0.40	10.7	166
RE-02YS(St)YSWBY 4×2×1	4	1.00	30/0.2	0.55	0.5	0.40	12.3	249



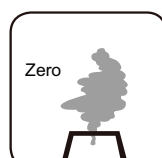
Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Halogen Free
IEC60754-1
EN50267-2-1



Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

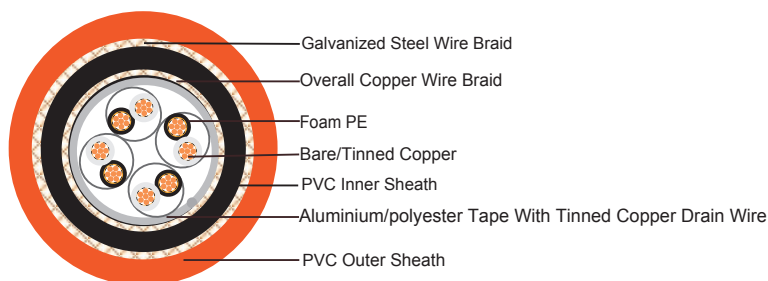


Caledonian

PVC Fire Retardant RS485 Screened & GSWB Databus Cable

Foam PE Insulated, PVC Sheathed, Overall Aluminium/polyester Tape & Copper Wire Braid Double Screened, Galvanized Steel Wire Braided Multipair RS 485 Databus Cables

RE-02Y(St)CYSWBY



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.

CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Aluminium/polyester tape+copper wire braid.

Inner Sheath: Thermoplastic PVC compound.

Armour: Galvanized steel wire braid.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

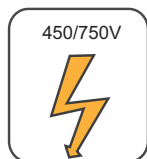
Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thick-ness	Steel Wire Braid Armour Diameter	Nominal Sheath Thick-ness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02Y(St)CYSWBY 1×2×0.22	1	0.22	7/0.2	0.55	0.5	0.40	6.1	71
RE-02Y(St)CYSWBY 2×2×0.22	2	0.22	7/0.2	0.55	0.5	0.40	8.9	127
RE-02Y(St)CYSWBY 4×2×0.22	4	0.22	7/0.2	0.55	0.5	0.40	10.1	170
RE-02Y(St)CYSWBY 1×2×0.5	1	0.50	16/0.2	0.55	0.5	0.40	6.7	87
RE-02Y(St)CYSWBY 2×2×0.5	2	0.50	16/0.2	0.55	0.5	0.40	10	159
RE-02Y(St)CYSWBY 4×2×0.5	4	0.50	16/0.2	0.55	0.5	0.40	11.5	221



Caledonian

PVC Fire Retardant RS485 Screened & GSWB Databus Cable

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Steel Wire Braid Armour Diameter	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02Y(St)CYSWBY 1×2×0.75	1	0.75	24/0.2	0.55	0.5	0.40	7.2	100
RE-02Y(St)CYSWBY 2×2×0.75	2	0.75	24/0.2	0.55	0.5	0.40	10.9	185
RE-02Y(St)CYSWBY 4×2×0.75	4	0.75	24/0.2	0.55	0.5	0.40	12.5	264
RE-02Y(St)CYSWBY 1×2×1	1	1.00	30/0.2	0.55	0.5	0.40	7.3	106
RE-02Y(St)CYSWBY 2×2×1	2	1.00	30/0.2	0.55	0.5	0.40	11.2	198
RE-02Y(St)CYSWBY 4×2×1	4	1.00	30/0.2	0.55	0.5	0.40	12.8	286



450/750V

Rated Voltage



EIA/TIA 485

Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



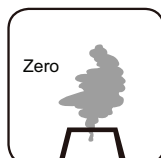
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



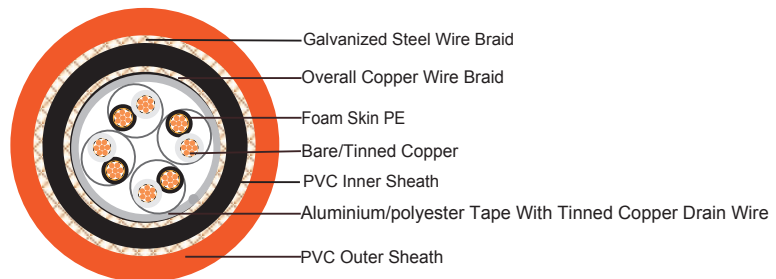
Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

Foam Skin PE Insulated, PVC Sheathed, Overall Aluminium/polyester Tape & Copper Wire Braid Double Screened, Galvanized Steel Wire Braided Multipair RS 485 Databus Cables

RE-02YS(St)CYSWBY



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.



CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam skin PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Aluminium/polyester tape+copper wire braid.

Inner Sheath: Thermoplastic PVC compound.

Armour: Galvanized steel wire braid.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thick-ness	Steel Wire Braid Armour Diameter	Nominal Sheath Thick-ness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YS(St)CYSWBY 1×2×0.22	1	0.22	7/0.2	0.55	0.5	0.40	6.1	71
RE-02YS(St)CYSWBY 2×2×0.22	2	0.22	7/0.2	0.55	0.5	0.40	8.9	127
RE-02YS(St)CYSWBY 4×2×0.22	4	0.22	7/0.2	0.55	0.5	0.40	10.1	170
RE-02YS(St)CYSWBY 1×2×0.5	1	0.50	16/0.2	0.55	0.5	0.40	6.7	87
RE-02YS(St)CYSWBY 2×2×0.5	2	0.50	16/0.2	0.55	0.5	0.40	10	159

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Steel Wire Braid Armour Diameter	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YS(St)CYSWBY 4×2×0.5	4	0.50	16/0.2	0.55	0.5	0.40	11.5	221
RE-02YS(St)CYSWBY 1×2×0.75	1	0.75	24/0.2	0.55	0.5	0.40	7.2	100
RE-02YS(St)CYSWBY 2×2×0.75	2	0.75	24/0.2	0.55	0.5	0.40	10.9	185
RE-02YS(St)CYSWBY 4×2×0.75	4	0.75	24/0.2	0.55	0.5	0.40	12.5	264
RE-02YS(St)CYSWBY 1×2×1	1	1.00	30/0.2	0.55	0.5	0.40	7.3	106
RE-02YS(St)CYSWBY 2×2×1	2	1.00	30/0.2	0.55	0.5	0.40	11.2	198
RE-02SY(St)CHSWBH 4×2×1	4	1.00	30/0.2	0.55	0.5	0.40	12.8	286



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



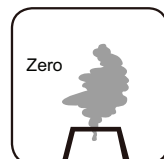
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

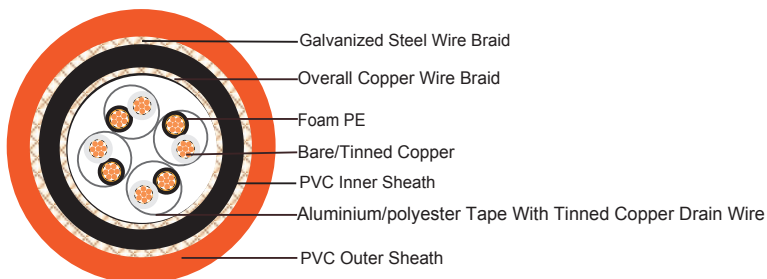


Caledonian

PVC Fire Retardant RS485 Screened & GSWB Databus Cable

Foam PE Insulated, PVC Sheathed, Individual Aluminium/polyester Tape & Overall Copper Wire Braid Double Screened, Galvanized Steel Wire Braided Multipair RS 485 Databus Cables

RE-02Y(St)CYSWBY PiMF



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.

CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Individual Screen: Individual aluminium/polyester tape.

Overall Screen: Copper wire braid.

Inner Sheath: Thermoplastic PVC compound.

Armour: Galvanized steel wire braid.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thick-ness	Steel Wire Braid Armour Diameter	Nominal Sheath Thick-ness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02Y(St)CYSWBY PiMF 1×2×0.22	1	0.22	7/0.2	0.55	0.5	0.40	5.7	54
RE-02Y(St)CYSWBY PiMF 2×2×0.22	2	0.22	7/0.2	0.55	0.5	0.40	8.6	100
RE-02Y(St)CYSWBY PiMF 4×2×0.22	4	0.22	7/0.2	0.55	0.5	0.40	9.7	152
RE-02Y(St)CYSWBY PiMF 1×2×0.5	1	0.50	16/0.2	0.55	0.5	0.40	6.2	72
RE-02Y(St)CYSWBY PiMF 2×2×0.5	2	0.50	16/0.2	0.55	0.5	0.40	9.7	136
RE-02Y(St)CYSWBY PiMF 4×2×0.5	4	0.50	16/0.2	0.55	0.5	0.40	11.1	200
RE-02Y(St)CYSWBY PiMF 1×2×0.75	1	0.75	24/0.2	0.55	0.5	0.40	6.7	84
RE-02Y(St)CYSWBY PiMF 2×2×0.75	2	0.75	24/0.2	0.55	0.5	0.40	10.5	159
RE-02Y(St)CYSWBY PiMF 4×2×0.75	4	0.75	24/0.2	0.55	0.5	0.40	12.5	247



Caledonian

PVC Flire Retardant RS485 Screened & GSWB Databus Cable

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Steel Wire Braid Armour Diameter	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02Y(St)CYSWBY PiMF 1×2×1	1	1.00	30/0.2	0.55	0.5	0.40	6.8	90
RE-02Y(St)CYSWBY PiMF 2×2×1	2	1.00	30/0.2	0.55	0.5	0.40	10.8	171
RE-02Y(St)CYSWBY PiMF 4×2×1	4	1.00	30/0.2	0.55	0.5	0.40	12.4	263



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



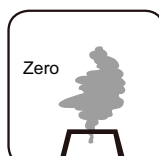
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



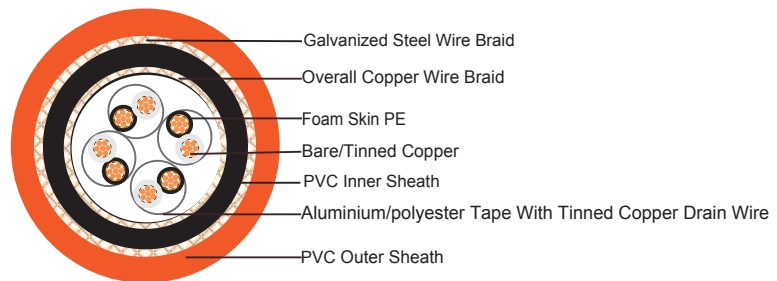
Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Zero
Halogen Free
IEC60754-1
EN50267-2-1

Foam Skin PE Insulated, PVC Sheathed, Individual Aluminium/polyester Tape & Overall Copper Wire Braid Double Screened, Galvanized Steel Wire Braided Multipair RS 485 Databus Cables

RE-02YS(St)CYSWBY PiMF



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard..



CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam skin PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Individual Screen: Individual aluminium/polyester tape.

Overall Screen: Copper wire braid.

Inner Sheath: Thermoplastic PVC compound.

Armour: Galvanized steel wire braid.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thick-ness	Steel Wire Braid Armour Diameter	Nominal Sheath Thick-ness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YS(St)CYSWBY PiMF 1×2×0.22	1	0.22	7/0.2	0.55	0.5	0.40	5.7	54
RE-02YS(St)CYSWBY PiMF 2×2×0.22	2	0.22	7/0.2	0.55	0.5	0.40	8.6	100
RE-02YS(St)CYSWBY PiMF 4×2×0.22	4	0.22	7/0.2	0.55	0.5	0.40	9.7	152
RE-02YS(St)CYSWBY PiMF 1×2×0.5	1	0.50	16/0.2	0.55	0.5	0.40	6.2	72
RE-02YS(St)CYSWBY PiMF 2×2×0.5	2	0.50	16/0.2	0.55	0.5	0.40	9.7	136
RE-02YS(St)CYSWBY PiMF 4×2×0.5	4	0.50	16/0.2	0.55	0.5	0.40	11.1	200

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thick-ness	Steel Wire Braid Armour Diameter	Nominal Sheath Thick-ness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YS(St)CYSWBY PiMF 1×2×0.75	1	0.75	24/0.2	0.55	0.5	0.40	6.7	84
RE-02YS(St)CYSWBY PiMF 2×2×0.75	2	0.75	24/0.2	0.55	0.5	0.40	10.5	159
RE-02YS(St)CYSWBY PiMF 4×2×0.75	4	0.75	24/0.2	0.55	0.5	0.40	12.5	247
RE-02YS(St)CYSWBY PiMF 1×2×1	1	1.00	30/0.2	0.55	0.5	0.40	6.8	90
RE-02YS(St)CYSWBY PiMF 2×2×1	2	1.00	30/0.2	0.55	0.5	0.40	10.8	171
RE-02YS(St)CYSWBY PiMF 4×2×1	4	1.00	30/0.2	0.55	0.5	0.40	12.4	263



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



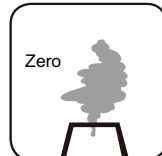
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

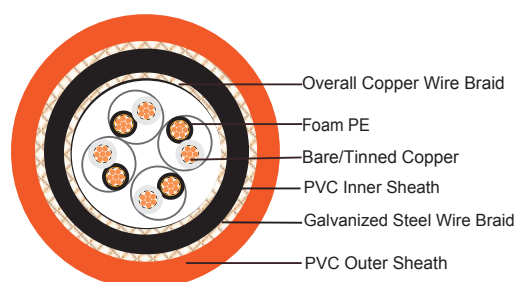


Caledonian

PVC Fire Retardant RS485 Screened & GSWB Databus Cable

Foam PE Insulated, PVC Sheathed, Overall Copper Wire Braid Screened, Galvanized Steel Wire Braided Multipair RS 485 Databus Cables

RE-02YCYSWBY



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.

CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Copper wire braid.

Inner Sheath: Thermoplastic PVC compound.

Armour: Galvanized steel wire braid.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

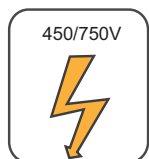
Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thick-ness	Steel Wire Braid Armour Diameter	Nominal Sheath Thick-ness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YCYSWBY 1×2×0.22	1	0.22	7/0.2	0.55	0.5	0.40	6.1	68
RE-02YCYSWBY 2×2×0.22	2	0.22	7/0.2	0.55	0.5	0.40	8.9	122
RE-02YCYSWBY 4×2×0.22	4	0.22	7/0.2	0.55	0.5	0.40	10	165
RE-02YCYSWBY 1×2×0.5	1	0.50	16/0.2	0.55	0.5	0.40	6.6	84
RE-02YCYSWBY 2×2×0.5	2	0.50	16/0.2	0.55	0.5	0.40	9.9	154
RE-02YCYSWBY 4×2×0.5	4	0.50	16/0.2	0.55	0.5	0.40	11.4	215
RE-02YCYSWBY 1×2×0.75	1	0.75	24/0.2	0.55	0.5	0.40	7	96



Caledonian

PVC Fire Retardant RS485 Screened & GSWB Databus Cable

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Steel Wire Braid Armour Diameter	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YCYSWBY 2×2×0.75	2	0.75	24/0.2	0.55	0.5	0.40	10.9	179
RE-02YCYSWBY 4×2×0.75	4	0.75	24/0.2	0.55	0.5	0.40	12.4	257
RE-02YCYSWBY 1×2×1	1	1.00	30/0.2	0.55	0.5	0.40	7.2	103
RE-02YCYSWBY 2×2×1	2	1.00	30/0.2	0.55	0.5	0.40	11.1	192
RE-02YCYSWBY 4×2×1	4	1.00	30/0.2	0.55	0.5	0.40	12.7	279



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



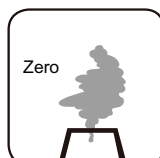
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



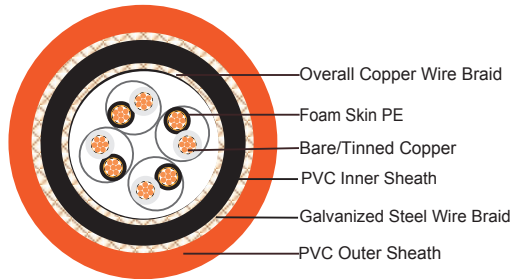
Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

Foam Skin PE Insulated, PVC Sheathed, Overall Copper Wire Braid Screened, Galvanized Steel Wire Braided Multipair RS 485 Databus Cables

RE-02YSCYSWBY



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.



CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam skin PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Copper wire braid.

Inner Sheath: Thermoplastic PVC compound.

Armour: Galvanized steel wire braid.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Steel Wire Braid Armour Diameter	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YSCYSWBY 1×2×0.22	1	0.22	7/0.2	0.55	0.5	0.40	6.1	68
RE-02YSCYSWBY 2×2×0.22	2	0.22	7/0.2	0.55	0.5	0.40	8.9	122
RE-02YSCYSWBY 4×2×0.22	4	0.22	7/0.2	0.55	0.5	0.40	10	165
RE-02YSCYSWBY 1×2×0.5	1	0.50	16/0.2	0.55	0.5	0.40	6.6	84
RE-02YSCYSWBY 2×2×0.5	2	0.50	16/0.2	0.55	0.5	0.40	9.9	154
RE-02YSCYSWBY 4×2×0.5	4	0.50	16/0.2	0.55	0.5	0.40	11.4	215
RE-02YSCYSWBY 1×2×0.75	1	0.75	24/0.2	0.55	0.5	0.40	7	96

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thick-ness	Steel Wire Braid Armour Diameter	Nominal Sheath Thick-ness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YSCYSWBY 2×2×0.75	2	0.75	24/0.2	0.55	0.5	0.40	10.9	179
RE-02YSCYSWBY 4×2×0.75	4	0.75	24/0.2	0.55	0.5	0.40	12.4	257
RE-02YSCYSWBY 1×2×1	1	1.00	30/0.2	0.55	0.5	0.40	7.2	103
RE-02YSCYSWBY 2×2×1	2	1.00	30/0.2	0.55	0.5	0.40	11.1	192
RE-02YSCYSWBY 4×2×1	4	1.00	30/0.2	0.55	0.5	0.40	12.7	279



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



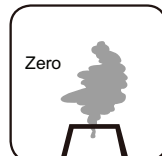
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

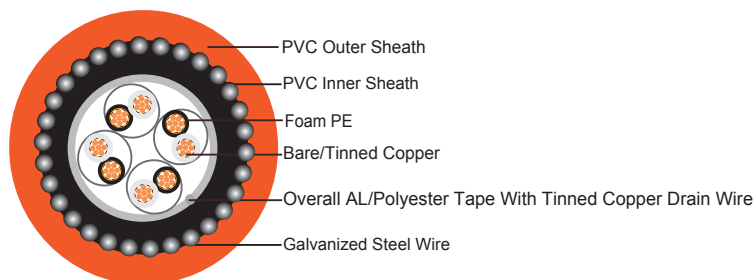


Caledonian

PVC Fire Retardant RS485 Screened & GSWA Databus Cables

Foam PE Insulated, PVC Sheathed, Overall Aluminum/polyester Tape Screened, Galvanized Steel Wire Armoured Multipair RS 485 Databus Cables

RE-02Y(St)YGSWAY



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.

CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Aluminum/polyester tape with tinned copper drain wire.

Inner Sheath: Thermoplastic PVC compound.

Armoured: Galvanized steel wire.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

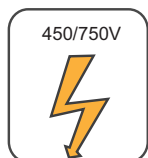
Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thick-ness	Steel Wire Armour Diameter	Nominal Sheath Thick-ness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02Y(St)YGSWAY 1×2×0.22	1	0.22	7/0.2	0.55	0.2	0.40	4.9	46
RE-02Y(St)YGSWAY 2×2×0.22	2	0.22	7/0.2	0.55	0.2	0.40	7.7	81
RE-02Y(St)YGSWAY 4×2×0.22	4	0.22	7/0.2	0.55	0.2	0.40	8.8	114
RE-02Y(St)YGSWAY 1×2×0.5	1	0.50	16/0.2	0.55	0.2	0.40	5.4	58
RE-02Y(St)YGSWAY 2×2×0.5	2	0.50	16/0.2	0.55	0.2	0.40	8.8	107
RE-02Y(St)YGSWAY 4×2×0.5	4	0.50	16/0.2	0.55	0.2	0.40	10.2	157
RE-02Y(St)YGSWAY 1×2×0.75	1	0.75	24/0.2	0.55	0.2	0.40	5.9	69



Caledonian

PVC Fire Retardant RS485 Screened & GSWA Databus Cables

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Steel Wire Armour Diameter	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02Y(St)YGSWAY 2×2×0.75	2	0.75	24/0.2	0.55	0.2	0.40	9.6	128
RE-02Y(St)YGSWAY 4×2×0.75	4	0.75	24/0.2	0.55	0.2	0.40	11.2	194
RE-02Y(St)YGSWAY 1×2×1	1	1.00	30/0.2	0.55	0.2	0.40	5.9	72
RE-02Y(St)YGSWAY 2×2×1	2	1.00	30/0.2	0.55	0.2	0.40	9.9	139
RE-02Y(St)YGSWAY 4×2×1	4	1.00	30/0.2	0.55	0.2	0.40	11.6	215



450/750V

Rated Voltage



EIA/TIA 485

Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



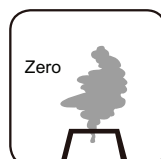
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

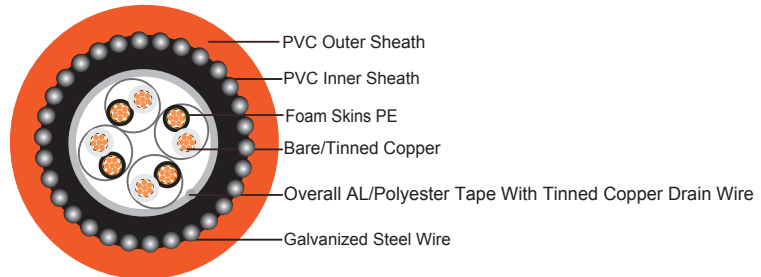


Zero

Halogen Free
IEC60754-1
EN50267-2-1

Foam Skin PE Insulated, PVC Sheathed, Overall Aluminum/polyester Tape Screened, Galvanized Steel Wire Armoured Multipair RS 485 Databus Cables

RE-02YS(St)YGSWAY



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.



CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam skin PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Aluminum/polyester tape with tinned copper drain wire.

Inner Sheath: Thermoplastic PVC compound.

Armoured: Galvanized steel wire.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thick-ness	Steel Wire Armour Diameter	Nominal Sheath Thick-ness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YS(St)YGSWAY 1×2×0.22	1	0.22	7/0.2	0.55	0.2	0.40	4.9	46
RE-02YS(St)YGSWAY 2×2×0.22	2	0.22	7/0.2	0.55	0.2	0.40	7.7	81
RE-02YS(St)YGSWAY 4×2×0.22	4	0.22	7/0.2	0.55	0.2	0.40	8.8	114
RE-02YS(St)YGSWAY 1×2×0.5	1	0.50	16/0.2	0.55	0.2	0.40	5.4	58
RE-02YS(St)YGSWAY 2×2×0.5	2	0.50	16/0.2	0.55	0.2	0.40	8.8	107
RE-02YS(St)YGSWAY 4×2×0.5	4	0.50	16/0.2	0.55	0.2	0.40	10.2	157
RE-02YS(St)YGSWAY 1×2×0.75	1	0.75	24/0.2	0.55	0.2	0.40	5.9	69

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thick-ness	Steel Wire Armour Diameter	Nominal Sheath Thick-ness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YS(St)YGSWAY 2×2×0.75	2	0.75	24/0.2	0.55	0.2	0.40	9.6	128
RE-02YS(St)YGSWAY 4×2×0.75	4	0.75	24/0.2	0.55	0.2	0.40	11.2	194
RE-02YS(St)YGSWAY 1×2×1	1	1.00	30/0.2	0.55	0.2	0.40	5.9	72
RE-02YS(St)YGSWAY 2×2×1	2	1.00	30/0.2	0.55	0.2	0.40	9.9	139
RE-02YS(St)YGSWAY 4×2×1	4	1.00	30/0.2	0.55	0.2	0.40	11.6	215



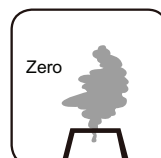
Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Halogen Free
IEC60754-1
EN50267-2-1



Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

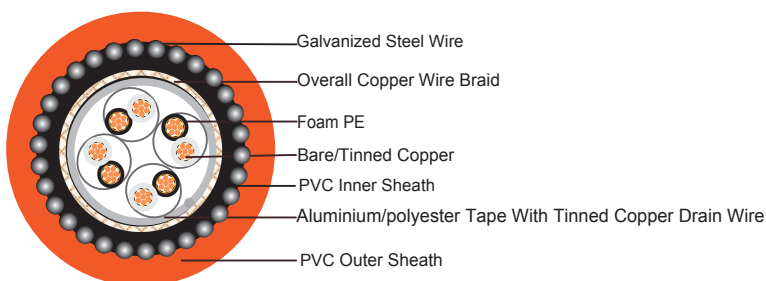


Caledonian

PVC Fire Retardant RS485 Screened & GSWA Databus Cables

Foam PE Insulated, PVC Sheathed, Overall Aluminium/polyester Tape and Copper Wire Braid Screened, Galvanized Steel Wire Armoured Multipair RS 485 Databus Cables

RE-02Y(St)CYGSWAY



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.

CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Aluminium/polyester tape + copper wire braid.

Inner Sheath: Thermoplastic PVC compound.

Armoured: Galvanized steel wire.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

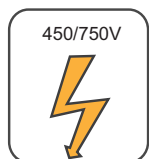
Cable Code	No. of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Steel Wire Armour Diameter	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02Y(St)CYGSWAY1×2×0.22	1	0.22	7/0.2	0.55	0.2	0.40	5.4	59
RE-02Y(St)CYGSWAY2×2×0.22	2	0.22	7/0.2	0.55	0.2	0.40	8.2	104
RE-02Y(St)CYGSWAY4×2×0.22	4	0.22	7/0.2	0.55	0.2	0.40	9.3	140
RE-02Y(St)CYGSWAY1×2×0.5	1	0.50	16/0.2	0.55	0.2	0.40	5.9	74
RE-02Y(St)CYGSWAY2×2×0.5	2	0.50	16/0.2	0.55	0.2	0.40	9.3	133
RE-02Y(St)CYGSWAY4×2×0.5	4	0.50	16/0.2	0.55	0.2	0.40	10.7	188
RE-02Y(St)CYGSWAY1×2×0.75	1	0.75	24/0.2	0.55	0.2	0.40	6.4	85



Caledonian

PVC Fire Retardant RS485 Screened & GSWA Databus Cables

Cable Code	No. of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Steel Wire Armour Diameter	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02Y(St)CYGSWAY2×2×0.75	2	0.75	24/0.2	0.55	0.2	0.40	10.1	157
RE-02Y(St)CYGSWAY4×2×0.75	4	0.75	24/0.2	0.55	0.2	0.40	11.7	228
RE-02Y(St)CYGSWAY1×2×1	1	1.00	30/0.2	0.55	0.2	0.40	6.5	92
RE-02Y(St)CYGSWAY2×2×1	2	1.00	30/0.2	0.55	0.2	0.40	10.4	169
RE-02Y(St)CYGSWAY4×2×1	4	1.00	30/0.2	0.55	0.2	0.40	12	250



450/750V

Rated Voltage

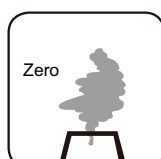


EIA/TIA 485

Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Zero

Halogen Free
IEC60754-1
EN50267-2-1



Low Toxicity
NES 02-713/NF C 20-454



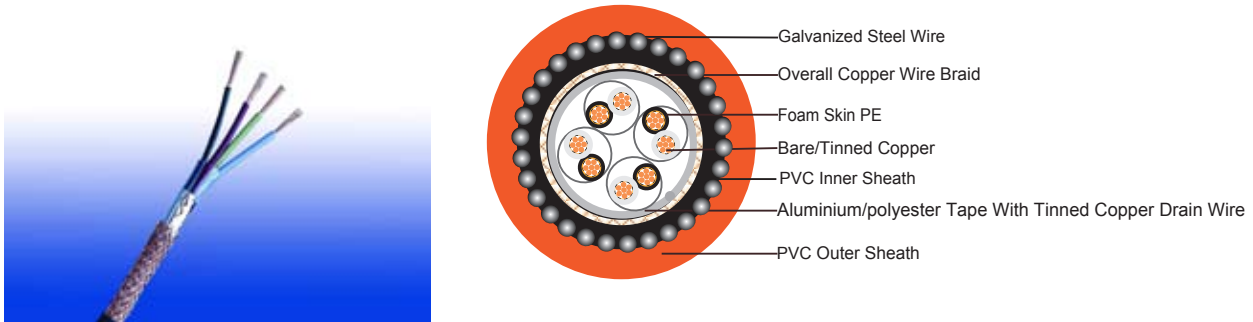
Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Foam Skin PVC Insulated, PE Sheathed, Overall Aluminium/polyester Tape and Copper Wire Braid Screened, Galvanized Steel Wire Armoured Multipair RS 485 Databus Cables

RE-02YS(St)CYGSWAY



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.



CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam skin PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Aluminium/polyester tape + copper wire braid(90% coverage).

Inner Sheath: Thermoplastic PVC compound.

Armoured: Galvanized steel wire.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

Cable Code	No. of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Steel Wire Armour Diameter	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YS(St)CYGSWAY1×2×0.22	1	0.22	7/0.2	0.55	0.2	0.40	5.4	59
RE-02YS(St)CYGSWAY2×2×0.22	2	0.22	7/0.2	0.55	0.2	0.40	8.2	104
RE-02YS(St)CYGSWAY4×2×0.22	4	0.22	7/0.2	0.55	0.2	0.40	9.3	140
RE-02YS(St)CYGSWAY1×2×0.5	1	0.50	16/0.2	0.55	0.2	0.40	5.9	74
RE-02YS(St)CYGSWAY2×2×0.5	2	0.50	16/0.2	0.55	0.2	0.40	9.3	133
RE-02YS(St)CYGSWAY4×2×0.5	4	0.50	16/0.2	0.55	0.2	0.40	10.7	188
RE-02YS(St)CYGSWAY1×2×0.75	1	0.75	24/0.2	0.55	0.2	0.40	6.4	85

Cable Code	No. of pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Steel Wire Armour Diameter	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YS(St)CYGSWAY2×2×0.75	2	0.75	24/0.2	0.55	0.2	0.40	10.1	157
RE-02YS(St)CYGSWAY4×2×0.75	4	0.75	24/0.2	0.55	0.2	0.40	11.7	228
RE-02YS(St)CYGSWAY1×2×1	1	1.00	30/0.2	0.55	0.2	0.40	6.5	92
RE-02YS(St)CYGSWAY2×2×1	2	1.00	30/0.2	0.55	0.2	0.40	10.4	169
RE-02YS(St)CYGSWAY4×2×1	4	1.00	30/0.2	0.55	0.2	0.40	12	250



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



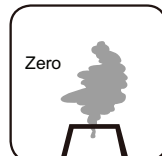
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

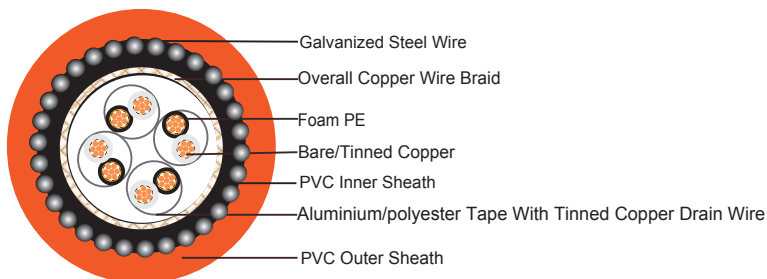


Caledonian

PVC Fire Retardant RS485 Screened & GSWA Databus Cables

Foam PE Insulated, PVC Sheathed, Individual Aluminium/polyester Tape & Overall Copper Wire Braid Screened, Galvanized Steel Wire Armoured Multipair RS 485 Databus Cables

RE-02Y(St)CYGSWAY PiMF



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.

CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Individual Screen: Individual aluminium/polyester tape.

Overall Screen: Copper wire braid.

Inner Sheath: Thermoplastic PVC compound.

Armoured: Galvanized steel wire.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

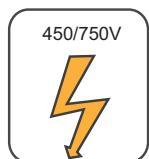
Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thick-ness	Steel Wire Armour Diameter	Nominal Sheath Thick-ness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02Y(St)CYGSWAY PiMF 1×2×0.22	1	0.22	7/0.2	0.55	0.2	0.40	5.4	58
RE-02Y(St)CYGSWAY PiMF 2×2×0.22	2	0.22	7/0.2	0.55	0.2	0.40	8.3	103
RE-02Y(St)CYGSWAY PiMF 4×2×0.22	4	0.22	7/0.2	0.55	0.2	0.40	9.5	151
RE-02Y(St)CYGSWAY PiMF 1×2×0.5	1	0.50	16/0.2	0.55	0.2	0.40	5.9	76
RE-02Y(St)CYGSWAY PiMF 2×2×0.5	2	0.50	16/0.2	0.55	0.2	0.40	9.4	138
RE-02Y(St)CYGSWAY PiMF 4×2×0.5	4	0.50	16/0.2	0.55	0.2	0.40	10.8	200
RE-02Y(St)CYGSWAY PiMF 1×2×0.75	1	0.75	24/0.2	0.55	0.2	0.40	6.4	88



Caledonian

PVC Fire Retardant RS485 Screened & GSWA Databus Cables

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Steel Wire Armour Diameter	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02Y(St)CYGSWAY PiMF 2×2×0.75	2	0.75	24/0.2	0.55	0.2	0.40	10.2	163
RE-02Y(St)CYGSWAY PiMF 4×2×0.75	4	0.75	24/0.2	0.55	0.2	0.40	11.8	242
RE-02Y(St)CYGSWAY PiMF 1×2×1	1	1.00	30/0.2	0.55	0.2	0.40	6.5	94
RE-02Y(St)CYGSWAY PiMF 2×2×1	2	1.00	30/0.2	0.55	0.2	0.40	10.5	175
RE-02Y(St)CYGSWAY PiMF 4×2×1	4	1.00	30/0.2	0.55	0.2	0.40	12.2	264



450/750V

Rated Voltage



EIA/TIA 485

Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



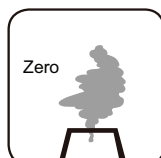
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



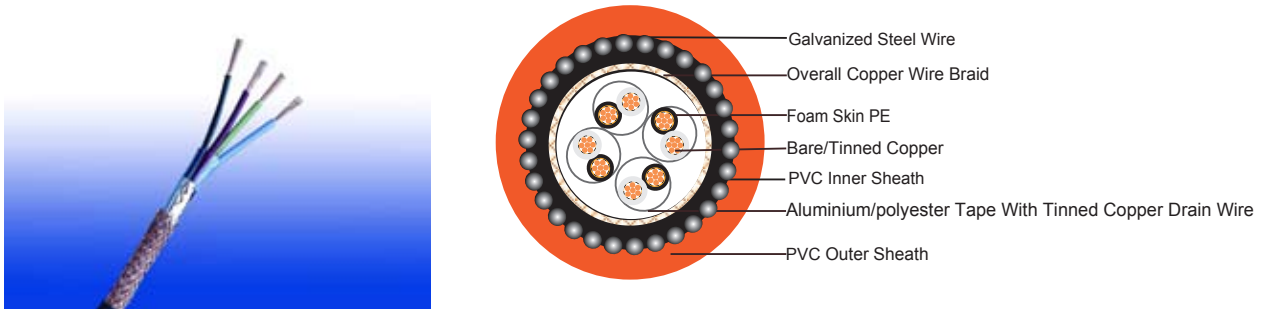
Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

Foam Skin PE Insulated, PVC Sheathed, Individual Aluminium/polyester Tape & Overall Copper Wire Braid Screened, Galvanized Steel Wire Armoured Multipair RS 485 Databus Cables

RE-02YS(St)CYGSWAY PiMF



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard..



CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam skin PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Individual Screen: Individual aluminium/polyester tape.

Overall Screen: Copper wire braid.

Inner Sheath: Thermoplastic PVC compound.

Armoured: Galvanized steel wire.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thick-ness	Steel Wire Armour Diameter	Nominal Sheath Thick-ness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YS(St)CYGSWAY PiMF 1×2×0.22	1	0.22	7/0.2	0.55	0.2	0.40	5.4	58
RE-02YS(St)CYGSWAY PiMF 2×2×0.22	2	0.22	7/0.2	0.55	0.2	0.40	8.3	103
RE-02YS(St)CYGSWAY PiMF 4×2×0.22	4	0.22	7/0.2	0.55	0.2	0.40	9.5	151
RE-02YS(St)CYGSWAY PiMF 1×2×0.5	1	0.50	16/0.2	0.55	0.2	0.40	5.9	76
RE-02YS(St)CYGSWAY PiMF 2×2×0.5	2	0.50	16/0.2	0.55	0.2	0.40	9.4	138
RE-02YS(St)CYGSWAY PiMF 4×2×0.5	4	0.50	16/0.2	0.55	0.2	0.40	10.8	200

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Steel Wire Armour Diameter	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YS(St)CYGSWAY PiMF 1×2×0.75	1	0.75	24/0.2	0.55	0.2	0.40	6.4	88
RE-02YS(St)CYGSWAY PiMF 2×2×0.75	2	0.75	24/0.2	0.55	0.2	0.40	10.2	163
RE-02YS(St)CYGSWAY PiMF 4×2×0.75	4	0.75	24/0.2	0.55	0.2	0.40	11.8	242
RE-02YS(St)CYGSWAY PiMF 1×2×1	1	1.00	30/0.2	0.55	0.2	0.40	6.5	94
RE-02YS(St)CYGSWAY PiMF 2×2×1	2	1.00	30/0.2	0.55	0.2	0.40	10.5	175
RE-02YS(St)CYGSWAY PiMF 4×2×1	4	1.00	30/0.2	0.55	0.2	0.40	12.2	264



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



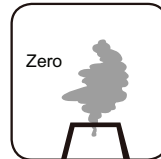
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

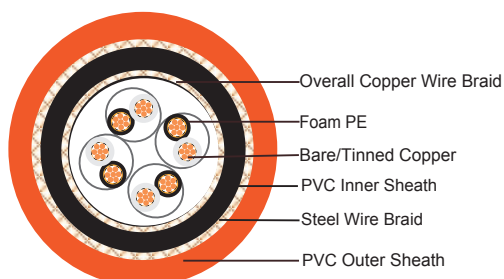


Caledonian

PVC Fire Retardant RS485 Screened & GSWA Databus Cables

Foam PE Insulated, PVC Sheathed, Overall Copper Wire Braid Screened, Galvanized Steel Wire Armoured Multipair RS 485 Databus Cables

RE-02YCYGSWAY



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.

CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Copper wire braid.

Inner Sheath: Thermoplastic PVC compound.

Armoured: Galvanized steel wire.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thick-ness	Steel Wire Armour Diameter	Nominal Sheath Thick-ness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YCYGSWAY 1×2×0.22	1	0.22	7/0.2	0.55	0.2	0.40	5.2	56
RE-02YCYGSWAY 2×2×0.22	2	0.22	7/0.2	0.55	0.2	0.40	8.1	100
RE-02YCYGSWAY 4×2×0.22	4	0.22	7/0.2	0.55	0.2	0.40	9.2	136
RE-02YCYGSWAY 1×2×0.5	1	0.50	16/0.2	0.55	0.2	0.40	5.8	71
RE-02YCYGSWAY 2×2×0.5	2	0.50	16/0.2	0.55	0.2	0.40	9.2	129
RE-02YCYGSWAY 4×2×0.5	4	0.50	16/0.2	0.55	0.2	0.40	10.6	183
RE-02YCYGSWAY 1×2×0.75	1	0.75	24/0.2	0.55	0.2	0.40	6.3	83
RE-02YCYGSWAY 2×2×0.75	2	0.75	24/0.2	0.55	0.2	0.40	10	152



Caledonian

PVC Fire Retardant RS485 Screened & GSWA Databus Cables

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thickness	Steel Wire Armour Diameter	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YCYGSWAY 4×2×0.75	4	0.75	24/0.2	0.55	0.2	0.40	11.6	223
RE-02YCYGSWAY 1×2×1	1	1.00	30/0.2	0.55	0.2	0.40	6.4	89
RE-02YCYGSWAY 2×2×1	2	1.00	30/0.2	0.55	0.2	0.40	10.3	165
RE-02YCYGSWAY 4×2×1	4	1.00	30/0.2	0.55	0.2	0.40	12	244



450/750V

Rated Voltage



EIA/TIA 485

Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



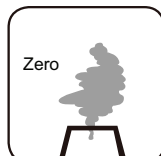
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



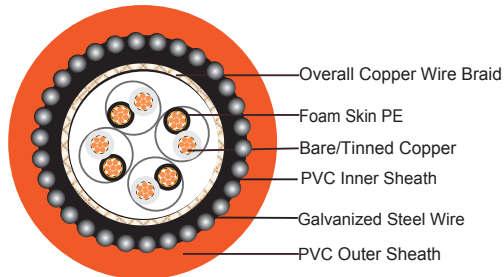
Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

Foam Skin PE Insulated, PVC Sheathed, Overall Copper Wire Braid Screened, Galvanized Steel Wire Armoured Multipair RS 485 Databus Cables

RE-02YSCYGSWAY



APPLICATION

The cables are designed for RS485 data connections where continued functionality is required during a fire situation. This cable combines low capacitance insulation with one of the highest levels of screening to provide high speed, interference free, data transmission where continued functionality is required during a fire situation.

STANDARDS

Basic design adapted to EIA/TIA 485

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.



CABLE CONSTRUCTION

Conductors: Bare or tinned copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Foam skin PE.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers.

Overall Screen: Copper wire braid.

Inner Sheath: Thermoplastic PVC compound.

Armoured: Galvanized steel wire.

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -20°C - +90°C

Temperature range during installation (mobile state): -5°C - +60°C

Minimum bending radius: 8 x Overall Diameter

ELECTRICAL PROPERTIES

Dielectric test	2000 V r.m.s. for 5' (core-core) 1000 V r.m.s. for 5' (core-screen)
Impedance	120Ω
Capacitance	45 nF/km conductor to conductor
	90 nF/km conductor to shield

CONSTRUCTION PARAMETERS

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thick-ness	Steel Wire Armour Diameter	Nominal Sheath Thick-ness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YSCYGSWAY 1×2×0.22	1	0.22	7/0.2	0.55	0.2	0.40	5.2	56
RE-02YSCYGSWAY 2×2×0.22	2	0.22	7/0.2	0.55	0.2	0.40	8.1	100
RE-02YSCYGSWAY 4×2×0.22	4	0.22	7/0.2	0.55	0.2	0.40	9.2	136
RE-02YSCYGSWAY 1×2×0.5	1	0.50	16/0.2	0.55	0.2	0.40	5.8	71
RE-02YSCYGSWAY 2×2×0.5	2	0.50	16/0.2	0.55	0.2	0.40	9.2	129
RE-02YSCYGSWAY 4×2×0.5	4	0.50	16/0.2	0.55	0.2	0.40	10.6	183
RE-02YSCYGSWAY 1×2×0.75	1	0.75	24/0.2	0.55	0.2	0.40	6.3	83

Cable Code	No. of Pair	Nominal Cross Sectional Area	No./ Nominal Diameter of Strands	Nominal Insulation Thick-ness	Steel Wire Armour Diameter	Nominal Sheath Thick-ness	Nominal Overall Diameter	Approx. Weight
	No	mm ²	No/mm	mm	mm	mm	mm	kg/km
RE-02YSCYGSWAY 2×2×0.75	2	0.75	24/0.2	0.55	0.2	0.40	10	152
RE-02YSCYGSWAY 4×2×0.75	4	0.75	24/0.2	0.55	0.2	0.40	11.6	223
RE-02YSCYGSWAY 1×2×1	1	1.00	30/0.2	0.55	0.2	0.40	6.4	89
RE-02YSCYGSWAY 2×2×1	2	1.00	30/0.2	0.55	0.2	0.40	10.3	165
RE-02YSCYGSWAY 4×2×1	4	1.00	30/0.2	0.55	0.2	0.40	12	244



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



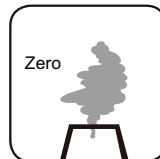
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

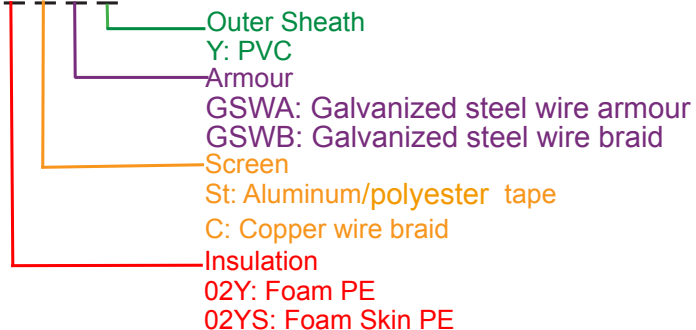


Caledonian

PVC Fire Retardant RS485 Screened & GSWA Databus Cables

TYPE CODES

RE-A-B-C-D



Technical Information

FLAME RETARDANCE IN ACCORDANCE WITH DIFFERENT STANDARDS

The following standards specify a method for flame propagation test for single core cables. The single cable sample undergoes the flame action of a bunsen burner. The test only lasts few minutes.

The IEC 60332-1 standards are taken over as EN standards and transferred to national standards Example: IEC 60332-1 becomes EN 60332-1 and introduced in Germany as DIN EN 60332-1.

Flame Retardance in accordance with EN 60332:2004

EN 60332:2004 Tests on electrical and optical cables under fire conditions. The standard applies to single insulated wires (cables) and requires a vertical flame test with a maximum flame climb of 450mm. The test lasts between 1 and 8 minutes, depending on the cable diameter.

EN 60332-1-1:2004 / BS EN 60332-1-1:2004 / IEC 60332-1-1:2004 / DIN EN 60332-1-1:2004 / VDE 0482-1-1:2005-06 Test on electrical and optical cables under fire conditions. Test for a vertical flame propagation for a single insulated wire or cables.

EN 60332-1-2:2004 / BS EN 60332-1-2:2004 / IEC 60332-1-2:2004 / DIN EN 60332-1-2:2004 / VDE 0482-1-2:2005-06 / CEI 60332-1-2(CEI 20-35/1-2) Tests on electrical and optical fiber cables under fire conditions. Test for a vertical flame propagation for a single insulated wire or cable – Procedure for 1kW premixed flame.

This standard specifies a method of test for resistance to vertical flame propagation for a single insulated wire or cable. Part 1-1 specifies the test apparatus and Part 1-2 specifies the test procedure.

The cable sample is deemed to pass the test if the distance between the lower edge of the top support and the onset of charring is greater than 50mm. In addition, a failure shall be recorded if burning extends downward to a point greater than 540mm from the lower edge of the top support.

EN 60332-1-2:2004 specifies the use of 1kW premix flame and is for general use, except that the procedure may not be suitable for the testing of small insulated conductors or cables of less than 0.5mm sq cross section because the conductor melts before the test is completed, or for the testing of small optic fiber cables because the fiber will be broken before the test is completed. In this case, the procedure given by EN 60332-2-1/2 is recommended.

EN 60332-2-1:2004 / BS EN 60332-2-1:2004 / IEC 60332-2-1:2004 / DIN EN 60332-2-1:2004 / VDE 0482-2-1:2005-06 Tests on electrical and optical cables under fire conditions. Test for a vertical flame propagation for a single small insulated wire or cable.

EN 60332-2-2:2004 / BS EN 60332-2-2:2004 / IEC60332-2-2:2004 / DIN EN 60332-2-2:2004 / VDE 0482-2-2:2005-06 / CEI 60332-2-2 (CEI 20-35/2-2) Test on electric and optical fiber cables under fire conditions. Tests for vertical flame propagation for a single small insulated wire or cable. Procedure for diffusion flame.

This test applies to small dimensions cables.

This standard specifies a method of test for resistance to vertical flame propagation for a single insulated wire or cable. Part 2-1 specifies the test apparatus and Part 2-2 specifies the test



procedure.

Flame Retardance in accordance with NF C32-070-2.1(C2)

NF C32-070:2001 Insulated conductors and cables for installation - Classification tests on conductors and cables with regard to fire behavior.

NF C32-070 2.1 Procedure for 1 kW pre-mixed flame.

The NF F 32070 2.1 (Category C2) and IEC 60332-1-2 are very similar. The sole difference is the time during which the flame is applied.

Flame Retardance in accordance with EN 50265-1:1999 (replaced by EN 60332)

EN 50265-1:1999 / BS EN 50265-1:1999 / DIN EN 50265-1:1999 / VDE 0482-265-1:1999-04 – Common test methods for cables under fire conditions. Test for resistance to a vertical flame propagation for a single insulated conductor or cable. Apparatus (Replaced by EN 60332-1-1:2004 and EN 60332-2-1:2004).

EN 50265-2-1:1999 / BS EN 50265-2-1:1999 / DIN EN 50265-2-1:1999 / VDE 0482-265-2-1:1999-04 – Common test methods for cables under fire conditions. Test for resistance to a vertical flame propagation for a single insulated conductor or cable. Part 2-1: Procedure 1kW pre-mixed flame (Replaced by EN 60332-1-2:2004).

EN 50265-2-2:1999 / BS EN 50265-2-2:1999 / DIN EN 50265-2-2:1999 / VDE 0482-265-2-2:1999-04 – Common test methods for cables under fire conditions. Test for resistance to a vertical flame propagation for a single insulated conductor or cable. Part 2-2: Procedure Diffusion flame (Replaced by EN 60332-2-2:2004).

Flame Retardance in accordance with BS 4066 Part 1 & 2 (replaced by EN 60332)

BS 4066-2:1980 (superseded) – Tests on electric cables under fire conditions. Method of test on a single vertical insulated wire or cable.

This standard is no longer in force and is replaced by BS EN 50265-2-1 which was also superseded by BS EN 60332-1:2009.

Flame Retardance in accordance with NBN C 30-004 (cat. F1)

NBN C 32-004 specifies a method of test for measuring the vertical flame propagation characteristics of a single wire or cable. The cable specimen is deemed to have passed the test and categorized as F1 if after burning has ceased, the charred or affected portion does not reach within 50mm of the lower edge of the top clamp which is equivalent to 425mm above the point of flame application.

Flame Retardance in accordance with IEEE 383

In the IEEE 383 test, cables are supported by a one foot wide vertical rack eight feet high. The cables are positioned in the centre six inches of the rack, spaced one-half diameter apart. The rack is centered in an eight foot enclosure. A ten inch ribbon burner ignites the cable with a 21 kW (70000 BTU). The burner is positioned 2 feet above the floor and 9 to 12 inches of cables are exposed to direct flames for 20 minutes. Cables on which flame extends above the top of the 8 foot rack fail the test.

REDUCED FIRE PROPAGATION IN ACCORDANCE WITH DIFFERENT STANDARDS

These standards specify a method for fire propagation test for vertically mounted bunched cables. These tests simulate the chimney effect in vertical installation of bunch of cables. A certain number of cable sections with a length of 3.5 m is fastened to a vertical ladder in an adapted chamber. The amount of combustible materials for cables and duration of flame application depends on the category the cable has to meet.

Resistance of the wires bundle arranged vertically to the spread of the flame should be such that after a certain time and stopping the source of ignition, flame is extinguished by itself and the length of charred fragments will not exceed 2.5 m in height measured above the lower edge of the burner.



Reduced Fire Propagation in accordance with IEC 60332-3

This test is the most common one to verify the behaviour of a cables for the fire propagation. The cables are installed on a bunch of vertical ladder inside a metal cabinet and undergo the action of a ribbon flame at 750°C. The standard is subdivided in several parts that differ one from the other for the quantity of cable to be installed, the installation mode and the flame application time.

EN 60332-3-10:2009 / BS EN 60332-3-10:2009 / IEC 60332-3-10 ed1.1 / DIN EN 60332-3-10:2009 / VDE 0482-332-3-10:2010-08 – Common test methods for cables under fire conditions. Tests on electric and optical fiber cables under fire conditions - Part 3-10: Test for vertical flame spread of vertically mounted bunched wires or cables.

EN 60332-3-21:2009 / BS EN 60332-3-21:2009 / IEC 60332-3-21 ed1.1 / DIN EN 60332-3-21 / VDE 0482-332-3-21:2010-08 / CEI EN 60332-3-21:2009 (CEI 20-22/3-1)– Procedures. Tests on electric and optical fiber cables under fire conditions - Part 3-21: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category A . F/R

-Installation In one layer (front).

-Installation In two layers (front and rear)

-The quantity of the Installed cable is equal to 7 litres/m of combustible materials for cables

-The time of application of the flame is 40 minutes

EN 60332-3-22:2009 / BS EN 60332-3-22:2009 / IEC 60332-3-22 ed1.1 / DIN EN 60332-3-22:2009 / VDE 0482-332-3-22:2010-08 / CEI EN 60332-3-22:2009 (CEI 20-22/3-2)– Procedures. Tests on electric and optical fiber cables under fire conditions - Part 3-22: Test for vertical flame spread of vertically-mounted bunched wires or cable - Category A

-Installation In one layer (front).

-The quantity of the installed cable is equal to 7 litres/m of combustible materials for cables

-The time of application of the flame is 40 minutes

EN 60332-3-23:2009 / BS EN 60332-3-23:2009 / IEC 60332-3-23 ed1.1 / DIN EN 60332-3-23:2009 / VDE 0482-332-3-23:2010-08 / CEI EN 60332-3-23:2009 (CEI 20-22/3-3)– Procedures. Tests on



electric and optical fiber cables under fire conditions - Part 3-23: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category B

- Installation In one layer (front).
- The quantity of the installed cable is equal to 3.5 litres/m of combustible materials for cables
- The time of application of the flame is 40 minutes

EN 60332-3-24:2009 / BS EN 60332-3-24:2009 / IEC 60332-3-24 ed1.1 / DIN EN 60332-3-24:2009 / VDE 0482-332-3-24:2010-08 / CEI EN 60332-3-24:2009 (CEI 20-22/3-4) – Procedures. Tests on electric and optical fiber cables under fire conditions - Part 3-24: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category C

- Installation In one layer (front).
- The quantity of the installed cable is equal to 1.5 litres/m of combustible materials for cables
- The time of application of the flame is 20 minutes



EN 60332-3-25:2009 / BS EN 60332-3-25:2009 / IEC 60332-3-25 ed1.1 / DIN EN 60332-3-25: 2009 / VDE 0482-332-3-25:2010-08 / CEI EN 60332-3-25:2009 (CEI 20-22/3-5)– Procedures. Tests on electric and optical fiber cables under fire conditions - Part 3-25: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category D

- Installation In one layer (front).
- The quantity of the installed cable is equal to 0.5 litres/m of combustible materials for cables
- The time of application of the flame is 20 minutes.

Summary of test condition:

IEC	60332-3-21	60332-3-22			60332-3-23		60332-3-24		60332-3-25	
BS EN 50266	50266-2-1	50266-2-2			50266-2-3		50266-2-4		50266-2-5	
CEI	20-22/3-1	20-22/3-2			20-22/3-3		20-22/3-4		20-22/3-5	
Category	AF/R	A			B		C		D	
Conductor cross-sectionsmm ²	>35	>35	≤35		>35	≤35	>35	≤35	>35	≤35
NMV(litres per metre of cable)	7	7			3.5		1.5		0.5	
Minimum length of test pieces(m)	3.5	3.5			3.5		3.5		3.5	
Standard ladder (500 mm wide): • number of layers • maximum width of test sample	1front+1rear 300mm	≥1front 300mm	1front 300mm	- -	≥1front 300mm	1front 300mm	≥1front 300mm	1front 300mm	≥1front 300mm	

Wide ladder (800 mm wide): • number of layers • maximum width of test sample	- -	- -	- -	1front 600mm	- -	- -	- -	
Positioning of test pieces	Spaced 0.5×Diameter cable (Max.20mm)	Touching	Spaced 0.5×Diameter cable (Max.20mm)	Touching	Spaced 0.5×Diameter cable (Max.20mm)	Touching	Spaced 0.5×Diameter cable (Max.20mm)	Touching
Number of burners	1	1	1	2	1	1	1	
Ladder mounting	Front and rear	Front, Wider ladder for larger cables			Front	Front	Front	
Flame application time(min)	40	40	40	40	40	40	40	
Test conditions	Wind speed: <8 m/s; Temperature: 5°C - +40°C							
Extent of the charred portion	≤2.5m above the bottom edge of the burner, neither at the front nor at the rear of the ladder.							

Reduced fire propagation in accordance with NF C32-070-2.2(C1)

NF C32-070 :2001 Insulated conductors and cables for installation.

-Classification tests on conductors and cables with regard to fire behavior.

A 1600mm vertically installed bundled of cable is exposed to the effects of a radiating oven (approx 830°C) and forced ventilation. Pilot flames arranged above the oven burn off the emitted gases. The test duration is 30 minutes, with the ventilation stopped for every 10 minutes during the flame application period. The cable sample is classified under Category C1 according to NF F 32070-2.2 if the carbonised part of the cable sample does not extend more than 0.8m above the upper base of the oven.

Depending on the damaged length, they can be further classified into 4 classes A, B, C and D according to NF F 16-101 as follows:

Category	Test Result
A	No damaged length from top of the oven in upper position.
B	Damaged length from top of oven in upper position not extending more than 50mm.
C	Damaged length from top of oven in upper position not extending more than 300mm
D	Damaged length from top of oven in upper position not extending above the top of the chimney

Reduced Fire Propagation in accordance to EN 50266-1, EN 50266-2-2, EN 50266-2-3, EN 50266-2-4.

EN 50266-1:2001 / BS EN 50266-1:2001 / DIN EN 50266-1:2001 / VDE 0482-266-1:2001-09– Common test methods for cables under fire conditions. Test for vertical flame spread of vertically mounted bunched wires or cables - Part 1: Apparatus (Replaced by EN 60332-3-10:2009)

EN 50266-2-1:2001 / BS EN 50266-2-1:2001 / DIN EN 50266-2-1:2001 / VDE 0482-266-2-1:2001-09 / CEI EN 50266-2-1– Common test methods for cables under fire conditions. Test for vertical flame



spread of vertically mounted bunched wires or cables - Part 2-1 : Procedures. Category A F/R (Replaced by EN 60332-3-21:2009)

EN 50266-2-2:2001 / BS EN 50266-2-2:2001 / DIN EN 50266-2-2:2001 / VDE 0482-266-2-2:2001-09 / CEI EN 50266-2-2- Common test methods for cables under fire conditions. Test for vertical flame spread of vertically mounted bunched wires or cables - Part 2-2: Procedures. Category A (Replaced by EN 60332-3-22:2009)

EN 50266-2-3:2001 / BS EN 50266-2-3:2001 / DIN EN 50266-2-3:2001 / VDE 0482-266-2-3:2001-09 / CEI EN 50266-2-1- Common test methods for cables under fire conditions. Test for vertical flame spread of vertically mounted bunched wires or cables - Part 2-3: Procedures. Category B (Replaced by EN 60332-3-23:2009)



EN 50266-2-4:2001 / BS EN 50266-2-4:2001 / DIN EN 50266-2-4:2001 / VDE 0482-266-2-4:2001-09 / CEI EN 50266-2-4:2001 – Common test methods for cables under fire conditions. Test for vertical flame spread of vertically mounted bunched wires or cables - Part 2-4: Procedures. Category C (Replaced by EN 60332-3-24:2009).

Reduced Fire Propagation in accordance with BS 4066-3

BS 4066-3:1994 (superseded) – Tests on electric cables under fire conditions. Tests on bunched wires or cables.

This standard is no longer in force and is replaced by the BS EN 50266-1:2001

Reduced Fire Propagation in accordance with NBN C 32-004 (F2)

NBN C 32-004 specifies a method of test for measuring the vertical flame propagation characteristics of a bunch of cables. The cable specimen is deemed to have passed the test and categorized as F2 if after burning has ceased, the extent of charred or affected portion does not reach a height exceeding 2.5m above the bottom edge of the burner.

HALOGEN CONTENT TEST IN ACCORDANCE WITH DIFFERENT STANDARDS

In the event of a fire, many fumes are produced. This test is concerned with the possibilities of corrosive acid gases being released from halogen containing cables and the damage such cables can cause (to equipments). These standards specify a method for determination of the amount of halogen acid gas, evolved during combustion of compound.

Halogen Content Test in accordance with EN 50267-2-1

EN 50267-2-1:1998 / BS EN 50267-2-1:1999 / DIN EN 50267-2-1:1999 / VDE 0482-267-2-1:1999-04 / CEI EN 50267-2-1:1999 (CEI 20-37/2-1) Common test methods for cables under fire conditions- Test on gases evolved during combustion of materials from cables- Part 2-1: Procedures. Determination of the amount of halogen acid gas.

This part of the standard defines the method to measure the amount of halogen acid evolved and which should be expressed in hydrochloric acid. The amount of halogen acid contained in the test solution is determined by a titration method.



If the cables are described as zero halogen or halogen free, it is recommended that the hydrochloric acid yield should be less than 0.5%.

Halogen Content Test in accordance with IEC 60754-1

IEC 60754-1 ed 2.0 Common test methods for cables under fire conditions. Test on gases evolved during combustion of materials from cables. Part 1: Procedures. Determination of the amount of halogen acid gas.

Basically, this is same as EN 50267-2-1.

Halogen Content Test in accordance with BS 6425-1

BS 6425-1:1990(superseded): Test on gases evolved during the combustion of materials from cables. Method for determination of amount of halogen acid gas evolved during combustion of polymeric materials taken from cables.

This standard is no longer in force and is replaced by the EN 50267-2-1.

ACID GAS EMISSION TEST IN ACCORDANCE WITH DIFFERENT STANDARDS

The following standards specify a method for determination of acidity of gas evolved during combustion of cables by measuring PH and conductivity. This test allows to determine the corrosivity of the acid gases generally halogens, that develop during the electric cable combustion.

Acid Gas Emission Test in accordance with EN 50267-2-2

EN 50267-2-2:1999 / BS EN 50267-2-2:1999 / DIN EN 50267-2-2:1999 / VDE 0482-267-2-2:1999-04 / CEI EN 50267-2-2:1999 (CEI 20-37/2-2). Common test methods for cables under fire conditions- Test on gases evolved during combustion of materials from cables- Part 2-2: Procedures. Determination of degree of acidity of gases for materials by measuring PH and conductivity

The standard states that the pH and the conductivity of a test solution should be measured, using calibrated PH and conductivity meters.

If the cables are described as zero halogen or halogen free, it is recommended that at least both of the following requirements should be met for each of the individual materials of a cable:

- The PH value should not be less than 4.3 when related to 1 litre of water

- The conductivity should not be less than 10us/mm when related to 1 litre of water

EN 50267-2-3:1999 / BS EN 50267-2-3:1999 / DIN EN 50267-2-3:1999 / VDE 0482-267-2-3:1999-04 / CEI EN 50267-2-3:1999 (CEI 20-37/2-3). Common test methods for cables under fire conditions- Test on gases evolved during combustion of materials from cables- Part 2-3:Procedures. Determination of degree of acidity of gases for cables by determination of the weighted average of pH and conductivity.

The standard states that the pH and the conductivity of a test solution should be measured, using calibrated pH and conductivity meters. The results from the different components of the cable are then weighted.





Acid Gas Emission Test in accordance with IEC 60754-2

IEC 60754-2 ed1.0 Test on gases evolved during combustion of electric cables - Part 2 : Determination of degree of acidity of gases evolved during combustion of materials taken from electric cables by measuring pH and conductivity.

Acid Gas Emission Test in accordance with NF C32-074

NF C32-074 Common test methods for cables under fire conditions - Test on gases evolved during combustion of materials from cables. This standard is equivalent to IEC 60754-2

Acid Gas Emission Test in accordance with BS 6425-2

BS 6425-2:1993 (superseded) Test on gases evolved during the combustion of materials from cables. Determination of degree of acidity (corrosivity) of gases by measuring pH and conductivity.

This standard is no longer in force and is replaced by the EN 50267-2-2:1999.

Acid Gas Emission Test in accordance with DIN VDE 0472-813 / VDE 0472-813:1994

DIN VDE 0472-813 / VDE 0472-813:1994 Corrosivity of combustion gases.

The standards are no longer in force and are replaced by the EN 50267-2-2 & VDE 0482-267-2-2.

SMOKE DENSITY TEST IN ACCORDANCE WITH DIFFERENT STANDARDS

The smoke density measurement taken from a material under fire conditions gives an indication of the visibility through the smoke. This is important as reduced visibility in a real fire situation makes it more difficult to escape from the fire thus increasing the threat to human life from the toxic gas, fumes and heat

The following standards specify the method for measuring the generation of smoke from cables during fire.

Smoke Density Test in accordance with IEC 61034-1 & IEC 61034-2

IEC 61034-1:2005 / EN 61034-1:2005 / BS EN 61034-1:2005 / DIN EN 61034-1:2006 / VDE 0482-1034-1:2006 Measurement of smoke density of cables burning under defined conditions. Part 1: Test apparatus



IEC 61034-2:2005 / EN 61034-2:2005 / BS EN 61034-2:2005 / DIN EN 61034-2:2006 / VDE 0482-1034-2:2006 / CEI EN 61034-2:2006 (CEI 20-37/3-1) Measurement of smoke density of cables burning under defined conditions.

Part 2: Test procedure and requirements.

The standard specifies a method of measurement of smoke density of cables. Part 1 specifies the test apparatus and Part 2 specifies the test procedure.

The test is usually performed inside a chamber of 3m x3m x3m and the test is sometimes described as 3 metre cube test. The test is performed by monitoring the transmittance reduction of a white light beam, running from one side of the chamber to the other, at a set height, thus monitoring the build up of smoke inside the chamber. The minimum percentage of light transmittance is often used to determine if the cable has passed or failed the test , often a minimum light transmittance of 60% is

applied in order to classify a cable as low smoke.

Smoke Density Test in accordance with NF C32- 073

NF C32 073 Common test methods for cables under fire conditions.

- Measurement of smoke density of cables burning under defined conditions.

This standard is equivalent to IEC 61034-2

Smoke Density Test in accordance with BS 7622-1 & BS 7622-2

BS 7622-1:1993 (superseded) – Measurement of smoke density of electric cables burning under defined conditions. Test apparatus.

BS 7622-2:1993 (superseded) – Measurement of smoke density of electric cables burning under defined conditions. Test procedure and requirements.

The standards are no longer in force and were replaced by the EN 50268-1:2000 and EN 50268-2:2000 even though they too were superseded by EN 61034-1:2005 and EN 61034-2:2005.

Smoke Density Test in accordance with EN 50268-1 & EN 50268-2

EN 50268-1:2000 / BS EN 50268-1:2000 / DIN EN 50268-1:2000 / VDE 0482-268-1:2000 (superseded) – Common test methods for cables under fire conditions. Measurement of smoke density of cable burning under defined conditions. Part 1: Apparatus

EN 50268-2:2000 / BS EN 50268-2:2000 / DIN EN 50268-2:2000 / VDE 0482-268-2:2000 (superseded) – Common test methods for cables under fire conditions. Measurement of smoke density of cable burning under defined conditions. Part 2: Procedure.

The standards are no longer in force and are replaced by the EN 61034-1:2005 and EN 61034-2:2005. Although these standards have been withdrawn, they are still called upon in some specification documents such as in the London Underground specification 1-085.

Smoke Density Test In Accordance with DIN VDE 0472-816 / VDE 0472-816:1994

DIN VDE 0472-816/VDE 0472-816:1994 Testing of cables, wires and flexible cords. Smoke Density.

The standards are no longer in force and are replaced by the EN 50268-1, VDE 0482-268-1, EN 50268-2 & VDE 0482-268-2 which are also replaced by the EN 61034-1:2005 and EN 61034-2:2005.

OXYGEN INDEX TEST IN ACCORDANCE WITH DIFFERENT STANDARDS

The oxygen index is defined as the minimum concentration of oxygen, expressed as volume percentage, in a mixture of oxygen and nitrogen that will just support combustion of a material initially at room temperature under specified test conditions.

Oxygen Index Test in accordance with ASTM D 2863

ASTM D 2863-10 Measuring the minimum oxygen concentration to support candle-like combustion of plastics (Oxygen Index).

The test is performed in accordance with the procedure specified in ASTM 2863-95 using test piece cut from the outer sheath of the cable. The apparatus holds a small specimen which is clamped vertically in a tube in an atmosphere where the relative concentration of oxygen and nitrogen can be changed. The aim is to test the flammability of the sample with a small pilot flame to find the





minimum oxygen concentration required to just sustain combustion of the sample.

Oxygen Index Test in accordance with ISO 4589-2

ISO4589-2:1996 Determination of burning behaviour by oxygen index Part 2: Ambient temperature test.

Specimens measuring 100mm long by 6mm wide are used for testing. The test is performed in accordance with the procedure specified in the standard.

TEMPERATURE INDEX TEST IN ACCORDANCE WITH DIFFERENT STANDARDS

This is a test for assessing the performance of a material when it is tested in accordance with BS2782: Part 1: Method 143a and 143b. The oxygen index of a material will drop when the temperature rises. When the temperature rises and the oxygen index drops to 21%, the material will burn automatically. This temperature is defined as temperature index. For example, the oxygen index of the coal at room temperature is 50% and when the temperature climbs to 150°C, its oxygen index drops to 21°C and the coal will burn by itself automatically. The temperature index of the coal is defined as 150°C. In general, the temperature index of fire retardant cable exceeds 250°C.



Temperature Index Test in accordance with BS 2782

BS 2782: Part 1:1989 Method 143a and 143b Temperature of materials. Determination of flammability.

Specimens measuring nominally 100mm long by 6.5mm wide by 3mm thick are used for testing. The specimens are then tested in accordance with the test procedure specified in the standard.

Temperature Index Test in accordance with ISO 4589-3

ISO4589-3:1996 Determination of burning behaviour by oxygen index Part 3: Elevated temperature test.

Specimens measuring 100mm long by 6mm wide are used for testing. The test is performed in accordance with the procedure specified in the standard.

TOXICITY TEST IN ACCORDANCE WITH DIFFERENT STANDARDS

Toxicity test in accordance with NES 02-713

Measuring a fume from a material exposed to a controlled fire conditions gives an indication of the fumes which may be produced in a real fire situation. A standard method of test for determining the toxicity of materials under fire condition is Defense Standard NES 02-713- Toxicity. This method gives the level of toxicity of the fumes produced from the material under test. During the test, the test specimen is heated via direct flame application at 1150°C.

The flame is applied via a bunsen burner with a flame height of between 100mm and 125mm formed with a methane gas and an external supply of compressed air. The specimen toxicity is determined from accurate pre-analysis weight (4pp) colorimetric tubes and ion chromatography.

The test may determine the following species: Hydrogen Bromide, Hydrochloric Acid, Hydrogen Fluoride, Formaldehyde, Nitrous gases, Carbon Monoxide, Carbon Dioxide, Acrylonitrile, Phenol, Hydrogen Sulphide, Sulphur Dioxide, Hydrocyanic Acid, Ammonia. The concentration in ppm for each gas detected are provided. The toxicity index of the specimens summates the toxic gases, taking into account of their level of danger to humans. The smaller the toxicity index, the better the product. A limit of 5 is often applicable.

Toxicity test in accordance with NF C 20-454

NF C 20-454 base environmental testing procedures. Fire behaviour. Analysis and titration of gases evolved during pyrolysis or combustion of materials used in electrotechnics. Exposure to abnormal heat or fire. Tube furnace method.



The test defined by this standard serves to define the conventional toxicity index (cti) of the gases emitted by the insulating or sleeving materials during combustion at 800°C.

Toxicity test in accordance with NF X 70-100

NF X 70-100 Fire Tests; Analysis of gaseous effluents.

The test is conducted within a tube furnace where the temperature is set at either 400°C, 600°C, 800°C (commonly 600°C is used for most of the materials or 800°C for some electrical products) for 40 minutes throughout the test by analysis of the toxicity index of the gases including CO, CO₂, HCL, HBr, HCN, HF and SO₂.



Address:

**Marchants Industrial Centre, Mill Lane, Laughton, Lewes,
East Sussex, BN8 6AJ, UK**

Tel: 44(0) 207 4195087

Fax: 44(0) 207 8319489

E-mail: sales@caledonian-cables.co.uk

www.caledonian-cables.co.uk