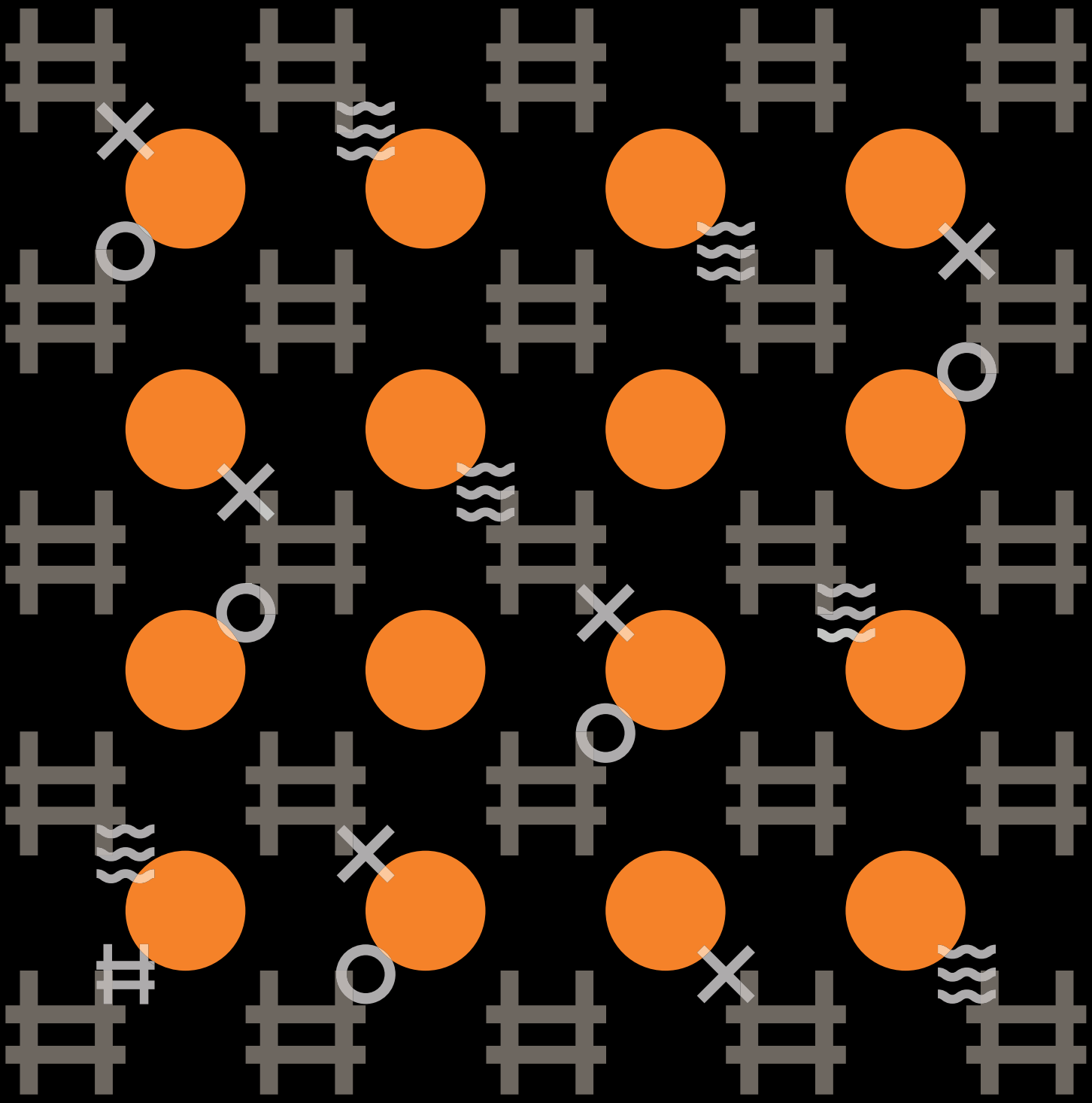
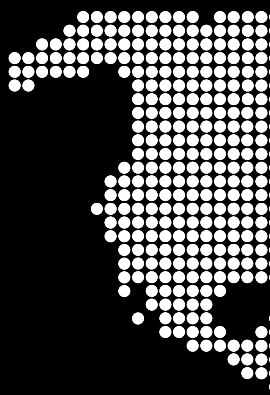
UNIKA



Railway

Globally Engineering Connections



Designers, producers and distributors of
high performance cable and wiring solutions

Featured Sector:

Railway

Other sectors:

Marine

Industrial Automation

Defence

Global Presence

Serving customers and markets worldwide. This is our objective, and our global presence attests it.

Presenza globale

Servire clienti e mercati in tutto il mondo. Questo è il nostro obiettivo e la presenza world-wide ne fa da testimone.

50 Countries

+1500 Clients

50% Export

25 Exclusive partners

Our milestones

1998

Unika S.p.A. Foundation

Unika was founded in 1998 in Cologna Veneta (VR), the heart of the Italian cable manufacturer district.

Nascita di Unika S.p.A.

Unika nasce nel 1998 a Cologna Veneta (VR), nel cuore del distretto italiano del cavo.

1999

First focus: Industrial Automation

Focusing on industrial automation, we acquired UL and CSA Certifications in under one year.

Primo focus: Automazione Industriale

Il primo focus è stata l'automazione industriale, portandoci a conseguire le certificazioni UL e CSA in meno di un anno.

2007

Synergies and new horizons

Through close collaboration with our partners, we developed and certified drinking water cables (clean cable).

Sinergie e nuovi orizzonti

Grazie alla stretta collaborazione con i nostri partner, nasce la famiglia di cavi approvati per uso in acqua potabile (clean cable).

2008 - 2017

Market diversification

In response to the 2008 global economic crisis, we diversified our focus and expanded into other sectors.

Diversificazione di Mercato

In risposta alla crisi globale del 2008, abbiamo diversificato il nostro focus approcciando altri settori.

2019

Hiring Global

Thanks to international hires, our sales branch is born in Germany, allowing us to focus our efforts on-site at the leading companies in the world of industrial automation.

Assunzioni Globali

Grazie ad assunzioni internazionali, nasce il nostro sales branch in Germania, permettendo di concentrare le nostre forze in loco presso le aziende leader nel mondo dell'automazione industriale.

2000

Our first steps in the German Market

Our first market was Germany, world-leading country in industrial automation.

I nostri primi passi nel Mercato Tedesco

Il nostro primo mercato è stato la Germania, paese leader mondiale dell'automazione industriale.

2004

KU Foundation

KU Distribution is born to satisfy the needs of the Italian Market.

Apertura di KU

Nasce KU Distribution per soddisfare le necessità del Mercato italiano.

2005 - 2006

Unika & KU: a success story

The two companies become increasingly linked, becoming a successful business model.

Unika & KU: un esempio di successo

Le due realtà aziendali sono sempre più integrate, diventando un business model di successo.

2020

KU Distribution Hub 2

The acquisition of the new warehouse (KU HUB 2) adds another 10,000 m^2 to manage the growth of our logistics hub.

KU Distribution Hub 2

L'acquisto del nuovo magazzino (KU HUB 2) mette a disposizione altri 10.000 m^2 per gestire la crescita del nostro polo logistico.

2023-2025

Unika Group today

Today, Unika Group stands as an international entity, a market leader capable of meeting the most demanding customers worldwide, from design and development to industrialization, all the way to logistics with Kanban service.

Unika Group oggi

Unika Group oggi si presenta come realtà internazionale, leader di mercato in grado di soddisfare i clienti più esigenti nel mondo, dalla progettazione, sviluppo, industrializzazione fino alla logistica con Kanban service.

UNIKA

UNIKA
PRODUCTION
Unika S.p.A.

KU
DISTRIBUTION

Company assets growing together as one

Our strength derives from the synergy among all departments within the group, from technical development to production, sales, logistics management, and procurement. It is through this collaboration that we are able to provide catalog products, product and packaging customizations, as well as just-in-time deliveries with dedicated stock for our customers.

La nostra forza deriva dalla sinergia tra tutti i reparti del gruppo, dallo sviluppo tecnico alla produzione, vendita, gestione logistica e di approvvigionamento. È grazie a questa collaborazione che siamo in grado di offrire prodotti da catalogo, customizzazioni di prodotto e confezionamento, e consegne just-in-time con stock dedicato per i nostri clienti.

Core activities / Attività principali

- **Research & Development, Production, Industrialisation**
- **High Technical competence**

- **Ricerca & Sviluppo, Produzione, Industrializzazione**
- **Alta Competenza tecnica**

Core activities / Attività principali

- **SALES**
- **Logistics**
- **Kanban Service**

- **Vendite**
- **Logistica**
- **Servizio Kanban**

Unika Production (UNIKA S.p.A.)

Cologna Veneta
Verona - Italy

1998

10.000 m^2

1 Megawatt

PVC, PUR, PE, PP, TPE-E, XLPE,
EPDM, SILICONE, FEP, FPA. ETFE

Value is created by combining diverse group expertise in technical, commercial, production, and purchasing knowledge within a unified market team. This collaboration allows for tailored product and packaging customization and efficient just-in-time delivery with dedicated customer stock.

Il valore aggiunto del gruppo consiste nella capacità di combinare diverse competenze in ambito tecnico, commerciale, di produzione e di acquisto all'interno di un unico team. Questa collaborazione consente la realizzazione di prodotti personalizzati ed imballaggi su misura, oltre ad un'efficiente consegna just-in-time con stock dedicato al cliente.

KU Distribution (Hub 1 + Hub 2)

12.000 m^2
(Hub 1, Hub 2)

Bagnolo San Vito
Mantova - Italy

2004

+10.000 pallets

Sales Unit Germany

Mönchengladbach
Düsseldorf - Germany

2019

Homologations & Certifications

Elevating Quality through Technical Expertise and Certifications

Unika S.p.A. places the utmost emphasis on precision and professionalism. Our company places technical excellence at the forefront, offering products of the highest quality that meet various industry standards. The certifications and approvals, obtained and maintained through constant investments, are synonymous with high-quality products and an organization that is market-oriented and focused on customer needs. The technical office and the sales department collaborate daily to develop innovative solutions, all crafted by our team of expert professionals.

Competenze tecniche e certificazioni per una qualità sempre più elevata

Unika S.p.A. dedica massima attenzione a precisione e professionalità. L'azienda pone in primo piano l'eccellenza tecnica, offrendo prodotti di altissima qualità che soddisfano i vari standard di settore. Le certificazioni e le omologazioni, ottenute e mantenute con costanti investimenti, sono sinonimo di prodotti di qualità e di un'organizzazione orientata al mercato e focalizzata sulle esigenze dei clienti. L'intreccio tra ufficio tecnico e reparto commerciale è quotidiano, volto allo sviluppo di soluzioni innovative studiate dal nostro team di esperti professionisti.

Railway

EN standards (EN 50264-1; EN 50264-3-1; EN 50264-3-2; EN 50200; EN 50382; EN 50306; EN 45545);
Data Cables and jumpers

Industrial Automation

Drinkable water

Shipboard & Offshore

Defence

Our wide range of national and international certifications and approvals guarantees the quality of products and services.

Refer to the single product pages for the correct assignment of each certification.

La nostra vasta gamma di certificazioni e omologazioni nazionali ed internazionali garantisce la qualità dei nostri prodotti e servizi.

Per la corretta attribuzione delle certificazioni riferirsi alle singole pagine dei prodotti.

La missione di **UNIKA Group** è sempre stata il progetto e lo sviluppo di cavi basati su specifiche richieste dei nostri Clienti. La nostra presenza ed esperienza, guadagnata nel corso degli anni in diversi settori, unita ai sistemi di produzione di ultima generazione e ad una nutrita task force tecnica e commerciale a livello internazionale, ha permesso lo sviluppo continuo dell'Azienda basandosi sulle tendenze del Mercato. Queste competenze di base hanno stimolato un ulteriore ampliamento della nostra gamma di prodotto con lo sviluppo dei cavi per applicazioni ferroviarie, iniziato nel 2007 con l'inserimento di UNIKA nella vendor list di RFI.

Tutti i cavi per rotabili sono conformi alla EN 45545-2 in accordo al più alto livello di sicurezza designato con HL3* e tutte le prove di tipo sono certificati dall'IMQ in qualità di competent Body per i componenti ferroviari.
Il range comprende i cavi di potenza e controllo a spessore medio secondo la EN 50264-3, i cavi in silicone secondo la EN 50382 per temperature fino a 150°C e i cavi "thin wall" secondo EN 50306. I cavi isolati in silicone possono vantare il raggiungimento di più elevate caratteristiche in termini di resistenza alla lacerazione e all'abrasione unite a più alte prestazioni a livello termico secondo le più severe richieste dettate da TRENITALIA che permette l'eliminazione della treccia tessile esterna quale ulteriore protezione meccanica. Oltre i cavi sopra elencati, UNIKA ha sviluppato e approvato in conformità alla EN 45545-2, altri cavi al di fuori delle tabelle delle norme EN ferroviarie ma ampiamente usati in questo campo.
In particolare, possiamo fornire cavi resistenti al fuoco (secondo la EN 50264 ed EN 50200), cavi di controllo schermati e non schermati con sezioni da 0,25 a 0,75 mm2 non inclusi nella EN 50264-3, cavi ibridi speciali sviluppati in accordo alle necessità del cliente, i cavi dati (tra i quali i cavi Categoria 7A, Categoria 5E, Categoria 5E resistenti al fuoco, RS 485, RS 232 e Profinet) e cavi Jumper.
Unika è anche in grado di fornire i cavi dati opportunamente cablati con i loro connettori e testati in accordo al protocollo a cui appartengono, oltre che ai cavi precablati per i lavori di manutenzione e revamping.

i cavi sono resistenti ai raggi UV secondo UL758.

*Requisiti HL3:
- Non propagazione dell'incendio EN 60332-3-24/
EN 50305: < 2,5 m / 1,5 m
- Non propagazione della fiamma EN 60332-1-2
- Bassa tossicità: <6
- Privi di alogeni IEC 60754-1/-2 e IEC 60684-2
- Bassa emissione di fumi IEC 61034-2: >70%

UNIKA Group mission has always been the design and development of cables based on specific Customers' requests. Its presence and experience, gained over the years in several market sectors, linked to last generation production systems and to a technical and commercial task force at international level, allows the continuous improvement of the Company possibilities based on market trends. This background has stimulated a further enlargement of our range with the development of cables for railways applications, started in 2007 with the qualification of UNIKA into RFI vendor list.

All our rolling stock cables are in compliance with EN 45545-2 according to the highest safety level HL3* and all the type tests are certified by IMQ as competent body for rolling stock components.
The range consists of medium wall power and control cables according to EN 50264-3, silicon cables according to EN 50382 standard for temperature up to 150°C and thin wall cables according to EN 50306. Silicon cables can grant the achievement of enhanced performances in tear and abrasion resistance and aging test as required by severe TRENITALIA rules without the employment of an external textile braid as mechanical protection. Beside those ones listed above, UNIKA has developed and approved according to EN 45545-2 indications, other cables out of the scope of the relevant EN Standards for rolling stocks but widely applied in such field.
In particular we can supply fire resistant power cables (following EN 50264 and EN 50200), control cables screened and unscreened with cross sections 0,25÷0,75 mm^2 not included into EN 50264-3, special hybrid cables developed under Customers' needs, data cables (including Category 7A, Category 5E, Category 5E fire resistant, RS 485, RS 232 and Profinet) and Jumper cables. UNIKA is also able to supply data cables with connectors and to test them according to the protocol they belong to, besides harnesses for revamping jobs.

Cables are UV resistant according to UL758.

*HL3 requirements:
- Not fire propagation EN 60332-3-24/
EN 50305: < 2,5 m / 1,5 m
- Not flame propagation EN 60332-1-2
- Low toxicity content: <6
- Halogen free IEC 60754-1/-2 and IEC 60684-2
- Low smoke emission IEC 61034-2: >70%

Rated voltage			
U_0 (on the marking)	U	U_{MAX}	U_0 (direct current core/ core)
300 V	500 V	600 V	450 V
600 V	1000 V	1200 V	900 V
1800 V	3000 V	3600 V	2700 V
3600 V	6000 V	7200 V	5400 V

Product range

Visit our website

www.unika.it

01

Rolling Stock Cables

UNIRAIL HT – EN 50382-2 1800 V 150°C - type F

UNIKA (Italy) - EN 50382-2 1800 V 16 F 150°C - code

TECHNICAL DATA

Temperature rating up to and including 150°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, acids and alkali

Enhanced abrasion and tear resistance and enhanced thermal aging for long term (beyond 20000h at 170°C) according to the TRENITALIA specification and principal OEMs requests

Bending radius: fixed ≥3 outer diameter, flexible ≥ 5 outer diameter

Range of approval:
According to table 1 (cross-section 1,5 ÷ 400 mm²) of EN 50382-2 for cables rated 1800V (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter without braid [mm]	Cable mass [kg/km]
RA801	1,5	6,3 ÷ 7,3	57
RA802	2,5	6,7 ÷ 7,8	69
RA803	4	7,2 ÷ 8,4	86
RA804	6	7,7 ÷ 9,0	107
RA805	10	8,5 ÷ 10,0	151
RA806	16	9,6 ÷ 11,2	219
RA807	25	10,9 ÷ 12,7	305
RA808	35	12,1 ÷ 14,1	394
RA809	50	13,5 ÷ 15,8	540
RA810	70	15,2 ÷ 17,8	725
RA811	95	17,0 ÷ 19,9	961
RA812	120	18,6 ÷ 21,7	1182
RA813	150	20,1 ÷ 23,5	1438
RA814	185	21,7 ÷ 25,4	1760
RA815	240	24,1 ÷ 28,2	2249
RA816	300	26,4 ÷ 30,9	2680
RA817	400	29,9 ÷ 34,9	3450

CONSTRUCTION

Type: single core unsheathed cable

Conductor: tinned copper conductor according to class 5 EN 60228

Screening separator: semiconductive black tape

Insulation: silicon rubber compound, type EI111 according to Standard EN 50382-1, colour black if not otherwise stated

Textile braid: available upon request

Marking: UNIKA (Italy) – EN 50382-2 1800V *cross-section* F 150°C – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

The characteristics of the products, described in the data sheet, do not constitute any contractual binding. UNIKA spa reserves the right to change the specifications without any notice. Partial or total reproduction of this document is forbidden.

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The images are made for the sole purpose of illustrating the product and are purely indicative.

UNIRAIL HT – EN 50382-2 1800 V 150°C - type FF

TECHNICAL DATA

Temperature rating up to and including 150°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, acids and alkali

Enhanced abrasion and tear resistance and enhanced thermal aging for long term (beyond 20000h at 170°C) according to the TRENITALIA specification and principal OEMs requests

Bending radius: fixed ≥3 outer diameter, flexible ≥ 5 outer diameter

Range of approval:
According to table 2 (cross-section 1,5 ÷ 400 mm²) of EN 50382-2 for cables rated 1800V (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RAA01	1,5	6,8 ÷ 7,9	63
RAA02	2,5	7,2 ÷ 8,4	76
RAA03	4	7,7 ÷ 9,0	93
RAA04	6	8,2 ÷ 9,6	115
RAA05	10	9,4 ÷ 11,0	168
RAA06	16	10,5 ÷ 12,2	236
RAA07	25	12,3 ÷ 14,4	339
RAA08	35	13,6 ÷ 15,9	432
RAA09	50	15,0 ÷ 17,5	583
RAA10	70	16,8 ÷ 19,7	780
RAA11	95	19,0 ÷ 22,2	1039
RAA12	120	20,8 ÷ 24,3	1276
RAA13	150	22,3 ÷ 26,1	1539
RAA14	185	24,5 ÷ 28,6	1871
RAA15	240	27,1 ÷ 31,7	2417
RAA16	300	29,5 ÷ 34,6	2760
RAA17	400	33,2 ÷ 38,9	3620

CONSTRUCTION

Type: single core sheathed cable

Conductor: tinned copper conductor according to class 5 EN 60228

Screening separator: semiconductive black tape

Insulation: silicon rubber compound, type EI111 according to Standard EN 50382-1, colour white if not otherwise stated

Tape (optional): polyester or other non-hygroscopic tape

Sheath: silicon rubber compound, type EM107 according to Standard EN 50382-1, colour black if not otherwise stated

Marking: UNIKA (Italy) – EN 50382-2 1800V *cross-section* FF 150°C – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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UNIRAIL HT – EN 50382-2 3600 V 150°C - type F

UNIKA (Italy) - EN 50382-2 3600 V 10 F 150°C - code

TECHNICAL DATA

Temperature rating up to and including 150°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, acids and alkali

Enhanced abrasion and tear resistance and enhanced thermal aging for long term (beyond 20000h at 170°C) according to the TRENITALIA specification and principal OEMs requests

Bending radius: fixed ≥3 outer diameter, flexible ≥ 5 outer diameter

Range of approval:
According to table 3 (cross-section 2,5 ÷ 400 mm²) of EN 50382-2 for cables rated 3600V (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter without braid [mm]	Cable mass [kg/km]
RA901	2,5	7,6 ÷ 8,9	84
RA902	4	8,1 ÷ 9,5	102
RA903	6	9,0 ÷ 10,6	124
RA904	10	9,5 ÷ 11,1	170
RA905	16	10,5 ÷ 12,3	241
RA906	25	11,8 ÷ 13,8	329
RA907	35	13,0 ÷ 15,2	422
RA908	50	14,4 ÷ 16,9	571
RA909	70	16,1 ÷ 18,9	760
RA910	95	17,5 ÷ 20,5	984
RA911	120	19,3 ÷ 22,6	1216
RA912	150	20,8 ÷ 24,4	1474
RA913	185	22,6 ÷ 26,5	1810
RA914	240	25,4 ÷ 29,8	2326
RA915	300	27,7 ÷ 32,4	2780
RA916	400	30,8 ÷ 36,0	3610

CONSTRUCTION

Type: single core unsheathed cable

Conductor: tinned copper conductor according to class 5 EN 60228

Screening separator: semiconductive black tape

Insulation: silicon rubber compound, type EI111 according to Standard EN 50382-1, colour black if not otherwise stated

Textile braid: available upon request

Marking: UNIKA (Italy) – EN 50382-2 3600V *cross-section* F 150°C – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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UNIRAIL HT – EN 50382-2 3600 V 150°C - type FF

TECHNICAL DATA

Temperature rating up to and including 150°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, acids and alkali

Enhanced abrasion and tear resistance and enhanced thermal aging for long term (beyond 20000h at 170°C) according to the TRENITALIA specification and principal OEMs requests

Bending radius: fixed ≥3 outer diameter, flexible ≥ 5 outer diameter

Range of approval:
According to table 5 (cross-section 2,5 ÷ 400 mm²) of EN 50382-2 for cables rated 3600V (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RAB01	2,5	9,9 ÷ 11,6	122
RAB02	4	10,4 ÷ 12,2	143
RAB03	6	10,9 ÷ 12,8	167
RAB04	10	11,8 ÷ 13,8	217
RAB05	16	12,8 ÷ 15,0	291
RAB06	25	14,7 ÷ 17,2	403
RAB07	35	15,9 ÷ 18,6	503
RAB08	50	17,5 ÷ 20,5	668
RAB09	70	19,2 ÷ 22,4	867
RAB10	95	20,8 ÷ 24,3	1110
RAB11	120	22,4 ÷ 26,2	1343
RAB12	150	24,1 ÷ 28,2	1621
RAB13	185	26,4 ÷ 30,9	2004
RAB14	240	29,4 ÷ 34,4	2555
RAB15	300	31,7 ÷ 37,1	3070
RAB16	400	35,0 ÷ 40,9	3970

CONSTRUCTION

Type: single core sheathed cable

Conductor: tinned copper conductor according to class 5 EN 60228

Screening separator: semiconductive black tape

Insulation: silicon rubber compound, type EI111 according to Standard EN 50382-1, colour white if not otherwise stated

Tape (optional): polyester or other non-hygroscopic tape

Sheath: silicon rubber compound, type EM107 according to Standard EN 50382-1, colour black if not otherwise stated

Marking: UNIKA (Italy) – EN 50382-2 3600V *cross-section* FF 150°C – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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UNIRAIL HT – EN 50382-2 600 V 150°C - type FX

TECHNICAL DATA

Temperature rating up to and including 150°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, acids and alkali

Enhanced abrasion and tear resistance and enhanced thermal aging for long term (beyond 20000h at 170°C) according to the TRENITALIA specification and principal OEMs requests

Bending radius: fixed ≥3 outer diameter, flexible ≥ 5 outer diameter

Range of approval:
In compliance with EN 50382-2 (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RAD00*	0,60	2,6	12
RAD06	16	10,1	220
RAD07	25	10,7	280
RAD08	35	12,1	410
RAD09	50	13,8	540
RAD10	70	15,6	770
RAD11	95	17,0	975
RAD12	120	18,5	1220
RAD13	150	20,6	1460
RAD14	185	25,5	2240

CONSTRUCTION

Type: single core transparent cable

Conductor: tinned copper conductor according to class 6 EN 60228 for section ≥ 16 mm², class 5 for section < 16 mm²

Tape (optional): polyester or other non-hygroscopic transparent tape

Insulation: silicon rubber compound, type EI111 according to Standard EN 50382-1, transparent or other colour

Marking: UNIKA (Italy) – EN 50382-2 600V *cross-section* FX 150°C – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

Cables are suitable for flexible installations (e.g. Jumper cables)

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UNIRAIL HT – EN 50382-2 3600 V 150°C - type FX

TECHNICAL DATA

Temperature rating up to and including 150°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, acids and alkali

Enhanced abrasion and tear resistance and enhanced thermal aging for long term (beyond 20000h at 170°C) according to the TRENITALIA specification and principal OEMs requests

Bending radius: fixed ≥3 outer diameter, flexible ≥ 5 outer diameter

Range of approval:
According to table 4 (cross-section 50 ÷ 185 mm²) of EN 50382-2 for cables rated 3600V (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RA907X*	35	13,0 ÷ 15,2	465
RA908X	50	15,2 ÷ 17,8	580
RA909X	70	16,9 ÷ 19,8	770
RA910X	95	18,3 ÷ 21,4	995
RA911X	120	20,1 ÷ 23,5	1240
RA912X	150	21,6 ÷ 25,3	1485
RA913X	185	23,4 ÷ 27,4	1830
RA914X	240	26,2 ÷ 27,4	2400

* Out of the scope of the standard

CONSTRUCTION

Type: single core unsheathed cable

Conductor: tinned copper conductor according to class 6 EN 60228

Screening separator: semiconductive black tape

Insulation: silicon rubber compound, type EI111 according to Standard EN 50382-1, colour black if not otherwise stated

Textile braid: available upon request

Marking: UNIKA (Italy) – EN 50382-2 3600V *cross-section* FX 150°C – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

Cables are suitable for flexible installations (e.g. Jumper cables)

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Unless otherwise specified, all values are nominal, other values can be provided on request.
The images are made for the sole purpose of illustrating the product and are purely indicative.

UNIRAIL HT – EN 50382-2 3600 V 150°C - type FFS

TECHNICAL DATA

Temperature rating up to and including 150°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, acids and alkali

Enhanced abrasion and tear resistance and enhanced thermal aging for long term (beyond 20000h at 170°C) according to the TRENITALIA specification and principal OEMs requests

Bending radius: fixed ≥3 outer diameter, flexible ≥ 5 outer diameter

Range of approval:
In compliance with table 5 (cross-section 2,5 ÷ 400 mm²) of EN 50382-2 for cables rated 3600V (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RAC05	16	12,8 ÷ 15,0	370
RAC06	25	14,7 ÷ 17,2	485
RAC07	35	15,9 ÷ 18,6	580
RAC08	50	17,5 ÷ 20,5	750
RAC09	70	19,2 ÷ 22,4	1010
RAC10	95	20,8 ÷ 24,3	1200
RAC11	120	22,4 ÷ 26,2	1485
RAC11H	120	26,5 ÷ 30,0	1620
RAC12	150	24,1 ÷ 28,2	1770
RAC13	185	26,4 ÷ 30,9	2160
RAC14	240	29,4 ÷ 34,4	2720

CONSTRUCTION

Type: single core screened cable with EMC performance

Conductor: tinned copper conductor according to class 5 EN 60228

Screening separator: semiconductive black tape

Insulation: silicon rubber compound, type EI111 according to Standard EN 50382-1, colour white if not otherwise stated

Tape (optional): polyester or other non-hygroscopic tape

Screen: tinned copper wire braid with optional non-hygroscopic tape, minimum coverage 85%

Sheath: silicon rubber compound, type EM107 according to Standard EN 50382-1, colour black if not otherwise stated

Marking: UNIKA (Italy) – EN 50382-2 3600V *cross-section* FFS 150°C – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

Add letter C after the item number to have spiral tinned copper wire instead of braid

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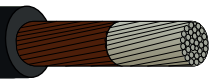
UNIRAIL S – EN 50264-3-1 600 V - type M

UNIKA (Italy) - EN 50264-3-1 600 V 16 M - code



TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, fuels, oils, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table 1 (cross-section 1 ÷ 400 mm²) of EN 50264-3-1 for cables rated 600V (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB001	1	2,4 ÷ 2,8	14
RB002	1,5	2,8 ÷ 3,3	20
RB003	2,5	3,2 ÷ 3,8	29
RB004	4	3,8 ÷ 4,4	43
RB005	6	4,2 ÷ 5,0	63
RB006	10	5,1 ÷ 5,9	104
RB007	16	6,1 ÷ 7,2	157
RB008	25	7,8 ÷ 9,1	253
RB009	35	9,0 ÷ 10,6	336
RB010	50	10,6 ÷ 12,4	486
RB011	70	12,5 ÷ 14,6	673
RB012	95	13,9 ÷ 16,3	892
RB013	120	15,7 ÷ 18,4	1124
RB014	150	17,6 ÷ 20,6	1399
RB015	185	19,6 ÷ 22,9	1745
RB016	240	22,2 ÷ 26,0	2261
RB017	300	24,6 ÷ 28,8	2776
RB018	400	28,1 ÷ 32,9	3795

Out of the scope of the Standard.

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB019	0,50	2,2	10
RB020	0,75	2,4	13

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CONSTRUCTION

Type: single core unsheathed cable

Conductor: tinned copper conductor according to class 5 EN 60228

Tape (optional): coloured tape for cross-section ≥ 16 mm²

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, colour black or yellow-green if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-1 600V *cross-section* M – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

Add the following letter after the item number for colours different from black
G: yellow/green
Y: grey
B: blue
R: red
W: brown
H: white
J: yellow
A: orange

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UNIRAIL S – EN 50264-3-1 1800 V – type M

UNIKA (Italy) - EN 50264-3-1 1800 V 35 M - code

TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table 2 (cross-section 1,5 ÷ 400 mm²) of EN 50264-3-1 for cables rated 1800V (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB101	1,5	5,3 ÷ 6,2	47
RB102	2,5	5,7 ÷ 6,7	58
RB103	4	6,2 ÷ 7,3	75
RB104	6	6,7 ÷ 7,8	97
RB105	10	7,5 ÷ 8,8	144
RB106	16	8,6 ÷ 10,0	201
RB107	25	9,9 ÷ 11,6	298
RB108	35	11,1 ÷ 13,0	386
RB109	50	12,5 ÷ 14,6	534
RB110	70	14,2 ÷ 16,6	717
RB111	95	16,0 ÷ 18,7	953
RB112	120	17,6 ÷ 20,6	1177
RB113	150	19,1 ÷ 22,3	1433
RB114	185	20,9 ÷ 24,4	1777
RB115	240	23,7 ÷ 27,5	2272
RB116	300	25,6 ÷ 30,1	2785
RB117	400	29,2÷ 34,2	3840

Out of the scope of the Standard.

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB118	0,50	5,0	35
RB120	0,75	5,2	40
RB119	1,0	5,4	45

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CONSTRUCTION

Type: single core unsheathed cable

Conductor: tinned copper conductor according to class 5 EN 60228

Tape (optional): coloured tape for cross-section ≥ 16 mm²

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, colour black or yellow-green if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-1 1800V *cross-section* M – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

Add the following letter after the item number for colours different from black
G: yellow/green
Y: grey
B: blue
R: red
W: brown
H: white
X: class 6 conductor
A: orange

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UNIRAIL S – EN 50264-3-1 1800 V – type MM

TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table 3 (cross-section 1,5 ÷ 400 mm²) of EN 50264-3-1 for cables rated 1800V (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB201	1,5	5,7 ÷ 6,7	49
RB202	2,5	6,0 ÷ 7,0	61
RB203	4	6,5 ÷ 7,6	78
RB204	6	7,0 ÷ 8,1	100
RB205	10	8,2 ÷ 9,6	156
RB206	16	9,2 ÷ 10,8	215
RB207	25	11,5 ÷ 13,4	343
RB208	35	12,7 ÷ 14,9	436
RB209	50	14,1 ÷ 16,5	591
RB210	70	15,8 ÷ 18,5	781
RB211	95	18,0 ÷ 21,0	1045
RB212	120	19,6 ÷ 22,9	1278
RB213	150	21,4 ÷ 25,1	1564
RB214	185	23,4 ÷ 27,4	1923
RB215	240	25,9 ÷ 30,3	2434
RB216	300	28,1 ÷ 32,9	2940
RB217	400	32,0 ÷ 37,4	3980

CONSTRUCTION

Type: single core sheathed cable

Conductor: tinned copper conductor according to class 5 EN 60228

Tape (optional): coloured tape for cross-section ≥ 16 mm²

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, colour black if not otherwise stated (upon request compound type EI110)

Tape (optional): or talcum powder for strippability

Sheath: crosslinked compound, type EM104 according to Standard EN 50264-1, colour black if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-1 1800V *cross-section* MM – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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UNIRAIL S – EN 50264-3-1 1800 V – type MMS

TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
In compliance with EN 50264-3-1 for cables rated 1800V (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RCA07	25	13,0 ÷ 15,2	440
RCA08	35	14,5 ÷ 16,7	550
RCA09	50	15,3 ÷ 17,5	675
RCA10	70	17,0 ÷ 19,2	910
RCA11	95	19,2 ÷ 22,0	1180

CONSTRUCTION

Type: single core sheathed cable

Conductor: tinned copper conductor according to class 5 EN 60228

Tape (optional): coloured tape for cross-section ≥ 16 mm²

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, colour black if not otherwise stated (upon request compound type EI110)

Tape: non-hygroscopic tape on the assembly

Screen: tinned copper wire braid with optional non-hygroscopic tape

Sheath: crosslinked compound, type EM104 according to Standard EN 50264-1, colour black if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-1 1800V *cross-section* MMS – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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UNIRAIL S – EN 50264-3-1 3600 V - type MM

TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table 4 (cross-section 2,5 ÷ 400 mm²) of EN 50264-3-1 for cables rated 3600V (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB301	2,5	8,6 ÷ 10,1	113
RB302	4	9,1 ÷ 10,7	134
RB303	6	9,6 ÷ 11,2	158
RB304	10	10,4 ÷ 12,2	210
RB305	16	11,5 ÷ 13,4	272
RB306	25	13,7 ÷ 16,1	416
RB307	35	14,9 ÷ 17,5	517
RB308	50	16,4 ÷ 19,1	680
RB309	70	18,0 ÷ 21,1	880
RB310	95	19,5 ÷ 22,8	1120
RB311	120	21,4 ÷ 25,1	1376
RB312	150	22,9 ÷ 26,8	1646
RB313	185	25,1 ÷ 29,4	2034
RB314	240	28,3 ÷ 33,1	2608
RB315	300	30,6 ÷ 35,8	3128
RB316	400	33,7 ÷ 39,4	4205

CONSTRUCTION

Type: single core sheathed cable

Conductor: tinned copper conductor according to class 5 EN 60228

Tape: semiconductive tape to reduce partial discharge effect

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, colour black if not otherwise stated (upon request compound type EI110)

Tape (optional): or talcum powder for strippability

Sheath: crosslinked compound, type EM104 according to Standard EN 50264-1, colour black if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-1 3600V *cross-section* MM – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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UNIRAIL S – EN 50264-3-1 3600 V - type MMS

TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table 4 (cross-section 2,5 ÷ 400 mm²) of EN 50264-3-1 for cables rated 3600V (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RC906	25	14,8 ÷ 16,5	510
RC907	35	16,1 ÷ 18,0	615
RC908	50	17,5 ÷ 19,5	770
RC909	70	19,1 ÷ 21,5	1030
RC910	95	21,1 ÷ 23,5	1210
RC911	120	23,0 ÷ 25,5	1550
RC912	150	25,0 ÷ 28,0	1840
RC913	185	27,0 ÷ 30,0	2260
RC914	240	30,5 ÷ 33,5	2850

CONSTRUCTION

Type: single core sheathed cable

Conductor: tinned copper conductor according to class 5 EN 60228

Tape: semiconductive tape to reduce partial discharge effect

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, colour black if not otherwise stated (upon request compound type EI110)

Tape (optional): or talcum powder for strippability

Sheath: crosslinked compound, type EM104 according to Standard EN 50264-1, colour black if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-1 3600V *cross-section* MMS – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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UNIRAIL S – EN 50264-3-2 300 V – type MM

TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table 1 (cross-section 1 ÷ 2,5 mm²) of EN 50264-3-2 for cables rated 300V (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB401	2x1	5,3 ÷ 6,2	42
RB425	3x1	5,7 ÷ 6,9	58
RB402	4x1	6,1 ÷ 7,2	67
RB426	5x1	6,9 ÷ 8,1	95
RB403	7x1	7,5 ÷ 8,7	111
RB428	8x1	8,5 ÷ 9,7	140
RB404	9x1	9,1 ÷ 10,6	150
RB427	10x1	9,8 ÷ 11,2	170
RB405	12x1	9,8 ÷ 11,5	180
RB433	16x1	11,6÷ 12,4	268
RB436	18x1	12,3÷ 13,1	303
RB406	19x1	11,7 ÷ 13,7	278
RB407	24x1	14,1 ÷ 16,5	363
RB408	32x1	15,5 ÷ 18,2	468
RB409	37x1	16,1 ÷ 18,9	530
RB410	40x1	16,7 ÷ 19,6	572
RB411	4x1,5	7,3 ÷ 8,6	94
RB434	5x1,5	9,0 ÷ 9,8	168

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB412	7x1,5	8,7 ÷ 10,2	153
RB429	8x1,5	9,8 ÷ 11,0	190
RB413	9x1,5	10,9 ÷ 12,7	197
RB414	12x1,5	11,8 ÷ 13,8	257
RB415	19x1,5	14,2 ÷ 16,6	402
RB416	24x1,5	16,6 ÷ 19,5	503
RB417	32x1,5	18,7 ÷ 21,9	674
RB418	37x1,5	19,5 ÷ 22,8	761
RB437	3x2,5	7,6 ÷ 8,4	122
RB419	4x2,5	8,3 ÷ 9,8	138
RB420	7x2,5	10,2 ÷ 11,9	232
RB421	9x2,5	12,9 ÷ 15,1	309
RB422	12x2,5	13,9 ÷ 16,3	396
RB423	19x2,5	16,3 ÷ 19,1	601
RB424	24x2,5	19,6 ÷ 22,9	776
RB430	2x1,5	6,7	70
RB431	6x1,5	9,3	150
RB432	2x2,5	7,5	96

Add letter **G** after the item number for cables with yellow/green conductor

CONSTRUCTION

Type: multicore unscreened cable

Conductor: tinned copper conductor according to class 5 EN 60228

Tape (optional): coloured tape

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, colour black with numbers with or without yellow-green if not otherwise stated (upon request compound type EI110)

Tape: non-hygroscopic tape on the assembly

Sheath: crosslinked compound, type EM104 according to Standard EN 50264-1, colour black if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-2 300V *(core number x cross-section)* MM (MMG with yellow-green) – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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UNIRAIL S – EN 50264-3-2 300 V – type MMS

TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table 2 (cross-section 1 ÷ 2,5 mm²) of EN 50264-3-2 for cables rated 300V (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB501	2x1	6,0 ÷ 7,1	60
RB525	3x1	6,5 ÷ 7,5	86
RB502	4x1	7,0 ÷ 8,2	94
RB530	6x1	8,1÷ 8,9	168
RB503	7x1	8,2 ÷ 9,6	137
RB526	8x1	9,4 ÷ 10,6	185
RB504	9x1	10,2 ÷ 11,9	195
RB505	12x1	10,9 ÷ 12,7	238
RB506	19x1	13,2 ÷ 15,4	368
RB507	24x1	15,2 ÷ 17,8	461
RB508	32x1	16,6 ÷ 19,4	578
RB509	37x1	17,2 ÷ 20,1	642
RB510	40x1	18,2 ÷ 21,3	710
RB511	4x1,5	8,0 ÷ 9,4	119
RB512	7x1,5	9,6 ÷ 11,3	199
RB527	8x1,5	10,4 ÷ 12,4	245

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB513	9x1,5	12,1 ÷ 14,2	260
RB532	10x1,5	13,1 ÷ 13,9	323
RB514	12x1,5	13,0 ÷ 15,2	324
RB515	19x1,5	15,3 ÷ 17,9	498
RB516	24x1,5	18,1 ÷ 21,2	620
RB517	32x1,5	19,8 ÷ 23,2	803
RB518	37x1,5	20,5 ÷ 24,0	891
RB531	2x2,5	8,3 ÷ 9,1	133
RB519	4x2,5	9,2 ÷ 10,8	180
RB520	7x2,5	11,1 ÷ 13,0	285
RB521	9x2,5	13,9 ÷ 16,3	393
RB522	12x2,5	15,0 ÷ 17,5	488
RB523	19x2,5	17,8 ÷ 20,8	708
RB524	24x2,5	20,6 ÷ 24,1	905
RB528	2x1,5	7,3	101
RB529	3x1,5	7,8	116

CONSTRUCTION

Type: multicore screened cable

Conductor: tinned copper conductor according to class 5 EN 60228

Tape (optional): coloured tape

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, colour black with numbers with or without yellow-green if not otherwise stated (upon request compound type EI110)

Tape: non-hygroscopic tape on the assembly

Screen: tinned copper wire braid with optional non-hygroscopic tape

Sheath: crosslinked compound, type EM104 according to Standard EN 50264-1, colour black if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-2 300V *(core number x cross-section)* MMS – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

Add letter **G** after the item number for cables with yellow/green conductor

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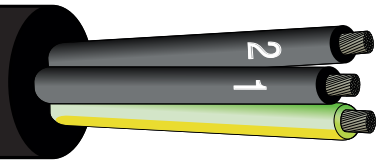
UNIRAIL S – EN 50264-3-2 600 V – type MM

UNIKA (Italy) – EN 50264-3-2 600 V 3x1,5 MMG - code



TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table 4, 6 e 8 (cross-section 1,5 ÷ 50 mm²) of EN 50264-3-2 for cables rated 600V (see IMQ test certificate).

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB601	2x1,5	7,2 ÷ 9,0	67
RB602	2x2,5	8,0 ÷ 10,0	94
RB603	2x4	9,1 ÷ 11,3	123
RB604	2x6	10,1 ÷ 12,4	178
RB605	2x10	12,5 ÷ 15,4	293
RB606	2x16	14,9 ÷ 18,4	434
RB607	2x25	18,7 ÷ 23,0	665
RB608	2x35	21,2 ÷ 25,9	856
RB609	2x50	25,1 ÷ 30,7	1140
RB610	3x1,5	7,7 ÷ 9,5	88
RB631	5x1,5	9,8 ÷ 10,6	165
RB632	7x1,5	10,5 ÷ 12,0	237
RB611	3x2,5	8,5 ÷ 10,5	124
RB612	3x4	9,7 ÷ 12,0	169
RB613	3x6	10,7 ÷ 13,2	248
RB614	3x10	13,3 ÷ 16,5	392
RB615	3x16	16,0 ÷ 19,6	590

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB616	3x25	20,0 ÷ 24,7	902
RB617	3x35	23,0 ÷ 28,2	1167
RB618	3x50	26,3 ÷ 32,2	1515
RB619	4x1,5	8,5 ÷ 10,5	109
RB620	4x2,5	9,4 ÷ 11,6	160
RB621	4x4	10,9 ÷ 13,4	221
RB622	4x6	12,2 ÷ 14,9	310
RB623	4x10	14,7 ÷ 18,2	478
RB624	4x16	18,0 ÷ 22,1	739
RB633	5x16	20,3 ÷ 22,8	1040
RB625	4x25	22,6 ÷ 27,6	1131
RB626	3x35+25	25,7 ÷ 31,2	1755
RB627	3x50+25	30,0 ÷ 36,5	1855
RB628	5x2,5	9,9 ÷ 11,9	207
RB629	6x1,5	9,8 ÷ 11,8	186
RB630	6x2,5	10,9 ÷ 13,1	252

Add letter **G** after the item number for cables with yellow/green conductor

CONSTRUCTION

Type: multicore unscreened cable

Conductor: tinned copper conductor according to class 5 EN 60228

Tape (optional): coloured tape for cross-section ≥ 16 mm²

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, colour black with numbers with or without yellow-green if not otherwise stated (upon request compound type EI110). Colour code according to HD 308 S2 is available.

Tape: non-hygroscopic tape on the assembly

Sheath: crosslinked compound, type EM104 according to Standard EN 50264-1, colour black if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-2 600V *(core number x cross-section)* MM (MMG with yellow/green) – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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UNIRAIL S – EN 50264-3-2 600 V – type MMS

TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table 5, 7 and 9 (cross-section 1,5 ÷ 50 mm²) of EN 50264-3-2 for cables rated 600V (see IMQ test certificate).

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB701	2x1,5	7,9 ÷ 9,9	94
RB710	3x1,5	8,4 ÷ 10,4	118
RB719	4x1,5	9,1 ÷ 11,3	142
RB728	6x1,5	10,3 ÷ 12,6	226
RB730	7x1,5	10,3 ÷ 12,6	237
RB732	8x1,5	11,0 ÷ 13,3	290
RB702	2x2,5	8,7 ÷ 10,7	125
RB711	3x2,5	9,2 ÷ 11,4	157
RB720	4x2,5	10,4 ÷ 12,9	212
RB729	6x2,5	11,5 ÷ 13,7	298
RB703	2x4	10,2 ÷ 12,7	175
RB712	3x4	10,8 ÷ 13,3	226
RB721	4x4	11,8 ÷ 14,5	281
RB704	2x6	10,9 ÷ 13,6	233
RB713	3x6	11,6 ÷ 14,3	307
RB722	4x6	13,1 ÷ 16,1	375
RB705	2x10	13,4 ÷ 16,6	357
RB714	3x10	14,4 ÷ 18,0	503

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB723	4x10	15,9 ÷ 19,5	592
RB706	2x16	16,0 ÷ 19,8	533
RB715	3x16	17,4 ÷ 21,3	721
RB724	4x16	19,3 ÷ 23,6	870
RB731	5x16	21,0÷ 25,3	1180
RB707	2x25	19,8 ÷ 24,6	789
RB716	3x25	21,3 ÷ 26,1	1061
RB725	4x25	24,0 ÷ 29,3	1314
RB708	2x35	22,8 ÷ 27,9	1044
RB717	3x35	24,5 ÷ 29,8	1368
RB709	2x50	26,4 ÷ 32,3	1347
RB718	3x50	28,3 ÷ 34,6	1761
RB733	4x95	41,0 ÷ 48,3	5000
RB726	3x35+25	26,9 ÷ 32,9	1662
RB727	3x50+25	31,5 ÷ 38,2	2344
RB734	4G10+2x1,5	20,0 ÷ 20,8	650

CONSTRUCTION

Type: multicore screened cable

Conductor: tinned copper conductor according to class 5 EN 60228

Tape (optional): coloured tape for cross-section ≥ 16 mm²

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, colour black with numbers with or without yellow-green if not otherwise stated (upon request compound type EI110). Colour code according to HD 308 S2 is available.

Tape: non-hygroscopic tape on the assembly

Screen: tinned copper wire braid with optional non-hygroscopic tape

Sheath: crosslinked compound, type EM104 according to Standard EN 50264-1, colour black if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-2 600V *(core number x cross-section)* MMS – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

Add letter **G** after the item number for cables with yellow/green conductor

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UNIRAIL S – EN 50264-3-2 300 V – type MM – EN 50200

TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table 1 of EN 50264-3-2 for cables rated 600V (see IMQ test certificate) with fire resisting time not below 120 min

Item n°	Cross-section [mm²]	Max. outer diameter [mm]	Cable mass [kg/km]
RB900	2x0,50	6,0	44
RB910	3x0,50	6,3	51
RB908	4x0,50	7,2	66
RB911	6x0,50	8,7	91
RB909	2x0,75	6,5	50
RB907	3x0,75	7,0	63
RB901	2x1	8,0	53
RB905	3x1	8,5	74
RB906	4x1	9,0	92
RB904	6x1	9,6	135
RB902	2x1,5	8,5	81
RB913	3x1,5	9,0	95
RB916	4x1,5	10,0	120
RB903	2x2,5	9,5	106
RB914	3x2,5	10,0	135
RB917	4x2,5	11,0	175
RB912	2x4	10,8	150
RB915	3x4	11,5	180
RB918	4X4	12,8	240

CONSTRUCTION

Type: multicore cable, fire resistant

Conductor: tinned copper conductor according to class 5 EN 60228

Tape: mica tape

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, colour black with numbers

Tape: non-hygroscopic tape on the assembly

Sheath: crosslinked compound, type EM104 according to Standard EN 50264-1, colour red if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-2 300V *cross-section* MM – EN 50200 PH120 - WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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UNIRAIL S – EN 50264-3-2 300 V – type MMS – EN 50200

TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table 1 of EN 50264-3-2 for cables rated 600V (see IMQ test certificate) with fire resisting time not below 120 min

Item n°	Cross-section [mm²]	Max. outer diameter [mm]	Cable mass [kg/km]
RB900S	2x0,50	6,5	64
RB915S	3x0,50	6,7	68
RB908S	4x0,50	7,6	82
RB912S	3x2x0,50	11,0	150
RB910S	7x0,50	9,5	133
RB914S	8x0,50	10,0	150
RB913S	2x0,75	7,9	72
RB907S	3x0,75	8,2	90
RB909S	4x0,75	8,6	101
RB911S	2x2x0,75	11,2	135
RB916S	1x1	5,5	40
RB901S	2x1	8,5	77
RB905S	3x1	9,0	100
RB906S	4x1	10,0	122
RB904S	6x1	11,8	176

Item n°	Cross-section [mm²]	Max. outer diameter [mm]	Cable mass [kg/km]
RB917S	1X1,5	6,0	45
RB918S	1X2,5	6,5	60
RB902S	2x1,5	9,2	109
RB921S	3X1,5	9,6	125
RB924S	4x1,5	10,8	155
RB927S	6x1,5	13,0	215
RB903S	2x2,5	10,2	143
RB922S	3x2,5	10,8	165
RB925S	4x2,5	11,8	210
RB928S	6X2,5	14,2	290
RB919S	1x4	7,0	80
RB920S	2x4	11,5	190
RB923S	3X4	12,2	225
RB926S	4x4	14,0	280
RB929S	6x4	16,2	420

CONSTRUCTION

Type: multicore screened cable, fire resistant

Conductor: tinned copper conductor according to class 5 EN 60228

Tape: mica tape

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, colour black with numbers

Tape: non-hygroscopic tape on the assembly

Screen: tinned copper wire braid with optional non-hygroscopic tape

Sheath: crosslinked compound, type EM104 according to Standard EN 50264-1, colour red if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-2 300V *cross-section* MMS – EN 50200 PH120 - WW/YYYY *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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UNIRAIL S – EN 50264-3-1 600 V – type M – EN 50200

UNIKA (Italy) - EN 50264-3-1 600 V 6 M - EN 50200 PH120 - code

TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table 1 (cross-section 1 ÷ 400 mm²) of EN 50264-3-1 for cables rated 600V (see IMQ test certificate) with fire resisting time not below 120 min

Item n°	Cross-section [mm²]	Max. outer diameter [mm]	Cable mass [kg/km]
RB819*	0,50	2,8	10
RB820*	0,75	3,0	13
RB801	1	3,1	17
RB802	1,5	3,6	23
RB803	2,5	4,1	33
RB804	4	4,7	47
RB805	6	5,3	67
RB806	10	6,4	106
RB807	16	7,6	158
RB808	25	9,4	248
RB809	35	10,9	331
RB810	50	12,7	474
RB811	70	14,9	655
RB812	95	16,6	871
RB813	120	18,7	1095
RB814	150	20,9	1363
RB815	185	23,2	1699
RB816	240	26,3	2197
RB817	300	29,1	2689
RB818	400	33,2	3800

*Out of the scope of the Standard.

CONSTRUCTION

Type: single core cable unsheathed, fire resistant

Conductor: tinned copper conductor according to class 5 EN 60228

Tape: mica tape

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, colour red if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-1 600V *cross-section* M – EN 50200 PH120 - *traceability code*

Outer diameter ≥ 20 mm
UNIKA (Italy) – EN 50264-3-1 600V *cross-section* M – EN 50362 PH120 - WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

Add the following letter after the item number for colours different from red
G: yellow/green
Y: grey
B: blue
W: brown
H: white
K: black

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UNIRAIL S – EN 50264-3-2 600 V – type MM – EN 50200

TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table 1 of EN 50264-3-2 for cables rated 600V (see IMQ test certificate) with fire resisting time not below 120 min

Item n°	Cross-section [mm²]	Max. outer diameter [mm]	Cable mass [kg/km]
RBA00	2x1,5	9,8	92
RBA01	2x2,5	10,7	122
RBA02	3x1,5	10,3	106
RBA03	3x2,5	11,3	146
RBA04	4x1,5	11,5	137
RBA05	4x2,5	12,4	186
RBA06	2x4	12,0	163

CONSTRUCTION

Type: multicore cable fire resistant

Conductor: tinned copper conductor according to class 5 EN 60228

Tape: mica tape

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, colour black with numbers

Tape: non-hygroscopic tape on the assembly

Sheath: crosslinked compound, type EM104 according to Standard EN 50264-1, colour red if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-2 600V *cross-section MM* – EN 50200 PH120 - WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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UNIRAIL S – EN 50264-3-2 600 V – type MMS – EN 50200

TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table 1 of EN 50264-3-2 for cables rated 600V (see IMQ test certificate) with fire resisting time not below 120 min

Item n°	Cross-section [mm²]	Max. outer diameter [mm]	Cable mass [kg/km]
RBA00S	2x1,5	10,9	129
RBA01S	2x2,5	11,3	163
RBA02S	3x1,5	11,0	146
RBA03S	3x2,5	12,1	190
RBA04S	4x1,5	12,1	184
RBA05S	4x2,5	13,5	233

CONSTRUCTION

Type: multicore screened cable, fire resistant

Conductor: tinned copper conductor according to class 5 EN 60228

Tape: mica tape

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, colour black with numbers

Tape: non-hygroscopic tape on the assembly

Screen: tinned copper wire braid with optional non-hygroscopic tape

Sheath: crosslinked compound, type EM104 according to Standard EN 50264-1, colour red if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-2 600V *cross-section* MMS – EN 50200 PH120 - WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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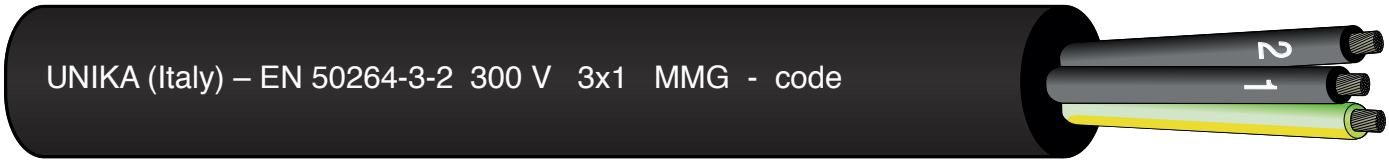
UNIRAIL P – EN 50264-3-2 300 V – type MM



TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
(2 ÷ 64) x (0,25 ÷ 0,75)
(core number x cross-section)
According to EN 52064-3-2:2008 (as far as applicable) and UNIKA technical specification ref. 108/2015 rev.2 2015 (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB4022	2x0,25	4,1 ÷ 5,3	24
RB4032	3x0,25	4,3 ÷ 5,5	34
RB4042	4x0,25	4,7 ÷ 5,9	40
RB4052	5x0,25	5,1 ÷ 6,3	45
RB4062	6x0,25	5,6 ÷ 6,8	52
RB4072	7x0,25	5,8 ÷ 7,0	57
RB4092	9x0,25	6,7 ÷ 7,9	70
RB4122	12x0,25	7,5 ÷ 8,7	87
RB4182	18x0,25	9 ÷ 10,2	126
RB4242	24x0,25	10,9 ÷ 12,5	166
RB4272	27x0,25	11,1 ÷ 12,7	181
RB4322	32x0,25	11,9 ÷ 13,5	208
RB4362	36x0,25	12,4 ÷ 14,0	231
RB4402	40x0,25	12,8 ÷ 14,4	250
RB4642	64x0,25	15,6 ÷ 17,8	398
RB4024	2x0,50	4,6 ÷ 5,8	32
RB4034	3x0,50	4,8 ÷ 6,0	45
RB4044	4x0,50	5,3 ÷ 6,5	55
RB435	5x0,50	5,8 ÷ 7,0	64
RB4064	6x0,50	6,3 ÷ 7,5	73
RB4074	7x0,50	6,5 ÷ 7,7	81
RB4084	8x0,50	7,2 ÷ 8,4	94
RB4094	9x0,50	7,6 ÷ 8,8	101
RB4124	12x0,50	8,5 ÷ 9,7	131
RB4184	18x0,50	10,2 ÷ 11,8	189

CONSTRUCTION

Type: multicore unscreened cable

Conductor: tinned copper conductor according to class 5 EN 60228

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1 (upon request compound type EI110).
Colours for cross-section from 0,5 mm²: black with numbers with or without yellow-green if not otherwise stated.
Colours for cross-section 0,25 mm²: DIN 47100

Tape: non-hygroscopic tape on the assembly

Sheath: crosslinked compound, type EM104 according to Standard EN 50264-1, colour black if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-2 300V *(core number x cross-section)* MM (MMG with yellow-green) – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB4244	24x0,50	12,4 ÷ 14,0	245
RB4274	27x0,50	12,6 ÷ 14,2	268
RB4324	32x0,50	13,6 ÷ 15,8	322
RB4364	36x0,50	14,1 ÷ 16,3	362
RB4404	40x0,50	14,6 ÷ 16,8	395
RB4644	64x0,50	17,8 ÷ 20	617
RB4025	2x0,75	5 ÷ 6,2	40
RB4035	3x0,75	5,2 ÷ 6,4	51
RB4045	4x0,75	5,8 ÷ 7,0	62
RB4055	5x0,75	6,3 ÷ 7,5	74
RB4065	6x0,75	6,9 ÷ 8,1	85
RB4075	7x0,75	7,1 ÷ 8,3	95
RB4095	9x0,75	8,3 ÷ 9,5	119
RB4125	12x0,75	9,3 ÷ 10,5	156
RB4185	18x0,75	11,2 ÷ 12,8	222
RB4245	24x0,75	13,6 ÷ 15,8	288
RB4275	27x0,75	13,8 ÷ 16,0	319
RB4325	32x0,75	14,9 ÷ 17,1	373
RB4365	36x0,75	15,5 ÷ 17,7	422
RB4405	40x0,75	16,1 ÷ 18,3	464
RB4645	64x0,75	19,6 ÷ 21,8	735

Add letter **G** after the item number for cables with yellow/green conductor

Add letter **D** after the item number for DIN 47100 cores identification fir cross-section ≥ 0,50 mm²

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UNIRAIL P – EN 50264-3-2 300 V – type MMS

UNIKA (Italy) – EN 50264-3-2 300 V 4x0,50 MMS - code

TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
(2 ÷ 25) x 2 x (0,25 ÷ 0,75) mm²
(core number) x 2 x (cross-section)
(2 ÷ 25) x 3 x (0,25 ÷ 0,75) mm²
(core number) x 3 x (cross-section)
According to EN 52064-3-2:2008 (as far as applicable) and UNIKA technical specification ref. 108/2015 rev.2 2015 (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB5022	2x0,25	4,6 ÷ 5,8	36
RB5032	3x0,25	4,8 ÷ 6,0	42
RB5042	4x0,25	5,2 ÷ 6,4	49
RB5052	5x0,25	5,6 ÷ 6,8	55
RB5062	6x0,25	6,1 ÷ 7,3	62
RB5072	7x0,25	6,3 ÷ 7,5	71
RB5092	9x0,25	7,4 ÷ 8,6	96
RB5122	12x0,25	8,2 ÷ 9,4	115
RB5182	18x0,25	9,7 ÷ 10,9	158
RB5242	24x0,25	11,6 ÷ 13,2	213
RB5372	27x0,25	11,8 ÷ 13,4	230
RB5322	32x0,25	12,8 ÷ 14,4	274
RB5362	36x0,25	13,3 ÷ 15,5	306
RB5402	40x0,25	13,7 ÷ 15,9	332
RB5642	64x0,25	16,5 ÷ 18,7	477
RB5024	2x0,50	5,1 ÷ 6,3	49
RB5034	3x0,50	5,3 ÷ 6,5	58
RB5044	4x0,50	5,8 ÷ 7,0	70
RB5054	5x0,50	6,3 ÷ 7,5	82
RB5064	6x0,50	7,0 ÷ 8,2	102
RB5074	7x0,50	7,2 ÷ 8,4	113
RB5084	8x0,50	7,9 ÷ 9,1	125

CONSTRUCTION

Type: multicore screened cable

Conductor: tinned copper conductor according to class 5 EN 60228

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1 (upon request compound type EI110).
Colours for cross-section from 0,5 mm²: black with numbers with or without yellow-green if not otherwise stated.
Colours for cross-section 0,25 mm²: DIN 47100

Tape: non-hygroscopic tape on the assembly

Screen: tinned copper wire braid with optional non-hygroscopic tape

Sheath: crosslinked compound, type EM104 according to Standard EN 50264-1, colour black if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-2 300V *(core number x cross-section)* MMS – WW/YYYY - *traceability code*

Fire safety: hazard level HL3 according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RB5094	9x0,50	8,3 ÷ 9,5	141
RB5124	12x0,50	9,2 ÷ 10,4	174
RB5144	14x0,50	10,2 ÷ 10,8	195
RB5184	18x0,50	109, ÷ 12,5	250
RB5244	24x0,50	13,3 ÷ 15,5	358
RB5374	27x0,50	13,5 ÷ 15,7	388
RB5324	32x0,50	14,5 ÷ 16,7	439
RB5364	36x0,50	15,0 ÷ 17,2	480
RB5404	40x0,50	15,5 ÷ 17,7	520
RB5644	64x0,50	18,9 ÷ 21,1	791
RB5025	2x0,75	5,5 ÷ 6,7	53
RB5035	3x0,75	5,8 ÷ 7,0	60
RB5045	4x0,75	6,3 ÷ 7,5	69
RB5055	5x0,75	7,0 ÷ 8,2	90
RB5065	6x0,75	7,6 ÷ 8,8	105
RB5075	7x0,75	7,8 ÷ 9,0	118
RB5085	8x0,75	8,3 ÷ 9,1	141
RB5095	9x0,75	9,0 ÷ 10,2	145
RB5125	12x0,75	10,0 ÷ 11,6	181
RB5185	18x0,75	11,9 ÷ 13,5	262
RB5245	24x0,75	14,5 ÷ 16,7	371
RB5375	27x0,75	14,7 ÷ 16,9	403
RB5325	32x0,75	15,8 ÷ 18,0	463
RB5365	36x0,75	16,4 ÷ 18,6	509
RB5405	40x0,75	17,0 ÷ 19,2	557
RB5645	64x0,75	20,7 ÷ 22,9	859

Add letter **G** after the item number for cables with yellow/green conductor

Add letter **D** after the item number for DIN 47100 cores identification fir cross-section ≥ 0,50 mm²

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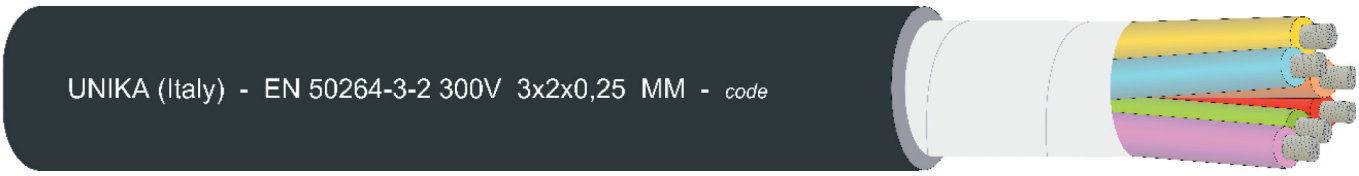
UNIRAIL P – EN 50264-3-2 300 V – type MM



TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
(2 ÷ 25) x 2 x (0,25 ÷ 0,75) mm²
(core number) x 2 x (cross-section)
(2 ÷ 25) x 3 x (0,25 ÷ 0,75) mm²
(core number) x 3 x (cross-section)
According to EN 52064-3-2:2008 (as far as applicable) and UNIKA technical specification ref. 108/2015 rev.2 (see IMQ test certificate).

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RC8042	2x2x0,25	6,0 ÷ 7,2	42
RC8082	4x2x0,25	7,0 ÷ 8,2	64
RC8162	8x2x0,25	9,8 ÷ 11	116
RC8362	18x2x0,25	13,8 ÷ 16	245
RC8502	25x2x0,25	16,7 ÷ 18,9	341
RC8032	2x3x0,25	6,7 ÷ 7,9	54
RC8122	4x3x0,25	7,2 ÷ 9,1	86
RC8044	2x2x0,50	6,8 ÷ 8,0	56
RC8084	4x2x0,50	8,0 ÷ 9,2	91
RC8164	8x2x0,50	11,2 ÷ 12,8	173
RC8364	18x2x0,50	16, ÷ 18,5	378
RC8504	25x2x0,50	19,1 ÷ 21,3	498
RC8064	2x3x0,50	7,6 ÷ 8,8	74
RC8124	4x3x0,50	9,2 ÷ 10,4	129
RC8045	2x2x0,75	6,8 ÷ 8,0	67
RC8085	4x2x0,75	8,0 ÷ 9,2	113
RC8165	8x2x0,75	11,2 ÷ 12,8	217
RC8365	18x2x0,75	16,3 ÷ 18,5	477
RC8505	25x2x0,75	19,1 ÷ 21,3	635
RC8065	2x3x0,75	7,6 ÷ 8,8	91
RC8125	4x3x0,75	9,2 ÷ 10,4	162

Add letter **G** after the item number for cables with yellow/green conductor

CONSTRUCTION

Type: multipair unscreened cable

Conductor: tinned copper conductor according to class 5 EN 60228

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, (upon request compound type EI110). Colours for cross section from 0,5 mm²: pairs blue-white, triples: blue-white-red, with black numbers. Colours for cross-section 0,25 mm²: DIN 47100

Assembly: cores are twisted into pairs or triples and pairs or triples are stranded together in concentric layers

Sheath: crosslinked compound, type EM104 according to Standard EN 50264-1, colour black if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-2 300V *(number of pairs) x 2 x cross-section* MM – *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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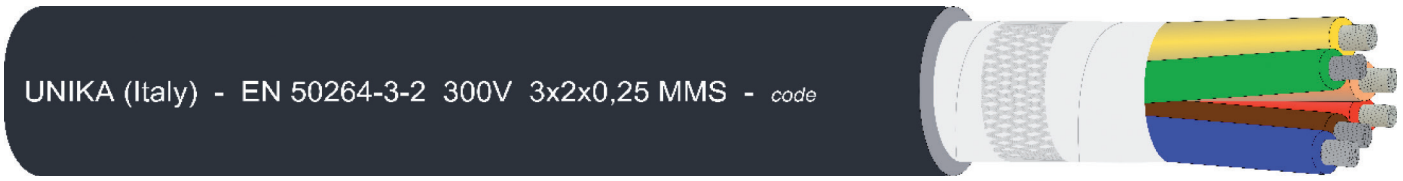
UNIRAIL P – EN 50264-3-2 300 V – type MMS



TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
(2 ÷ 25) x 2 x (0,25 ÷ 0,75) mm²
(core number) x 2 x (cross-section)
(2 ÷ 25) x 3 x (0,25 ÷ 0,75) mm²
(core number) x 3 x (cross-section)
According to EN 52064-3-2:2008 (as far as applicable) and UNIKA technical specification ref. 108/2015 rev.2 (see IMQ test certificate).

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RC7042	2x2x0,25	6,5 ÷ 7,7	49
RC7082	4x2x0,25	7,7 ÷ 8,9	75
RC7162	8x2x0,25	10,5 ÷ 12,1	135
RC7362	18x2x0,25	14,7 ÷ 16,9	270
RC7502	25x2x0,25	17,5 ÷ 19,7	364
RC7062	2x3x0,25	7,4 ÷ 8,6	65
RC7122	4x3x0,25	8,5 ÷ 9,7	96
RC7123*	4x(3x0,34)	10,9 ÷ 12,5	210
RC7044	2x2x0,50	7,5 ÷8,7	80
RC7084	4x2x0,50	8,7 ÷ 9,9	120
RC7164	8x2x0,50	11,9 ÷ 13,5	213
RC7364	18x2x0,50	17,1 ÷ 19,3	458
RC7504	25x2x0,50	20,2 ÷ 22,4	588
RC7064	2x3x0,50	8,3 ÷ 9,5	103
RC7124	4x3x0,50	9,9 ÷ 11,5	162
RC7045	2x2x0,75	8,2 ÷ 9,4	109
RC7085	4x2x0,75	9,7 ÷ 10,9	166
RC7165	8x2x0,75	13,0 ÷ 15,2	292
RC7065	2x3x0,75	9,3 ÷ 10,5	114
RC7125	4x3x0,75	10,8 ÷ 12,4	188

*screen over the triples and over the complete stranding

Add letter **G** after the item number for cables with yellow/green conductor

CONSTRUCTION

Type: multipair screened cable

Conductor: tinned copper conductor according to class 5 EN 60228

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, (upon request compound type EI110). Colours for cross section from 0,5 mm²: pairs blue-white, triples: blue-white-red, with black numbers. Colours for cross-section 0,25 mm²: DIN 47100

Assembly: cores are twisted into pairs or triples and pairs or triples are stranded together in concentric layers

Screen: tinned copper wire braid with optional non-hygroscopic tape

Sheath: crosslinked compound, type EM104 according to Standard EN 50264-1, colour black if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-2 300V *(number of pairs) x 2 x cross-section* MM – *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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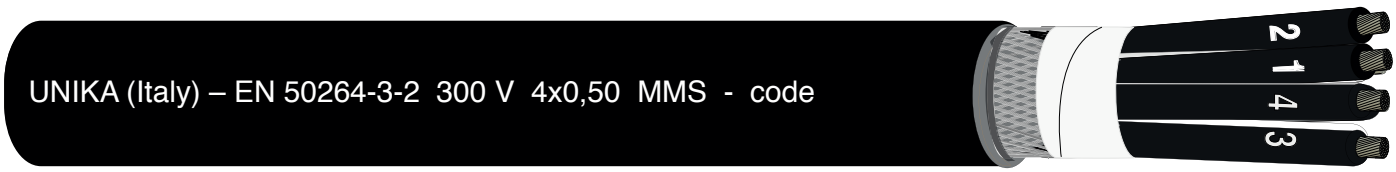
UNIRAIL P – EN 50264-3-2 300 V – type MMS



TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, fuels, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
(3x0,50) + (3÷26)x0,50 mm²
According to EN 52064-3-2:2008 (as far as applicable) and UNIKA technical specification ref. 108/2015 rev.2 (see IMQ test certificate)

Item n°	Cross-section [mm²]	Diameter [mm]	Cable mass [kg/km]
RC7064	(3x0,50)+3x0,50	7,6 ÷ 9,0	102
RC7154	(3x0,50)+12x0,50	10,0 ÷ 11,3	186
RC7294	(3x0,50)+26x0,50	12,9 ÷ 14,3	324

Add letter **G** after the item number for cables with yellow/green conductor

CONSTRUCTION

Type: multicore hybrid screened cable

Conductor: tinned copper conductor according to class 5 EN 60228

Tape (optional): coloured tape

Insulation: crosslinked compound, type EI109 according to Standard EN 50264-1, colour black with numbers with or without yellow-green if not otherwise stated (upon request compound type EI110)

Assembly: cores are stranded together a screened triples in concentric layers

Tape: non-hygroscopic tape on the assembly

Screen: tinned copper wire braid with optional non-hygroscopic tape

Sheath: crosslinked compound, type EM104 according to Standard EN 50264-1, colour black if not otherwise stated

Marking: UNIKA (Italy) – EN 50264-3-2 300V *(3x0,50) + core number x 0,50* MMS – WW/YYYY - *traceability code*

Fire safety: **hazard level HL3** according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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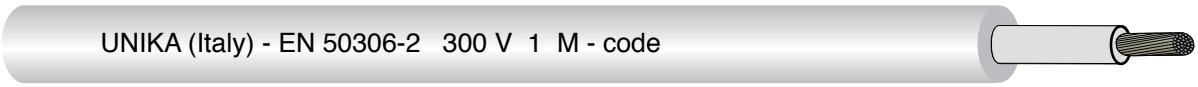
UNIRAIL TW – EN 50306-2 300 V – type M

Single core cable



TECHNICAL DATA

Temperature rating up to and including 105°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table TW1 (cross-section 0,5 ÷ 2,5 mm²) of EN 50306-2 for cables rated 300V (see IMQ test certificate) and HITACHI specification 211NW50282B

Table TW1 - dimensional data

Item n°	Cross-section [mm²]	Conductor n° wires x wire diameter [mm]	Diameter [mm]
RM006(1)	0,34	19x0,15	1,15÷1,31
RM001	0,5	19x0,18	1,15÷1,45
RM002	0,75	37x0,16	1,35÷1,65
RM003	1	37x0,18(2)	1,40÷1,80
RM004	1,5	37x0,23(2)	1,90÷2,30
RM005	2,5	37x0,30(2)	2,45÷2,85

Note (1): out of the scope of the standard

Note (2): conductors with 19 wires are allowed

CONSTRUCTION

Conductor: tinned copper conductor according to table TW1

Insulation: double layer of special compound

Marking: UNIKA (Italy) – EN 50306-2 300V cross-section M – WW/YYYY - traceability code

Fire safety: hazard level HL3 according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

Add the following letter after the item number for colours different from white
G: yellow/green
Y: grey
B: blue
R: red
W: brown
K: black
V: greengreen

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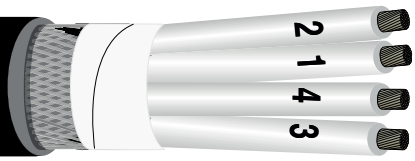
UNIRAIL TW – EN 50306-3 300 V – type MMS

Single core and multicore cables, screened and thin wall sheathed

UNIKA (Italy) – EN 50306-3 300 V 4x1,5 MMS - code



TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table TW2 of EN 50306-3 for cables rated 300V (see IMQ test certificate)

Table TW2 - Dimensional data

Item n°	Conductor n° wires x cross-section [mm²]	Diameter [mm]
RM501	1x0,5	2,3÷2,9
RM502	2x0,5	3,5÷4,4
RM503	3x0,5	3,7÷4,7
RM504	4x0,5	4,0÷5,2
RM521	6x0,5	5,5÷6,5
RM525	8x0,5	6,1÷7,1
RM522	16x0,5	7,5÷8,5
RM505	1x0,75	2,5÷3,1
RM506	2x0,75	3,9÷4,8
RM507	3x0,75	4,0÷5,2
RM508	4x0,75	4,5÷5,7
RM526	6x0,75	6,1÷7,1
RM527	8x0,75	7,3÷8,3
RM509	1x1	2,7÷3,3
RM510	2x1	4,2÷5,3
RM511	3x1	4,5÷5,7

Item n°	Conductor n° wires x cross-section [mm²]	Diameter [mm]
RM512	4x1	5,0÷6,2
RM528	6x1	6,3÷7,3
RM524	7x1	6,4÷7,4
RM529	8x1	7,5÷8,5
RM513	1x1,5	3,1÷3,6
RM514	2x1,5	5,1÷6,1
RM515	3x1,5	5,4÷6,4
RM516	4x1,5	6,0÷7,0
RM523	5x1,5	6,6÷7,6
RM530	6x1,5	7,3÷8,3
RM531	8x1,5	8,5÷9,5
RM517	1x2,5	3,6÷4,5
RM518	2x2,5	6,4÷7,5
RM519	3x2,5	6,8÷8,0
RM520	4x2,5	7,5÷8,7

CONSTRUCTION

Conductor: tinned copper conductor according to table TW1

Insulation: double layer of special compound

Identification: numbered white cores (other identification methods may be agreed)

Laying-up: cores are twisted together in multicore cables with optional non-hygroscopic tape

Screen: tinned copper wire braid

Sheath: cross-linked compound type S2 according to EN 50306-1 for rated temperature 90°C, colour black

Marking: UNIKA (Italy) – EN 50306-3 300V (n°cores)x(cross-section) MMS 90 – WW/YYYY - traceability code

Fire safety: hazard level HL3 according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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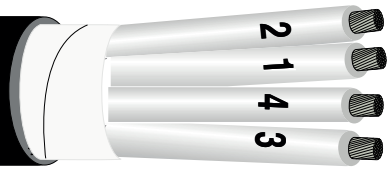
UNIRAIL TW – EN 50306-4 300 V – type MM (Table 1)

Multicore unscreened cables, standard wall sheathed

UNIKA (Italy) – EN 50306-4 300 V 4x1,5 MM - code



TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table TW3 of EN 50306-4 for cables rated 300V (see IMQ test certificate). Further constructions are available upon request.

Table TW3 – Multicore unscreened sheathed cables - Dimensional data

Item n°	Cable type n° cores x cross-section [mm²]	Diameter exposed type [mm]	Diameter protected type [mm]
RM235	2x0,5	4,9 ÷ 5,9	3,5÷4,5
RM236	3x0,5	5,1 ÷ 6,1	3,8 ÷4,8
RM201	4x0,5	5,5 ÷ 6,5	4,1÷5,3
RM202	7x0,5	6,3 ÷ 7,3	4,9÷6,1
RM238	9X0,5	6,8 ÷ 7,8	6,3÷6,9
RM203	13x0,5	8,3 ÷ 9,3	7,3÷8,5
RM204	19x0,5	9,0 ÷ 10,2	8,1÷9,3
RM237	25x0,5	10,2 ÷ 11,4	9,6÷10,4
RM205	37x0,5	12,3 ÷ 13,5	10,8÷12,2
RM233	2x0,75	5,3 ÷ 6,3	4,0 ÷ 5,0
RM241	3x0,75	5,5 ÷ 6,5	4,2 ÷ 5,2
RM206	4x0,75	6,0 ÷ 7,0	4,6÷5,8
RM207	7x0,75	6,9 ÷ 7,9	5,5÷6,6
RM208	13x0,75	9,1 ÷ 10,3	8,2÷9,4
RM209	19x0,75	10,0 ÷ 11,2	9,0÷10,4
RM210	37x0,75	13,2 ÷ 14,4	12,2÷13,6
RM211	48x0,75	14,8 ÷ 16,4	13,9÷15,7
RM225	2x1	5,6 ÷ 6,6	4,3 ÷ 5,3
RM242	3x1	5,9 ÷ 6,9	4,6 ÷ 5,6
RM212	4x1	6,3 ÷ 7,3	4,9÷6,1
RM213	7x1	7,3 ÷ 8,3	6,0÷7,0

Item n°	Cable type n° cores x cross-section [mm²]	Diameter exposed type [mm]	Diameter protected type [mm]
RM214	13x1	9,7 ÷ 10,9	8,7÷10,1
RM215	19x1	10,7 ÷ 11,9	9,8÷11,2
RM226	20x1	10,9 ÷ 12,1	10,3 ÷ 11,5
RM216	37x1	14,0 ÷ 15,6	13,3÷14,7
RM232	2x1,5	6,3 ÷ 7,3	5,0 ÷ 6,0
RM239	3x1,5	6,6 ÷ 7,6	5,3 ÷ 6,3
RM217	4x1,5	7,4 ÷ 8,4	6,0÷7,2
RM240	5x1,5	8,1 ÷ 9,3	7,0 ÷ 8,2
RM227	6x1,5	8,5 ÷ 9,7	7,6 ÷ 8,6
RM218	7x1,5	8,6 ÷ 9,8	7,7÷ 8,9
RM228	12x1,5	10,9 ÷ 12,1	10,3 ÷ 11,5
RM219	13x1,5	11,7÷ 12,9	10,7÷12,1
RM220	19x1,5	13,0 ÷ 14,2	12,0 ÷13,4
RM229	20x1,5	13,2 ÷ 14,4	12,6 ÷ 13,8
RM221	37x1,5	17,2 ÷18,8	16,2÷ 18,0
RM222	2x2,5	7,7 ÷ 8,7	6,7÷7,9
RM223	3x2,5	8,1 ÷ 9,1	7,1÷ 8,3
RM224	4x2,5	8,8 ÷ 10,0	7,9 ÷ 9,1
RM234	6x2,5	10,0 ÷ 11,2	9,5 ÷ 10,3
RM230	12x2,5	13,0 ÷ 14,2	12,5 ÷ 13,7
RM231	20x2,5	16,0 ÷ 17,2	15,6 ÷ 16,8

Add letter **E** for exposed installations or **P** for protected installations at the end of the item number

CONSTRUCTION

Conductor: tinned copper conductor according to table TW1

Insulation: double layer of special compound

Identification: numbered white cores (other identification methods may be agreed)

Laying-up: cores are twisted together in multicore cables with optional non-hygroscopic tape

Sheath: cross-linked compound type EM104 according to EN 50306-1, colour black

Marking: UNIKA (Italy) – EN 50306-4 300V "1n" (n°cores)x(cross-section) MM 90 – WW/YYYY - "traceability code"
n: E for exposed installations or P for protected installations

Fire safety: hazard level HL3 according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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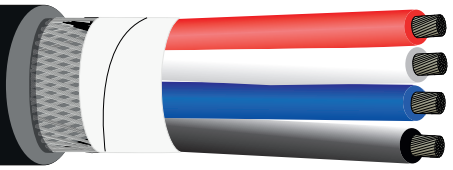
UNIRAIL TW – EN 50306-4 300 V – type MMS (Table 3)

Multicore screened cables, standard wall sheathed

UNIKA (Italy) – EN 50306-4 300 V 4x2,5 MMS - code



TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table TW5 of EN 50306-4 for cables rated 300V (see IMQ test certificate) and HITACHI specification 211NW50283B. Further constructions are available upon request.

Table TW5 – Multipair cables, individually screened and sheathed with an overall sheath - Dimensional data

Item n°	Cable type n° cores x cross-section [mm²]	Diameter exposed type [mm]	Diameter protected type [mm]	Item n°	Cable type n° cores x cross-section [mm²]	Diameter exposed type [mm]	Diameter protected type [mm]
RM301	2x0,5	5,5÷6,5	4,1÷5,3	**RM311**	2x1	6,2÷7,2	4,7÷5,9
RM302	3x0,5	5,7÷6,7	4,3÷5,5	**RM312**	3x1	6,5÷7,5	5,1÷6,2
RM303	4x0,5	6,1÷7,1	4,7÷5,9	**RM313**	4x1	6,9÷7,9	5,5÷6,7
RM342	5x0,5	6,2÷7,2	5,1÷6,1	**RM314**	6x1	8,0÷9,0	6,6÷7,9
RM304	6x0,5	6,9÷7,9	5,5÷6,8	**RM315**	8x1	8,6÷9,8	7,7÷9,0
RM305	8x0,5	7,5÷8,5	6,0÷7,3	**RM331**	12x1	9,5 ÷ 10,7	9,0 ÷ 10,2
RM324	10x0,5	7,7 ÷ 8,7	7,2 ÷ 8,2	**RM316**	2x1,5	7,1÷8,1	5,7÷6,9
RM339	12x0,5	8,2 ÷ 9,2	7,5 ÷ 8,5	**RM317**	3x1,5	7,4÷8,4	6,0÷7,2
RM306	2x0,75	5,9÷6,9	4,5÷5,7	**RM318**	4x1,5	8,0÷9,0	6,6÷7,8
RM307	3x0,75	6,2÷7,2	4,7÷5,9	**RM319**	6x1,5	9,2÷10,4	8,3÷9,6
RM308	4x0,75	6,5÷7,5	5,2÷6,4	**RM320**	8x1,5	10,2÷11,4	8,9÷10,4
RM309	6x0,75	7,5÷8,5	6,1÷7,4	**RM337_M**	10x1,5	10,9÷12,1	10,0÷11,0
RM338	7x0,75	8,0÷9,0	6,5÷7,5	**RM340**	30x1,5	16,0÷17,2	15,0÷16,0
RM310	8x0,75	8,2÷9,2	6,6÷7,9	**RM321**	2x2,5	8,3÷9,3	7,3÷8,5
RM336	12x0,75	9,6÷10,6	8,5÷9,5	**RM322**	3x2,5	8,6÷10,2	7,7÷8,9
RM341	16x0,75	9,9÷10,9	9,1÷10,1	**RM323**	4x2,5	9,4÷10,6	8,4÷9,8
RM335	18x0,75	10,6 ÷ 11,8	9,8 ÷ 10,8				

Add letter **E** for exposed installations or **P** for protected installations at the end of the item number (or replace _ with **E** or **P**)

Add letter **F** for fire resistant version

CONSTRUCTION

Conductor: tinned copper conductor according to table TW1

Insulation: double layer of special compound

Identification: white, red, black, blue, brown, orange, grey, white/red (other identification methods may be agreed). Starting from 9 cores: numbered white cores

Laying-up: cores are twisted together in pair with optional non-hygroscopic tape

Screen: tinned copper wire braid

Sheath: cross-linked compound type EM104 according to EN 50306-1, colour black

Laying-up: pairs are twisted together with optional fillers and non-hygroscopic tape

Sheath: cross-linked compound type EM104 according to EN 50306-1

Marking: UNIKA (Italy) – EN 50306-4 300V "3n" (n°pairs)x(cross-section) MMS 90 – WW/YYYY - traceability code n: E for exposed installations or P for protected installations

Fire safety: hazard level HL3 according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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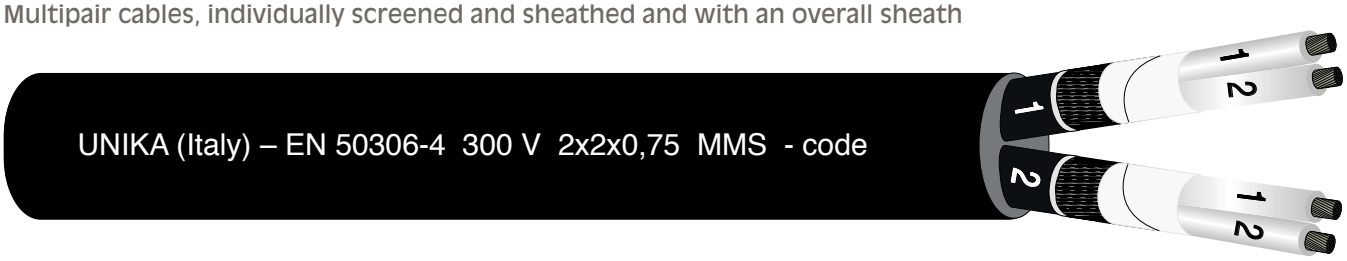
UNIRAIL TW – EN 50306-4 300 V – type MMS (Table 5)

Multipair cables, individually screened and sheathed and with an overall sheath



TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table TW4 of EN 50306-4 for cables rated 300V (see IMQ test certificate). Further constructions are available upon request.

Table TW4 – Multicore screened sheathed cables - Dimensional data

Item n°	Cable type n° cores x cross-section [mm²]	Diameter exposed type [mm]	Diameter protected type [mm]
RM401	2x2x0,5	10,1÷11,3	9,0÷10,2
RM402	3x2x0,5	10,8÷12,0	9,6÷10,8
RM403	4x2x0,5	11,8÷13,0	10,7÷12,0
RM404	7x2x0,5	13,9÷15,5	13,0÷14,2
RM405	2x2x0,75	10,9÷12,1	9,8÷11,0
RM406	3x2x0,75	11,6÷13,0	10,5÷11,7
RM407	4x2x0,75	12,8÷14,3	11,6÷12,8
RM408	7x2x0,75	15,1÷16,9	14,0÷15,6
RM417	1x2x(1)	7,0÷8,0	6,2 ÷ 7,2
RM409	2x2x1	11,3÷12,5	10,2÷11,6
RM410	3x2x1	12,0÷13,5	10,9÷12,3
RM411	4x2x1	13,2÷14,7	12,1÷13,3
RM412	7x2x1	15,7÷17,3	14,6÷16,3
RM413	2x2x1,5	13,3÷14,5	12,2÷13,4
RM414	3x2x1,5	14,0÷15,6	13,1÷14,3
RM415	4x2x1,5	15,5÷17,1	14,3÷15,9
RM416	7x2x1,5	18,7÷20,5	17,6÷19,2

Add letter **E** for exposed installations or **P** for protected installations at the end of the item number

CONSTRUCTION

Conductor: tinned copper conductor according to table TW1

Insulation: double layer of special compound

Identification: numbered white cores (other identification methods may be agreed)

Pairing: cores are twisted in pairs

Pair screen: tinned wire braid

Pair sheath: cross-linked compound, black numbered

Laying up: sheathed pairs are stranded together

Sheath: cross-linked compound type EM104 according to EN 50306-1

Marking: UNIKA (Italy) – EN 50306-4 "5n" (n°pairs)x(cross-section) MMS 90 – WW/YYYY - traceability code
n: E for exposed installations or P for protected installations

Fire safety: hazard level HL3 according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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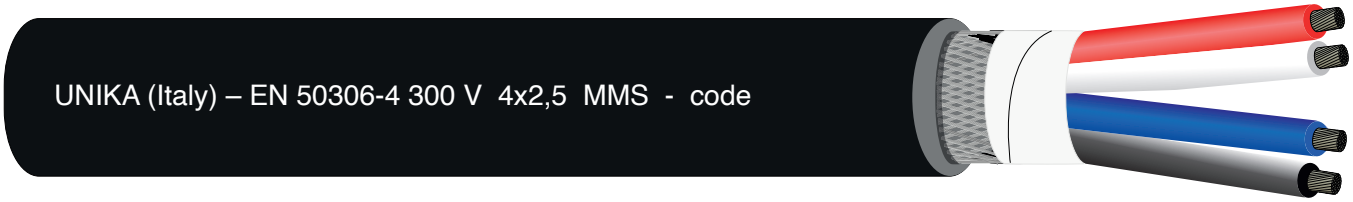
UNIRAIL TW – EN 50306-4 300 V – type MMS (Table 7)

Multipair cables with an overall screen and sheath



TECHNICAL DATA

Temperature rating up to and including 90°C

Very low temperatures resistance (-40°C)

Resistance to ozone, oils, acids and alkali

Bending radius: refer to EN 50343 table 16

Range of approval:
According to table TW6 of EN 50306-4 for cables rated 300V (see IMQ test certificate). Further constructions are available upon request.

Table TW6 – Multicore screened sheathed cables - Dimensional data

Item n°	Cable type n° cores x cross-section [mm²]	Diameter exposed type [mm]	Diameter protected type [mm]
RM327_M	2x2x0,25	5,9 ÷ 6,7	5,4 ÷ 6,2
RM328_M	3x2x0,25	6,2÷ 7,0	5,7 ÷ 6,5
RM330_M	4x2x0,25	6,6 ÷ 7,4	6,1 ÷ 6,9
RM325_M	2x2x0,50	7,1 ÷ 8,9	6,6 ÷ 7,9
RM332_M	3x2x0,50	7,5 ÷ 9,1	7,0 ÷ 8,1
RM329_M	4x2x0,50	8,3 ÷ 9,7	7,7 ÷ 8,7
RM326_M	6x2x0,50	9,5 ÷ 10,7	9,0 ÷ 10,2
RM701	7x2x0,50	9,6 ÷ 11,6	9,0 ÷ 10,6
RM702_M	2x2x0,75	7,6 ÷ 10,0	7,1 ÷ 9,0
RM703_M	3x2x0,75	8,2 ÷ 10,2	7,7 ÷ 9,2
RM704_M	4x2x0,75	9,5 ÷ 10,8	9,0 ÷ 10,0
RM705	7x2x0,75	11,4 ÷ 12,8	10,8 ÷ 11,8
RM706_M	2x2x1,0	8,3 ÷ 10,5	7,8 ÷ 9,5
RM707_M	3x2x1,0	8,8 ÷ 10,7	8,3 ÷ 9,7
RM708_M	4x2x1,0	9,6 ÷ 11,3	9,1 ÷ 10,3
RM709	7x2x1,0	11,6 ÷ 13,4	11,0 ÷ 12,4
RM710_M	2x2x1,5	10,3 ÷ 12,2	9,8 ÷ 11,2
RM711_M	3x2x1,5	11,0 ÷ 12,4	10,4 ÷ 11,4
RM712_M	4x2x1,5	12,1 ÷ 13,1	11,8 ÷ 12,6
RM713	7x2x1,5	14,5 ÷ 16,3	14,0 ÷ 15,3

Add letter **E** for exposed installations or **P** for protected installations at the end of the item number (or replace _ with **E** or **P**)
Substitute letter **M** with **H** for core identification with white numbering.

CONSTRUCTION

Conductor: tinned copper conductor according to table TW1

Insulation: double layer of special compound

Identification: (white-red), (black-blue), (brown-orange), (grey-green), (white/red-white/black), (white/blue-white/brown).
Starting from 7 pairs: numbered white cores

Pairing: cores are twisted together in pairs

Laying up: pairs are stranded together

Overall screen: tinned copper wire braid

Sheath: cross-linked compound type EM104 according to EN 50306-1

Marking: UNIKA (Italy) – EN 50306-4 "7n" (n°pairs)x(cross-section) MMS 90 – WW/YYYY - traceability code
n: E for exposed installations or P for protected installations

Fire safety: hazard level HL3 according to Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B)

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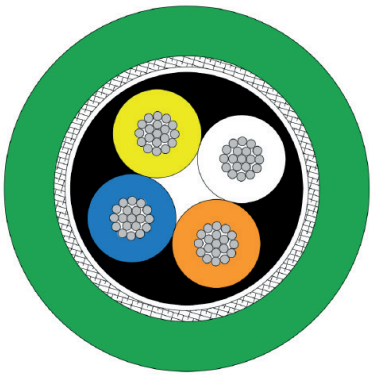
Note

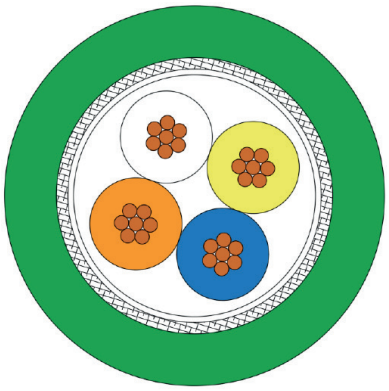
UNIRAIL *D* – ETHERNET CABLE CATEGORY 5e

Type: **1x4x22 AWG/19 SF/UTP**
Code: **RW100A**



CONSTRUCTION	
Conductor	stranded tinned copper wire – 22 AWG/19 (0,35 mm²)
Insulation	Polyolefin
Insulation colours	white ÷ blue ÷ yellow ÷ orange
Assembly of core	Stranded to quad: • pair 1 white/blue • pair 2 yellow/orange
Separation	polyester tape
Inner jacket	Halogen-free compound
Overall shield	aluminium/polyester tape + tinned copper braid 85% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - green colour if not otherwise stated
Marking	UNIKA (Italy) – Profinet Cable CAT. 5e (1x4x22 AWG/19) M - 100 ohm - WW/YYYY – *traceability code*

Type: **1x4x26 AWG/7 SF/UTP**
Code: **RW100B**



CONSTRUCTION	
Conductor	stranded bare copper wire – 26 AWG/7 (0,14 mm²)
Insulation	polyolefin
Insulation colours	white ÷ blue ÷ yellow ÷ orange
Assembly of core	Stranded to quad: • pair1 white/blue • pair2 yellow/orange
Separation	polyester tape
Overall shield	aluminium/polyester tape + tinned copper braid 85% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1. Green colour if not otherwise stated
Marking	UNIKA (Italy) – Profinet Cable CAT. 5e (1x4x26AWG/7) M - 100 ohm - WW/YYYY – *traceability code*

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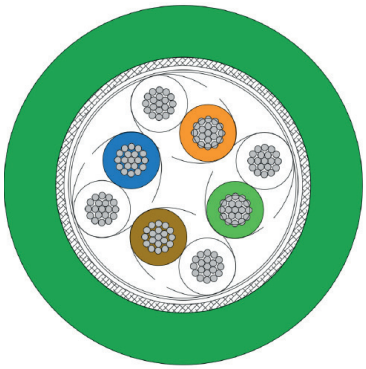
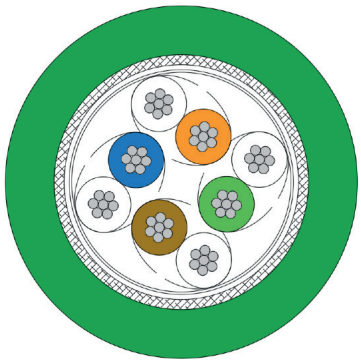
Type: **4x2x22 AWG/19 SF/UTP**
Code: **RW100C**



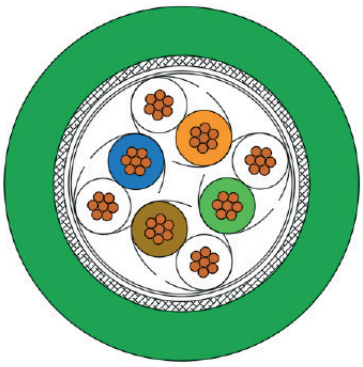
CONSTRUCTION	
Conductor	stranded tinned copper wire – 22 AWG/19 (0,35 mm²)
Insulation	polyolefin
Insulation colours	white-blue ÷ white-orange ÷ white-brown ÷ white-green
Assembly of core	Palr stranded together : • pair1 white/blue • pair2 white/orange • pair3 white/brown • pair4 white/green
Overall shield	aluminized/ polyester tape - tinned copper braid 85% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1. Green colour if not otherwise stated
Marking	UNIKA (Italy) – Ethernet Cable CAT. 5e (4x2x22AWG/19) M - 100 ohm - WW/YYYY – *traceability code*

Type: **4x2x26 AWG/7 SF/UTP**
Code: **RW100D**



CONSTRUCTION	
Conductor	stranded tinned copper wire – 26 AWG/7 (0,14 mm²)
Insulation	polyolefin
Insulation colours	white-blue ÷ white-orange ÷ white-brown ÷ white-green
Assembly of core	Palr stranded together : • pair 1 white/blue • pair 2 white/orange • pair 3 white/brown • pair 4 white/green
Overall shield	aluminized/polyester tape - tinned copper braid 85% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1. Green colour if not otherwise stated
Marking	UNIKA (Italy) – Ethernet Cable CAT. 5e (4x2x26AWG/7) M - 100 ohm - WW/YYYY – *traceability code*

Type: **4x2x24 AWG/7 SF/UTP**
Code: **RW100E**



CONSTRUCTION	
Conductor	stranded bare copper wire – 24 AWG/7 (0,25 mm²)
Insulation	polyolefin
Insulation colours	white-blue ÷ white-orange ÷ white-brown ÷ white-green
Assembly of core	Pair stranded together : • pair1 white/blue • pair2 white/orange • pair3 white/brown • pair4 white/green
Overall shield	aluminized/ polyester tape - tinned copper braid 85% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1. Green colour if not otherwise stated
Marking	UNIKA (Italy) – Ethernet Cable CAT. 5e (4x2x24AWG/7)M - 100 ohm - WW/YYYY – *traceability code*

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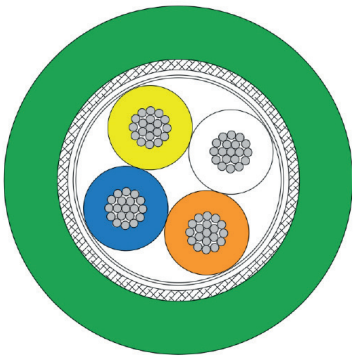
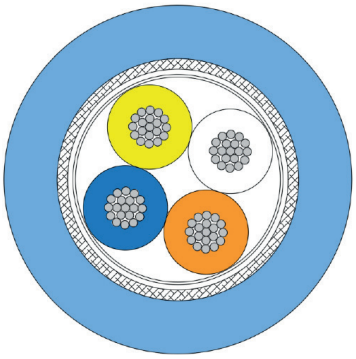
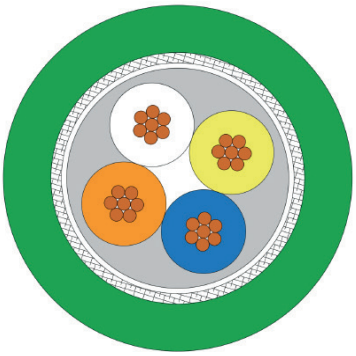
Type: **1x4x20 AWG/19 SF/UTP**
Code: **RW100F (for green outer jacket)**
Code: **RW100G (for blue outer jacket)**





CONSTRUCTION	
Conductor	stranded tinned copper wire – 20 AWG/19 (0,50 mm²)
Insulation	polyolefin
Insulation colours	white ÷ blue ÷ yellow ÷ orange
Assembly of core	Stranded to quad: • pair 1 white/blue • pair 2 yellow/orange
Separation	polyester tape
Overall shield	aluminium/polyester tape + tinned copper braid 85% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1. Green colour if not otherwise stated
Marking	UNIKA (Italy) – Profinet Cable CAT. 5e (1x4x20AWG/19)M - 100 ohm - WW/YYYY – *traceability code*

Type: **1x4x24 AWG/7 SF/UTP**
Code: **RW100H**



CONSTRUCTION	
Conductor	stranded bare copper wire – 24 AWG/7
Insulation	Polyolefin
Insulation colours	white ÷ blue ÷ yellow ÷ orange
Assembly of core	Stranded to quad: • pair 1 white/blue • pair 2 yellow/orange
Separation	polyester tape
Inner jacket	Halogen-free compound
Overall shield	aluminium/polyester tape + tinned copper braid 85% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - green colour if not otherwise stated
Marking	UNIKA (Italy) – Profinet Cable CAT. 5e (1x4x24 AWG/7) M - 100 ohm - WW/YYYY – *traceability code*

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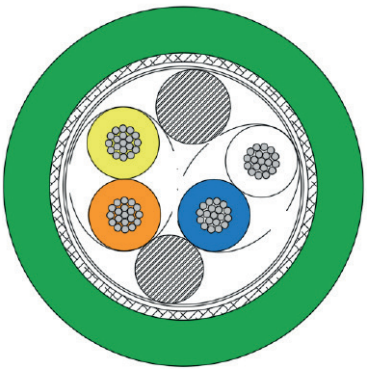
Type: **2x2x22 AWG/19 SF/UTP**
Code: **RW100J**



CONSTRUCTION	
Conductor	stranded tinned copper wire – 22 AWG/19
Insulation	Polyolefin
Insulation colours	white ÷ blue ÷ yellow ÷ orange
Assembly of core	Stranded to quad: • pair 1 white/blue • pair 2 yellow/orange
Separation	polyester tape
Overall shield	aluminium/polyester tape + tinned copper wire braid
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - green colour if not otherwise stated
Marking	UNIKA (Italy) – Ethernet Cable CAT. 5e (2x2x22 AWG/19) M - 100 ohm - WW/YYYY – *traceability code*

	RW100A 1x4x22 AWG/19	RW100B 1x4x26 AWG/7	RW100C 4x2x22 AWG/19	RW100D 4x2x26 AWG/7	RW100E 4x2x24 AWG/7	RW100F RW100G 1x4x20 AWG/19	RW100H 1x4x24 AWG/7	RW100J 2x4x22 AWG/19
Max DC conductor resistance	60 Ω/km	145 Ω/km	60 Ω/km	170 Ω/km	88 Ω/km	36,4 Ω/km	88 Ω/km	60 Ω/km
Capacitance	55 pF/m	52 pF/m	54 pF/m	52 pF/m	52 pF/m	49 pF/m	50 pF/m	52 pF/m
Characteristic impedance (1÷100 MHz)	100 Ω (±15%)	100 Ω (±15%)	100 Ω (±15%)	100 Ω (±15%)	100 Ω (±15%)	100 Ω (±15%)	100 Ω (±15%)	100 Ω (±15%)
Voltage rating	300 V	300 V	300 V	300 V	300 V	300 V	300 V	300 V
Min insulation resistance	5,0 GΩx-km	5,0 GΩx-km	5,0 GΩx-km	5,0 GΩx-km	5,0 GΩx-km	5,0 GΩx-km	5,0 GΩx-km	5,0 GΩx-km
Nominal velocity of propagation 100MHz	67%	65%	78%	71%	77%	67%	67%	77%
Nominal attenuation 1 MHz	1,8 dB/100m	3,0 dB/100m	2,4 dB/100m	2,6 dB/100m	2,1 dB/100m	1,7 dB/100m	1,7 dB/100m	3,2 dB/100m
10 MHz	5,7 dB/100m	9,1 dB/100m	7,8 dB/100m	8,1 dB/100m	6,0 dB/100m	5,3 dB/100m	6,8 dB/100m	9,5 dB/100m
100 MHz	20,7 dB/100m	29,8 dB/100m	26,4 dB/100m	27,3 dB/100m	21,0 dB/100m	17,8 dB/100m	24,9 dB/100m	32 dB/100m
Nominal weight	63 kg/km	40 kg/km	115 kg/km	60 kg/km	70 kg/km	110 kg/km	65 kg/km	80 kg/km
Nominal diameter	6,5 mm	4,8 mm	8,6 mm	6,5 mm	7,0 mm	8,6 mm	6,2 mm	8,0 mm
Minimum bending radius	8 x outer ø							
Temperature range	-40 °C +90°C							

Fire safety: cables are classified in compliance with the highest requirements established by hazard level HL3 into Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B).

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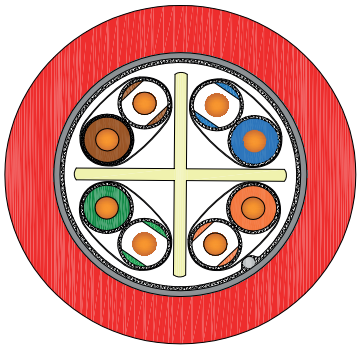
UNIRAIL *D* – ETHERNET CABLE CATEGORY 5e FIRE RESISTANT

Type: **4x2x23 AWG/1 SF/UTP**
Code: **RW101A**



CONSTRUCTION	
Conductor	solid bare copper wire – 23 AWG/1 (0,25 mm²)
Insulation	polyelefin
Insulation colours	white/blue, blue ÷ white/orange, orange ÷ white/green, green ÷ white/brown, brown
Fire barrier	special mineral glass tape with overlap over core insulation
Conductor assembly	twisted to pairs • 1 pair white-blue/blue • 2 pair white-brown/brown • 3 pair white-green/green • 4 pair white-orange/orange
Separation	polyester tape on each pair
Assembly elements	pairs stranded together around a central cross separator filler
Separation	glass fibre tape
Overall shield	copper/polyester tape + tinned copper braid 85% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - redcolour if not otherwise stated
Marking	UNIKA (Italy) – Ethernet Cable CAT. 5e 4x2x23AWG/1 M – EN50200 EN50289-4-16 PH120 100MHz – *traceability code*

Type: **1x4x22 AWG/19 SF/UTP**
Code: **RW101B**

CONSTRUCTION	
Conductor	stranded bare copper wire – 22 AWG/7 (0,35 mm²)
Insulation	polyolefin
Insulation colours	white ÷ blue ÷ yellow ÷ orange
Assembly of core	Stranded to quad: • pair1 white/blue • pair2 yellow/orange
Separation	polyester tape
Inner jacket	Halogen-free compound
Overall shield	aluminium/polyester tape + tinned copper braid 85% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - green colour if not otherwise stated
Marking	UNIKA (Italy) – Profinet Cable CAT. 5e 1x4x22AWG/19 M – EN50200 EN50289-4-16 PH120 100 MHz – *traceability code*

Unless otherwise specified, all values are nominal, other values can be provided on request.
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		RW101A 4x2x23 AWG/1 SF/UTP	RW101B 1x4x22 AWG/19 SF/UTP
DC conductor resistance		94,2 Ω/km	60 Ω/km
Capacitance		55 pF/m	53 pF/m
Characteristic impedance		100 Ω (±15%)	100 Ω (±15%)
Voltage rating		300 V	300 V
Min insulation resistance		5,0 GΩxkm	5,0 GΩxkm
Nominal velocity of propagation 100MHz		64%	67%
Nominal Attenuation	1 MHz	1,9 dB/100m	1,6 dB/100m
	10 MHz	5,7dB/100m	5,1 dB/100m
	100 MHz	19,3 dB/100m	19,0 dB/100m
Nominal weight		130 kg/km	63 kg/km
Nominal Diameter		9,2 mm	6,8 mm
Minimum bending radius		15 x outer ø	15 x outer ø
Temperature range		-40 °C +90°C	-40 °C +90°C
Standard reference		IEC 61156-5, EN 50288-2-1, EN 5289-4-16, ISO/IEC 11801, EN 50173, EN 50200	

Fire safety: cables are classified in compliance with the highest requirements established by hazard level HL3 into Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B).

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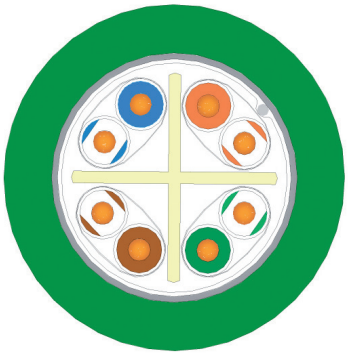
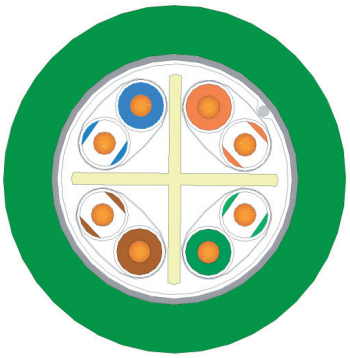
UNIRAIL *D* – ETHERNET CABLE CATEGORY 6

Type: **4x2x23 AWG/1 SF/UTP**
Code: **RW104A**



CONSTRUCTION	
Conductor	solid bare copper wire – 23 AWG/1 (0,25 mm²)
Insulation	polyolefin
Insulation colours	white-blue/blue ÷ white-orange/orange ÷ white-green/green ÷ white-brown/brown
Conductor assembly	twisted to pairs • 1 pair white-blue/blue • 2 pair white-brown/brown • 3 pair white-green/green • 4 pair white-orange/orange
Assembly elements	pairs stranded together around a central cross separator filler
Separation	polyester tape
Overall shield	aluminium/polyester tape + tinned copper braid 85% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - green if not otherwise stated
Marking	UNIKA (Italy) – Ethernet Cable CAT. 6 (4x2x23AWG/1)M - 100 ohm - WW/YYYY –*traceability code*

Type: **4x2x26 AWG/7 SF/UTP**
Code: **RW104B**



CONSTRUCTION	
Conductor	stranded bare copper wire – 26 AWG/7 (0,14 mm²)
Insulation	polyolefin
Insulation colours	white-blue/blue ÷ white-orange/orange ÷ white-green/green ÷ white-brown/brown
Conductor assembly	twisted to pairs • 1 pair white-blue/blue • 2 pair white-brown/brown • 3 pair white-green/green • 4 pair white-orange/orange
Assembly elements	pairs stranded together around a central cross separator filler
Separation	polyester tape
Overall shield	aluminium/polyester tape + tinned copper braid 85% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - green if not otherwise stated
Marking	UNIKA (Italy) – Ethernet Cable CAT. 6 (4x2x26AWG/7)M - 100 ohm - ww/yyyy –*traceability code*

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		RW104A 4x2x23 AWG/1 SF/UTP	RW104B 4x2x26 AWG/7 SF/UTP
DC conductor resistance		74,5 Ω/km	143 Ω/km
Capacitance		48 pF/m	52 pF/m
Characteristic impedance		100 Ω (±15%)	
Voltage rating		300 V	
Min insulation resistance		5,0 GΩxkm	5,0 GΩxkm
Nominal velocity of propagation 100MHz		73%	71%
Nominal Attenuation	1 MHz	1,9 dB/100m	2,5 dB/100m
	10 MHz	5,7 dB/100m	8,6 dB/100m
	100 MHz	18,7 dB/100m	28,8 dB/100m
	250 MHz	30,2 dB/100m	47,5 dB/100m
Nominal weight		90 kg/km	52 kg/km
Nominal Diameter		7,5 mm	6,4 mm
Minimum bending radius		10 x outer ø	
Temperature range		-40 °C +90°C	

Fire safety: cables are classified in compliance with the highest requirements established by hazard level HL3 into Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B).

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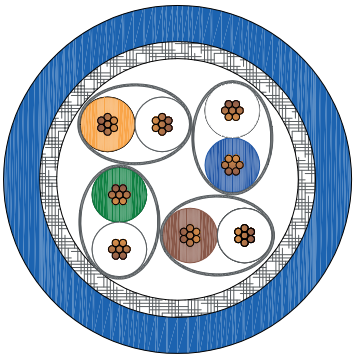
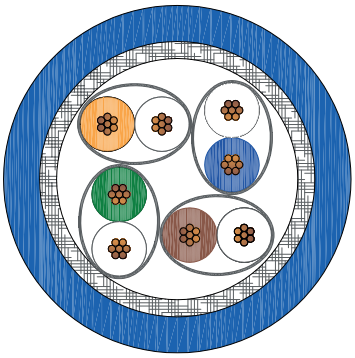
UNIRAIL *D* – ETHERNET CABLE CATEGORY 7A

Type: **4x(2x26AWG/7) S/FTP**
Code: **RW102A**



CONSTRUCTION	
Conductor	stranded bare copper wire – 26 AWG/7 (0,14 mm²)
Insulation	foam-skin polyethylene
Pair colours	blue/white ÷ orange/white ÷ green/white ÷ brown/white
Pair screen	aluminium/polyester tape (aluminium surface outiside)
Assembling	shielded pairs stranded together
Overall shield	tinned copper braid 85% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - bluecolour if not otherwise stated
Marking	UNIKA (Italy) – Ethernet Cable CAT. 7A 4x(2x26AWG/7) M - 100 ohm - WW/YYYY – *traceability code*

Type: **4x(2x24AWG/7) S/FTP**
Code: **RW102B**



CONSTRUCTION	
Conductor	stranded bare copper wire – 24 AWG/7 (0,22 mm²)
Insulation	foam-skin polyethylene
Pair solours	blue/white ÷ orange/white ÷ green/white ÷ brown/white
Pair screen	aluminium/polyester tape (outside aluminium surface)
Assembling	shielded pairs stranded together
Overall shield	tinned copper braid 85% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - bluecolour if not otherwise stated
Marking	UNIKA (Italy) – Ethernet Cable CAT. 7A 4x(2x24/7AWG) M - 100 ohm - WW/YYYY – *traceability code*

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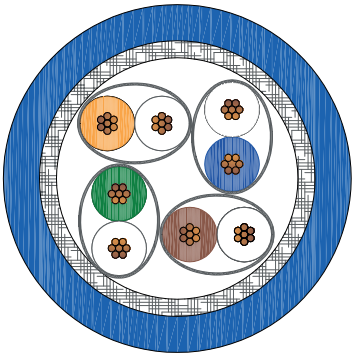
Type: **4x(2x23AWG/7) S/FTP**
Code: **RW102C**



CONSTRUCTION	
Conductor	stranded bare copper wire – 23 AWG/7 (0,26 mm²)
Insulation	foam-skin polyethylene
Pair colours	blue/white ÷ orange/white ÷ green/white ÷ brown/white
Pair screen	aluminium/polyester tape (outside aluminium surface)
Assembling	shielded pairs stranded together
Overall shield	tinned copper braid 85% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - bluecolour if not otherwise stated
Marking	UNIKA (Italy) – Ethernet Cable CAT. 7A 4x(2x23/7AWG) M - 100 ohm - WW/YYYY – *traceability code*

		RW102A 4x(2x26AWG/7) S/FTP	RW102B 4x(2x24AWG/7) S/FTP	RW102C 4x(2x23AWG/7) S/FTP
DC conductor resistance		143,0 Ω/km	94,2 Ω/km	74,5 Ω/km
Capacitance		46 pF/m	42pF/m	45pF/m
Characteristic impedance			100 Ω (±15%)	
Voltage rating			300 V	
Min insulation resistance		5,0 GΩxkm	5,0 GΩxkm	5,0 GΩxkm
Nominal velocity of propagation 100MHz		77%	77%	77%
Transfer Impedance	1 MHz	10 mΩ/m	10 mΩ/m	10 mΩ/m
	10 MHz	10 mΩ/m	8 mΩ/m	8 mΩ/m
	30 MHz	10 mΩ/m	10 mΩ/m	10 mΩ/m
Nominal attenuation	10 MHz	8,3 dB/100m	6,9 dB/100m	5,7 dB/100m
	100 MHz	26,3 dB/100m	19,0 dB/100m	18,7 dB/100m
	250 MHz	42,0 dB/100m	30,8 dB/100m	30,1 dB/100m
	600 MHz	66,1 dB/100m	49,5 dB/100m	47,6 dB/100m
Nominal weight		59 kg/km	90 kg/km	100 kg/km
Nominal diameter		6,7 mm	8,2 mm	8,4 mm
Minimum bending radius			10 x outer ø	
Temperature range			-40 °C +90°C	
Standard reference			EN 50173, IEC 61156-6, TIA/EIA 568 B.2, EN 50288-4-2, ISO/IEC 11801	

Fire safety: cables are classified in compliance with the highest requirements established by hazard level HL3 into Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B).

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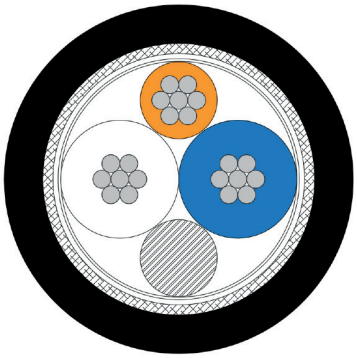
UNIRAIL *D* – RS485 and BUS cables

Type: **(1x2x0,35 + 1x0,35)**
Code: **RW103A**



CONSTRUCTION	
DATA PAIR	
Conductor	stranded tinned copper wire – (0,35 mm²), 7 wires
Insulation	foam skin polyolefin
Insulation colours	white ÷ blue
Assembly of core	twisted pair
POWER ELEMENT	
Conductor	stranded tinned copper wire – (0,35 mm²), 7 wires
Insulation	solid polyethylene according to EN 50290-2-23
Insulation colours	orange
Assembly	Data pair and signal conductor stranded together
Overall shield	Alu/ PET tape + tinned copper braid 90% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - black colour if not otherwise stated
Marking	UNIKA (Italy) – RS485(1x2x0,35+1x0,35) M - 120 ohm - WW/YYYY – *traceability code*

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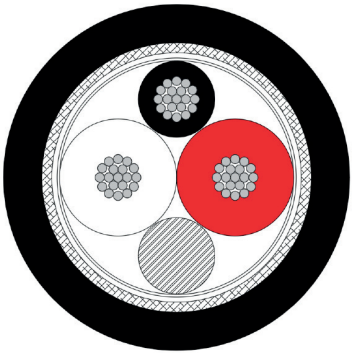
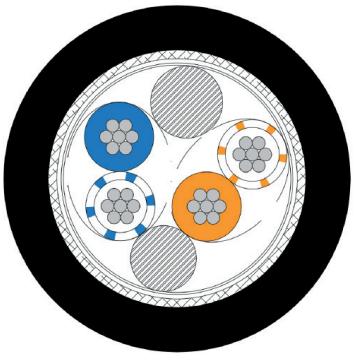
Type: **(1x2x0,50 + 1x0,50)**
Code: **RW103BZ**



CONSTRUCTION	
DATA PAIR	
Conductor	stranded tinned copper wire – (0,50 mm²), 19 wires
Insulation	foam skin polyolefin
Insulation colours	white ÷ red
Assembly of core	twisted pair
POWER ELEMENT	
Conductor	stranded tinned copper wire (0,50 mm²), 19 wires
Insulation	solid polyethylene
Insulation colour	black
Assembly	Data pair and signal conductor stranded together
Overall shield	ALU/PET tape + tinned copper braid 90% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - black colour if not otherwise stated
Marking	UNIKA (Italy) – RS485 (1x2x0,50+1x0,50) M - 120 ohm - WW/YYYY – *traceability code*

Type: **(2x2x0,34 mm²)**
Code: **RW103EZ**



CONSTRUCTION	
DATA PAIR	
Conductor	stranded tinned copper wire – 22 AWG/7 (0,35 mm²)
Insulation	foam skin polyolefin
Insulation colours	(White-blue ÷ blue) (Orange-white÷orange)
Assembly of core	twisted pair
Overall shield	ALU/ PET tinned copper braid 90% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - black colour if not otherwise stated
Marking	UNIKA (Italy) – RS485 (2x2x0,34) M - 120 ohm - WW/YYYY – *traceability code*

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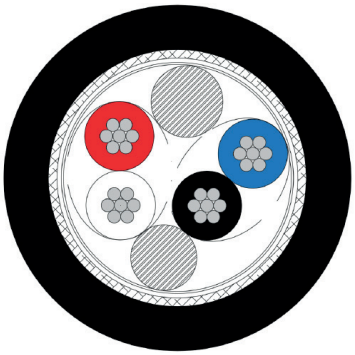
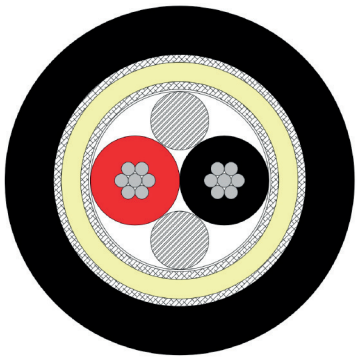
Type: **(2x2x0,50 mm²)**
Code: **RW103F**



CONSTRUCTION	
Conductor	stranded tinned copper wire (0,50 mm²)
Insulation	foam skin polyolefin
Pair colours	white/red ÷ black/blu
Assembly of core	pairs are stranded together
Overall shield	ALU/ PET + tinned copper braid 90% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - black colour if not otherwise stated
Marking	UNIKA (Italy) –RS485 (2x2x0,50) M - 120 ohm - WW/YYYY – *traceability code*

Type: **2x19 AWG/7 (2x0,60 mm²)**
Code: **RW105B**



CONSTRUCTION	
Conductor	stranded tinned copper wire – (0,60 mm²), 7 wires
Insulation	foam skin polyolefin
Pair colours	red/white
Assembly of core	twisted pair
1st shield	tinned copper braid 90% coverage
Inner jacket	crosslinked compound, type EM104 according to standard EN 50264-1
2nd shield	tinned copper braid 90% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - Black colour if not otherwise stated
Marking	UNIKA (Italy) – RS485 (2x0,60) M - 120 ohm - WW/YYYY – *traceability code*

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	RW103A *1x2x0,35+1x0,35*	RW103BZ *1x2x0,50+1x0,50*	RW103F *2x2x0,50*	RW105B 2x19/7 AWG *2x0,60*	RW103EZ 2x2x22 AWG 2x2x0,34
DC conductor resistance	≤ 59,4 Ω/km	≤ 40,1 Ω/km	≤ 40,1 Ω/km	≤ 32,2 Ω/km	≤ 59,4 Ω/km
Capacitance	42 pF/m (data pair)	46 pF/m (data pair)	46 pF/m	50 pF/m	44 pF/m
Characteristic impedance (0,75÷3 MHz)			120 Ω (±10%)		
Voltage rating			300 V		
Min insulation resistance	5,0 GΩxkm	5,0 GΩxkm	5,0 GΩxkm	5,0 GΩxkm	5,0 GΩxkm
Nominal velocity of propagation 100MHz	74%	77%	77%	77%	74%
Nom attenuation 1 MHz	1,6 dB/100 m	1,25 dB/100 m	1,25 dB/100 m		1,6 dB/100 m
2 MHz	2,3 dB/100 m	1,8 dB/100 m	1,8 dB/100 m		2,3 dB/100 m
3 MHz		2,25 dB/100 m	2,25 dB/100 m		
4 MHz	3,8 dB/100 m			0,6 dB/100 m	3,8 dB/100 m
Nominal weight	80 kg/km	72 kg/km	105 kg/km	125 kg/km	95 kg/km
Nominal diameter	7,6 mm	6,8 mm	9,3 mm	9,0 mm	8,8 mm
Minimum bending radius			10 x outer ø		
Temperature range			-40 °C +90°C		

Fire safety: cables are classified in compliance with the highest requirements established by hazard level HL3 into Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B).

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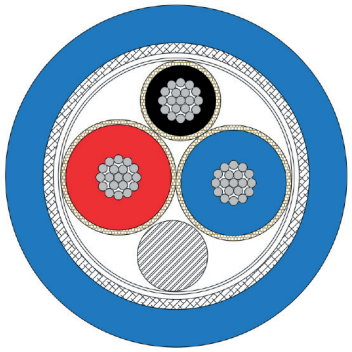
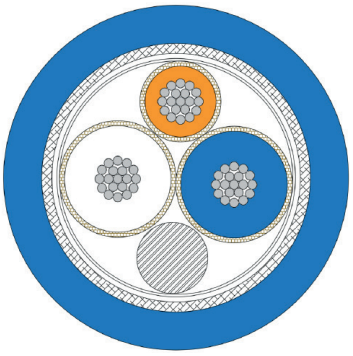
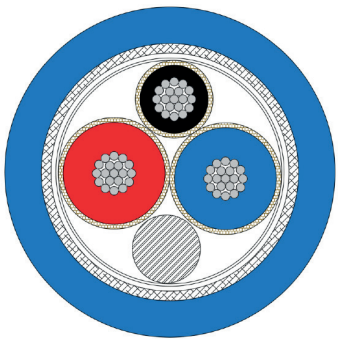
Type: **(1x2x0,50 + 1x0,50) EN 50200 PH90**
Code: **RW106B, RW106BZ**





CONSTRUCTION	
DATA PAIR	
Conductor	stranded tinned copper wire – (0,50 mm²), 19 wires
Insulation	foam skin polyolefin
Insulation colours	red ÷ blue (for RW106B), white ÷ blue (for RW106BZ)
Fire barrier	special mineral glass tape with overlap over each insulation
POWER ELEMENT	
Conductor	stranded tinned copper wire – (0,50 mm²), 19 wires
Insulation	solid polyethylene
Insulation colour	black (for RW106B), orange (for RW106BZ)
Fire barrier	special mineral glass tape with overlap over each insulation
Assembly	Data pair and signal conductor stranded together
Overall shield	Metallic tape + tinned copper braid 90% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - blue colour if not otherwise stated
Marking	UNIKA (Italy) – RS485 (1x2x0,50+1x0,50) M - 120 ohm - EN 50200 PH90- WW/YYYY – *traceability code*

Type: **(1x2x0,75 + 1x0,75) EN 50200 PH90**
Code: **RW106E**



CONSTRUCTION	
DATA PAIR	
Conductor	stranded tinned copper wire – (0,75 mm²)
Insulation	foam skin polyolefin
Insulation colours	red ÷ blue
Fire barrier	special mineral glass tape with overlap over each insulation
POWER ELEMENT	
Conductor	stranded tinned copper wire – (0,50 mm²), 19 wires
Insulation	solid polyethylene
Insulation colour	black
Fire barrier	special mineral glass tape with overlap over each insulation
Assembly	Data pair and signal conductor stranded together
Overall shield	Metallic tape + tinned copper braid 90% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - blue colour if not otherwise stated
Marking	UNIKA (Italy) – RS485 (1x2x0,75+1x0,75) M - 120 ohm - EN 50200 PH90 - WW/YYYY – *traceability code*

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	RW106B (1x2x0,50 + 1x0,50) EN 50200	RW106E (1x2x0,75 + 1x0,75) EN 50200
DC conductor resistance	≤ 40,1 Ω/km	≤ 26,0 Ω/km
Capacitance	46 pF/m	50 pF/m
impedance	120 Ω (±10%)	
Voltage rating	300 V	
Min insulation resistance	≥ 1,0 GΩxkm	1,0 GΩxkm
Nominal velocity of propagation 100MHz	66%	75%

		Before EN 50200 test	After EN 50200 test	Before EN 50200 test	After EN 50200 test
Nominal attenuation	1 MHz		< 12,0 dB/100m	10 dB/100m	10 dB/100m
	1,5 MHz	< 15,0 dB/100m			
	2 MHz		< 17,0 dB/100m	14 dB/100m	14 dB/100m
	3 MHz	< 20,0 dB/100m			

Nominal weight	102 kg/km	148 kg/km
Nominal diameter	8,0 mm	10,0 mm
Minimum bending radius	10 x outer ø	
Temperature range	-40 °C +90°C	
Standard reference	EN 50200, EIA RS485	

Fire safety: cables are classified in compliance with the highest requirements established by hazard level HL3 into Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B).

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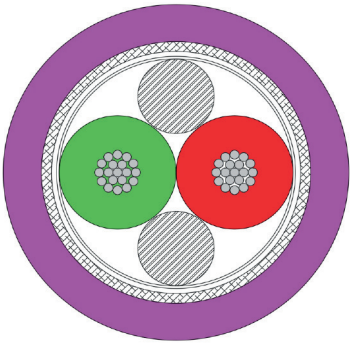
Type: **1x2xAWG22/19**
Code: **RW103DM**



CONSTRUCTION	
Conductor	stranded tinned copper wire – 22/19 AWG (0,38 mm²)
Insulation	foam skin polyolefin
Pair colours	red/green
Assembly of core	twisted pair + fillers and tape are assembled together
Overall shield	aluminium/ polyester tape, tinned copper braid 85% coverage
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 violet colour if not otherwise stated
Marking	UNIKA (Italy) – PROFIBUS DP (1x2xAWG22/19) M - 150 Ω - WW/YYYY – *traceability code*

	RW103DM 1x2xAWG22 Profibus DP
DC conductor resistance	≤ 59,4 Ω/km
Capacitance	≤ 30 pF/m
Characteristic impedance (0,25÷20 MHz)	150 Ω (±10%)
Voltage rating	300 V
Min insulation resistance	5,0 GΩxkm
Nominal velocity of propagation 100MHz	78%
Nom.attenuation 0,20 MHz	0,6 dB/100 m
4 MHz	2,2 dB/100 m
16 MHz	4,4 dB/100 m
20 MHz	4,9 dB/100 m
Nominal weight	73 kg/km
Maximum diameter	8,0 mm
Minimum bending radius	8 x outer ø
Temperature range	-40 °C +90°C

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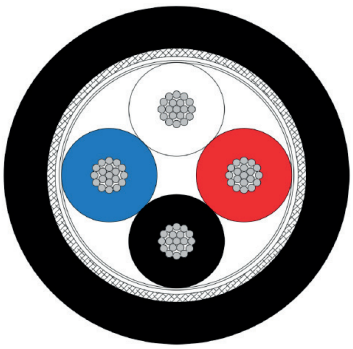
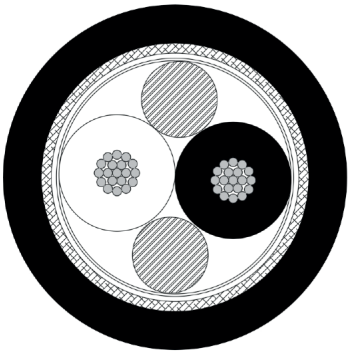
UNIRAIL *D* – MVB and WTB cables

Type: **MVB 1x4x0,50**
Code: **RW105C**

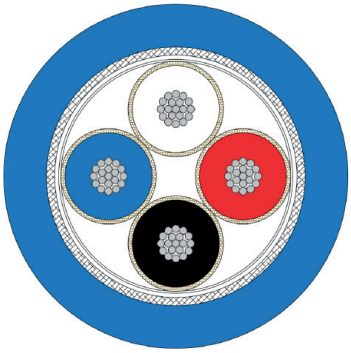


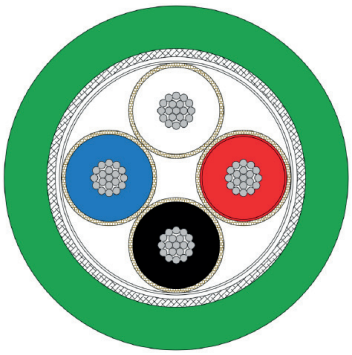
CONSTRUCTION	
Conductor	stranded tinned copper wire – 0,50 mm² (19 wires)
Insulation	foam skin polyolefin
Insulation colours	White, red, black, blue
Assembly of core	4 cores stranded to quad
Overall shield	metallic tape, tinned copper braid, coverage 85%
Outer sheath	crosslinked compound, type EM104 according to standard EN 50264-1 - black colour if not otherwise stated

Type: **WTB 1x2x0,75**
Code: **RW105A**



CONSTRUCTION	
Conductor	stranded tinned copper wire – 0,75 mm² (19 wires)
Insulation	foam skin polyolefin
Insulation colours	White - Black
Assembly of core	2 cores stranded to pair
Overall shield	metallic tape, tinned copper braid, coverage 85%
Outer sheath	crosslinked compound, type EM104 according to standard EN 50264-1 - black colour if not otherwise stated





Type: **MVB 1x4x0,50 EN 50200 PH15**
Code: **RW106C (blue) - RW106CV (green)**

CONSTRUCTION	
Conductor	stranded tinned copper wire – 0,50 mm² (19 wires)
Insulation	foam skin polyolefin
Fire barrier	special mineral glass tape with overlap over core insulation
Insulation colours	White, red, black, blue
Assembly of core	4 cores stranded to quad
Overall shield	metallic tape, tinned copper braid, coverage 85%
Outer sheath	crosslinked compound, type EM104 according to standard EN 50264-1 - blue or green

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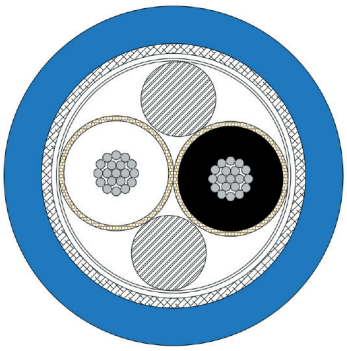
Type: **WTB 1x2x0,75 EN 50200 PH15**
Code: **RW106D (blue)**



CONSTRUCTION	
Conductor	stranded tinned copper wire – 0,75 mm² (19 wires)
Insulation	foam skin polyolefin
Insulation colours	White - Black
Fire barrier	special mineral glass tape with overlap over core insulation
Assembly of core	2 cores stranded to pair
Overall shield	metallic tape, tinned copper braid, coverage 85%
Outer sheath	crosslinked compound, type EM104 according to standard EN 50264-1 - blue colour if not otherwise stated

	MVB 1x4x0,50 RW105C	WTB 1x2x0,75 RW105A	MVB 1x4x0,50 EN 50200 RW106C/ RW106CV	WTB 1x2x0,75 EN 50200 RW106D
DC conductor resistance	≤ 40,1 Ω/km	≤ 26,7 Ω/km	≤ 40,1 Ω/km	≤ 26,0 Ω/km
Capacitance	48 pF/m (data pair)	65 pF/m (data pair)	48 pF/m (data pair)	65 pF/m (data pair)
Characteristic impedance (0,5÷5 MHz)			120 Ω (±10%)	
Voltage rating			300 V	
Min insulation resistance	1,0 GΩ x km	1,0 GΩ x km	1,0 GΩ x km	1,0 GΩ x km
Nominal velocity of propagation 100MHz	66%	74%	66%	66%

			Before EN 50200	After EN 50200	Before EN 50200	After EN 50200
Nom attenuation	1 MHz		14,0 dB/km		12,0 dB/km	12,0 dB/km	12,0 dB/km
	1,5 MHz	15,0 dB/km	21,1 dB/km	15,0 dB/km			
	2 MHz		24,1 dB/km		17,0 dB/km	14,0 dB/km	14,0 dB/km
	3 MHz	20,0 dB/km	26,7 dB/km	20,0 dB/km			
Nominal weight		98 kg/km	105 kg/km	100 kg/km		116 kg/km	
Nominal outer diameter		8,3 mm	8,4 mm	8,1 mm		8,7 mm	
Minimum bending radius, fixed installation				10 x outer ø			
Temperature range, fixed installation				-40 °C +90°C			

Fire safety: cables are classified in compliance with the highest requirements established by hazard level HL3 into Standard EN 45545-2 for indoor cables (EL1A) and outdoor cables (EL1B).

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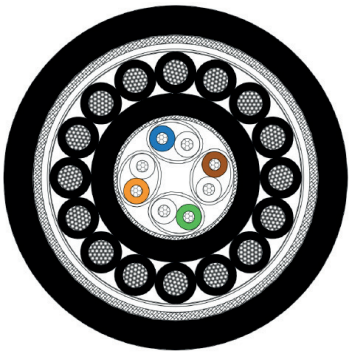
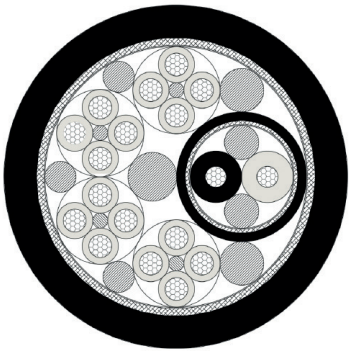
UNIRAIL *J* - JUMPER cables

Type: **[16x1 + CAT. 7 4x(2xAWG24)] M**
Code: **RJ001**



CONSTRUCTION	
CONTROL CORES	
Conductor	flexible strand of tinned copper wire according to class 6 EN 60228
Insulation	crosslinked compound, type EI109 according to EN 50264
Cores identification	black with white numbers
DATA CORES	
Conductor	flexible stranded tinned copper wire – AWG24 (7 wires)
Insulation	foam skin polyethylene according to EN 50290-2-23
Insulation colours	white-blue, white-orange, white-green, white-brown
Assembly of core	4 cores stranded to quad
Overall shield	aluminium/ polyester tape, tinned copper braid, coverage 85%
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - black colour if not otherwise stated

Type: **[4x4x1+(2x0,75)]M**
Code: **RJ002**



CONSTRUCTION	
DATA CORES (0,75 mm²)	
Conductor	flexible strand of tinned copper wire - 19 wires
Insulation	halogen free compound
Cores identification	white, black
Pair assembly	cores are stranded together
Pair screen	Tinned copper wire braid
Pair jacket	Halogen free compound, black
POWER CORES (1 mm²)	
Conductor	flexible stranded of tinned copper wire – 19 wires
Insulation	halogen free compound
Cores identification	white with black numbers from 1 to 16
Quad assembly	Cores are stranded together around central filler
Total assembly	Quads and pair are stranded together around central filler
Overall shield	Tinned copper wire braid (min. coverage 90%)
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - black colour if not otherwise stated

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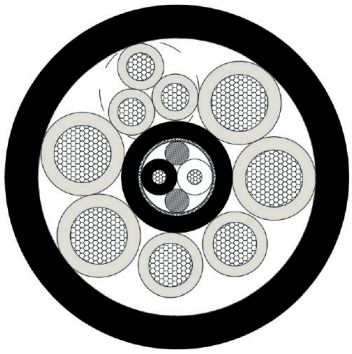
Type: **4x10+2x6+3x2,5+1x(2x0,75)**
Code: **RJ005**



CONSTRUCTION	
POWER CORES	
Conductor	flexible strand of tinned copper wire according to class 6 EN 60228
Insulation	halogen free compound
Cores identification	6 mm²: white marked A, B 2,5 mm²: white marked D, F, G 10 mm² white marked 1, 2, 3, 4
Triad assembly	2,5 mm² cores are stranded together
DATA CORES	
Conductor	flexible stranded of tinned copper wire – 19 wires
Insulation	halogen free compound
Cores identification	white marked X, black marked Y
Pair assembly	Cores are twsited together with suitable fillers
Pair screen	Tinned copper wire braid, coverage 90%
Pair jacket	Halogen free compound, black
Total assembly	Cores and triad are stranded together around bus pair, separator foil over the assembly
Outer jacket	crosslinked compound, type EM104 according to standard EN 50264-1 - black colour if not otherwise stated

	[16x1+CAT. 7 4x(2xAWG24)]M RJ001	[4x4x1+(2x0,75)] M RJ002	4x10+2x6+3x2,5+1x(2x0,75) RJ005
Capacitance	65 pF/m	65 pF/m	65 pF/m
Characteristic impedance	100 Ω (±5%)	120 Ω (±10%)	120 Ω (±10%)
Voltage rating	300 V	0,6/1 kV (Power), 300 v (BUS pair)	500 V (Power), 300 v (BUS)
Nominal weight	540 kg/km	505 kg/km	1190 kg/km
Nominal outer diameter	17,5 mm	17,9 mm	26,0 mm
Minimum bending radius, fixed installation	4 x outer ø	5 x outer ø	5 x outer ø
Minimum bending radius, flexible installation	6 x outer ø (tested acc. ISO 4141)	8 x outer ø	8 x outer ø
Temperature range, fixed installation	-50 °C +90°C	-40 °C +90°C	-40 °C +90°C
Temperature range, flexible installation	-25 °C +90°C	-25 °C +90°C	-25 °C +90°C

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Note

02

Mass Transit Cables

Single and multicore signalling PVC cables for RFI installations

Item n°	Cross-section [mm²]	Maximum diameter [mm]	RFI item and colour
R0101	1x0,60	1,75	804/915 black
R0102	1x0,93	2,05	804/916 black
R0103	21x0,60	11,0	804/917 grey
R0104	7x0,93	8,0	804/918 grey
R0105	13x0,93	10,5	804/919 grey
R0106	21x0,93	13,0	804/920 grey
R0107	21x0,93	13,0	804/921 green
R0108	3x2,5	8,8	804/922 red
R0109	10x2,5	14,2	804/923 red
R0110	10x4	16,5	804/924 red

Item n°	Cross-section [mm²]	Maximum diameter [mm]	RFI item and colour
R0111	1x16	1,75	804/236 red
R0112	1x16	2,05	804/237 yellow
R0113	20x1	13,0	804/247 grey

CONSTRUCTION ACCORDING TO IS400

Conductor: bare copper conductor

Insulation: PVC compound at high insulation resistance rated 105°C

Sheath: PVC compound type R_z according to CEI 20-11

Marking: no marking required

Fire safety: CEI EN 60332-1-2

CONSTRUCTION ACCORDING TO CEI-UNEL

SINGLE CORE:
Conductor: special bare copper conductor according to class 5 CEI EN 60228 construction (7x18x0,41)

Insulation: PVC compound type TI2 according to CEI EN 50525

Marking:
UNIKA (Italy) - cat.804/236 - H07V-K 1x16 IEMMEQU <HAR> - "traceability code" - CE
UNIKA (Italy) - cat.804/237 - 07V-K 1x16 - "traceability code" - CE

MULTICORE:
Conductor: bare copper conductor according to class 5 CEI EN 60228

Insulation: PVC compound type TI2 according to CEI EN 50525

Sheath: PVC compound type TM2 according to CEI EN 50525

Marking: UNIKA (Italy) - cat.804/247 - 05VV-F 20x1 300/500V – "traceability code" - CE

Fire safety: CEI EN 60332-1-2

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Multicore signalling halogen-free cables for outdoor installations according to RFI specifications

Item n°	Cross-section [mm²]	Maximum diameter [mm]	RFI item
R0401	2x1	12,7	804/302
R0402	4x1	14,0	804/304
R0403	6x1	16,6	804/306
R0404	8x1	17,5	804/308
R0405	12x1	20,5	804/312
R0406	16x1	22,6	804/316
R0407	30x1	28,1	804/330
R0408	2x2,5	15,3	804/348
R0409	4x2,5	17,0	804/350
R0410	1x4	11,2	804/352
R0411	2x4	16,2	804/354
R0412	3x4	17,0	804/356
R0413	3x6	18,2	804/360
R0414	3x10	21,8	804/359
R0415	3x16	24,5	804/361
R0416	4x1,5	15,2	804/334
R0417	8x1,5	19,5	804/338
R0418	16x1,5	27,0	804/344

CONSTRUCTION ACCORDING TO IS409 ED. 1988

Conductor: tinned copper conductor according to CEI EN 60228. Class 1 for cross-sections 1, 2,5, 4 and 6 mm². Class 2 for cross-sections 10 and 16 mm². Class 6 for cross-section 1,5 mm².

Insulation: halogen free compound type G10 according to CEI 20-11
Inner sheath: halogen free compound type G10 according to CEI 20-11

Sheath: halogen free compound type M2 according to CEI 20-11, colour black

Marking: UNIKA(Italy) –"*RFI item*" – "cond. number"x"cross-section"– EFSAT – year – "traceability code" – "meter marking"

Rated voltage: 450/750 V

Fire safety: CEI EN 60332-1-2, CEI EN 60332-3-24, CEI 20-37

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Item n°	Cross-section [mm²]	Maximum diameter [mm]	RFI item
R0420	4x1	14,0	804/510
R0421	8x1	17,5	804/512
R0422	16x1	22,6	804/514
R0423	2x2,5	15,3	804/516
R0424	4x2,5	17,0	804/518
R0425	2x4	16,2	804/520
R0426	3x4	17,0	804/522
R0427	2x6	17,4	804/524
R0429	3x6	18,2	804/526
R0430	3x10	21,8	804/528
R0431	3x16	24,5	804/530
R0432	3x25	28,2	804/532
R0433	4x1,5	15,2	804/534
R0434	8x1,5	19,5	804/536
R0435	16x1,5	27,0	804/538

CONSTRUCTION ACCORDING TO IS409 REV. C – NON ARMOURED TYPES

Conductor: tinned copper conductor according toCEI EN 60228. Class 1 for cross-sections 1, 2,5, 4 and 6 mm². Class 2 for cross-sections 10, 16 and 25 mm². Class 6 for cross-section 1,5 mm².

Insulation: halogen free compound type G10 according to CEI 20-11

Bedding: halogen free compound type G10 according to CEI 20-11

Sheath: halogen free compound type M2 according to CEI 20-11, colour black

Marking: UNIKA(Italy) –"*RFI item*" – "cond. number"x"cross-section"– EFSAT – year – "traceability code" – "meter marking"

Rated voltage: 450/750 V

Fire safety: CEI EN 60332-1-2, CEI EN 60332-3-24, CEI 20-37

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Item n°	Cross-section [mm²]	Maximum diameter [mm]	RFI item
R0440	4x1	19,0	804/511
R0441	8x1	22,5	804/513
R0442	16x1	27,0	804/515
R0443	2x2,5	20,3	804/517
R0444	4x2,5	23,0	804/519
R0445	2x4	21,2	804/521
R0446	3x4	23,0	804/523
R0447	2x6	22,4	804/525
R0448	3x6	23,2	804/527
R0449	3x10	26,8	804/529
R0450	3x16	29,5	804/531
R0451	3x25	33,0	804/533
R0452	4x1,5	20,2	804/535
R0453	8x1,5	24,5	804/537
R0454	16x1,5	33,0	804/539

CONSTRUCTION ACCORDING TO IS409 REV. C – ARMOURED TYPES

Conductor: tinned copper conductor according toCEI EN 60228. Class 1 for cross-sections 1, 2,5, 4 and 6 mm². Class 2 for cross-sections 10, 16 and 25 mm². Class 6 for cross-section 1,5 mm².

Insulation: halogen free compound type G10 according to CEI 20-11

Bedding: halogen free compound type G10 according to CEI 20-11

Inner sheath: halogen free compound type M2 according to CEI 20-11, colour black

Armour: double steel tape

Sheath: halogen free compound type M1 according to CEI 20-11, colour black

Marking: UNIKA(Italy) –"*RFI item*" – "cond. number"x"cross-section"– EFSAT – year – "traceability code" – "meter marking"

Rated voltage: 450/750 V

Fire safety: CEI EN 60332-1-2, CEI EN 60332-3-24, CEI 20-37

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Single and multicore signalling halogen-free cables for internal installations according to RFI specifications

Item n°	Cross-section [mm²]	Maximum diameter [mm]	RFI item and colour
R0201	1x0,60	2,3	804/268 black
R0202	1x0,93	2,5	804/269 black
R0203	1x2,5	3,8	804/270 black
R0204	1x4	4,3	804/271 black
R0205	21x0,60	13,9	804/272 grey
R0206	7x0,93	9,7	804/273 grey
R0207	13x0,93	13,0	804/274 grey
R0208	21x0,93	15,5	804/275 grey
R0209	21x0,93	15,5	804/276 green
R0210	3x2,5	9,8	804/277 red
R0211	10x2,5	17,3	804/278 red
R0212	10x4	19,6	804/279 red

CONSTRUCTION ACCORDING TO IS412

Conductor: bare copper conductor according to class 5 CEI EN 60228

Insulation: halogen free compound type G9 for single core and type G10 for multicore according to CEI 20-11

Sheath: halogen free compound type M1 according to CEI 20-11

Marking: UNIKA(Italy) –"*RFI item*"–EF-SATxx
(xx: last two digit of production year)

Rated voltage:
Cross-sections 2,5 and 4 mm² 450/750 V
Cross-sections 0,6 and 0,93 mm² 300/500 V

Fire safety: CEI EN 60332-1-2, CEI EN 60332-3-24, CEI 20-37

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Item n°	Cross-section [mm²]	Maximum diameter [mm]	RFI item and colour
R0601	1x0,5	2,8	804/250 black
R0602	1x1	3,2	804/251 black
R0603	1x1,5	3,5	804/252 black
R0604	1x2,5	4,2	804/254 black
R0605	1x4	4,8	804/256 black
R0606	1x6	6,3	804/258 black
R0607	5x0,5	10,0	804/260 black
R0608	12x0,5	13,0	804/262 black
R0609	20x0,5	16,0	804/264 black
R0610	20x1	18,0	804/266 black

CONSTRUCTION ACCORDING TO IS411

Conductor: tinned copper conductor according to class 5 CEI EN 60228

Insulation: halogen free compound type G9 for single core or G10 for multicore according to CEI 20-11

Sheath: halogen free compound type M1 according to CEI 20-11

Marking: UNIKA(Italy) –"*RFI item*"–EFSATxx
(xx: last two digit of production year)

Rated voltage:
single core 450/750 V
multi core 300/500 V

Fire safety: CEI EN 60332-1-2, CEI EN 60332-3-24, CEI 20-37

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Single and multicore, halogen-free power cables for outdoor installations according to RFI specifications

Item n°	Cross-section [mm²]	Maximum diameter [mm]	RFI item
R0501	1x10	12,6	803/250
R0502	1x16	14,0	803/251
R0503	1x25	15,7	803/252
R0504	1x35	20,3	803/253
R0505	1x70	22,6	803/254
R0506	1x95	25,2	803/255
R0507	1x120	27,9	803/256
R0508	1x150	30,1	803/257
R0509	2x6	17,6	803/258
R0510	2x10	19,7	803/259
R0511	2x16	22,2	803/260
R0512	2x25	26,6	803/261
R0513	3x2,5	15,2	803/262
R0514	3x10	22,0	803/263
R0515	3x16	24,2	803/264
R0516	3x25	27,9	803/265
R0517	3x35	30,4	803/266
R0518	3x50	33,6	803/267
R0519	3x95	43,1	803/268
R0520	3x120	46,9	803/269
R0521	3x150	51,8	803/270
R0522	4x2,5	17,1	803/271
R0523	4x4	18,5	803/272
R0524	4x6	20,5	803/273
R0525	4x25	30,3	803/274
R0526	3x35 + 25	32,5	803/275
R0527	3x50 + 25	36,0	803/276

CONSTRUCTION ACCORDING TO TE 652 AND CEI 20-38

Conductor: tinned copper conductor according to CEI EN 60228. Class 5 for cross-sections up to 10 mm² in multicore cables. Class 5 for all single core cables. Class 2 for cross-sections from 16 mm² in multicore core cables

Insulation: halogen free compound type G10 according to CEI 20-11

Sheath: halogen free compound type M1 according to CEI 20-11, colour black

Marking: UNIKA(Italy) –"*RFI item*" – EFSAT – year

Rated voltage: 0,6/1 kV

Fire safety: CEI EN 60332-1-2, CEI EN 60332-3-24, CEI 20-37

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Single and multicore, halogen-free, fire resistant, power cables for outdoor installations according to RFI specifications

Item n°	Cross-section [mm²]	Maximum diameter [mm]	RFI item
R0301	1x1,5	6,4	803/200
R0302	1x2,5	7,0	803/201
R0303	1x4	7,4	803/202
R0304	1x6	9,0	803/203
R0305	1x10	10,0	803/204
R0306	1x16	10,5	803/205
R0307	1x25	12,5	803/206
R0308	1x35	14,0	803/207
R0309	1x50	16,0	803/208
R0310	2x1,5	12,0	803/209
R0311	2x2,5	13,0	803/210
R0312	2x4	14,0	803/211
R0313	2x6	16,0	803/212
R0314	2x10	18,5	803/213
R0315	2x16	19,5	803/214
R0316	2x25	23,5	803/215
R0317	3x1,5	13,0	803/216
R0318	3x2,5	14,0	803/217
R0319	3x4	15,0	803/218
R0320	3x6	17,0	803/219
R0321	3x10	20,0	803/220
R0322	3x16	21,5	803/221
R0323	3x25	25,0	803/222
R0324	4x1,5	14,0	803/223
R0325	4x2,5	15,0	803/224
R0326	4x4	16,5	803/225
R0327	4x6	19,0	803/226
R0328	4x10	22,0	803/227
R0329	4x16	23,5	803/228
R0330	4x25	27,5	803/229

CONSTRUCTION ACCORDING TO TE 653 AND CEI 20-45

Conductor: tinned copper conductor according toCEI EN 60228 class 5

Insulation: mica tape(s) and halogen free compound type G10 according to CEI 20-11

Sheath: halogen free compound type M1 according to CEI 20-11, colour blue

Marking: UNIKA(Italy) – "*RFI item*" – EF-SATRF – year

Rated voltage: 0,6/1 kV

Fire safety*:* CEI EN 60332-1-2, CEI EN 60332-3-24, CEI 20-37, EN 50200

Unless otherwise specified, all values are nominal, other values can be provided on request.
The images are made for the sole purpose of illustrating the product and are purely indicative.

The characteristics of the products, described in the data sheet, do not constitute any contractual binding. UNIKA spa reserves the right to change the specifications without any notice. Partial or total reproduction of this document is forbidden.

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