## MEDIUM VOLTAGE TERMINATIONS

CATALOGUE 2023





Nexans ELECTRIFY THE FUTURE



## NEXANS NETWORK SOLUTIONS DIV. EUROMOLD

# COMPANY PRESENTATION



#### **EUROMOLD**

Euromold is the leading European specialised designer, manufacturer and distributor of prefabricated cable accessories for medium voltage energy distribution. Euromold provides a complete range of accessories for underground cables: premoulded EPDM rubber connectors for cables and epoxy bushings for transformers and switchgear, as well as a large range of coldshrinkable terminations and joints from 12 to 42 kV. Euromold is also the manufacturer of electrical components for the high voltage accessories of the Nexans group.

#### ISO 9001 Certificate

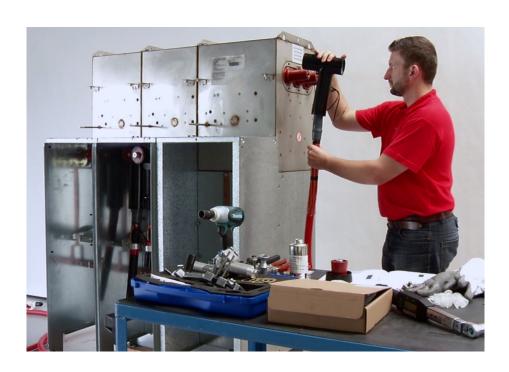
Since 1992, Euromold's commitment to quality is demonstrated by its ISO 9001 certification.

#### International standards

All our products meet the International standards like CENELEC HD 629.1, CENELEC EN 50180, IEC 60137, IEC 60502-4... or country specifications. Official certificates, CESI, KEMA, ATEX... prove the conformity of our products. Long duration tests of existing or new products are continuously performed in our test fields.

#### Laboratory accreditation

Since June 2000, Euromold's independent ELAB laboratory obtained the BELAC accreditation no.144-TEST conform with the European standards for laboratories ISO 17025 for electrical testing of low and medium voltage cable accessories according to the international standards EN 50393, IEC 60502-4, IEC 61442 and HD 629.



While every care is taken to ensure that the information contained in this publication is correct, no legal responsibility can be accepted for any inaccuracy. Nexans Network Solutions N.V. - Div. Euromold reserves the right to alter or modify the characteristics of its products described in this catalogue as standards and technology evolve.



## **TERMINATIONS**

#### TABLE OF CONTENTS

ITK - indoor coldshrink termination

OTK - outdoor coldshrink termination

AIN - heavy duty slip-on indoor termination

AFN - heavy duty slip-on outdoor termination

AIS(P) - standard duty slip-on indoor termination

AFS - standard duty slip-on outdoor termination

15TS-NSS - universal bushing boot

A kit of 3 terminations for use indoors in controlled environmental conditions and subject to light condensation. To connect polymeric insulated cable to equipment.

# 6/10 (12) kV 6.35/11 (12) kV

#### **DESIGN**

Indoor termination comprising:

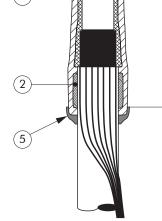
- 1. Cable lug (not included in the standard kit).
- 2. Water sealing mastic.
- 3. Silicone tube.
- 4. Stress control mastic.
- 5. Conductive EPDM ring.

#### 6/10 (12) kV 6.35/11 (12) kV 8.7/15 (17.5) kV 12/20 (24) kV 12.7/22 (24) kV

Up to 24 kV

# SPECIFICATIONS AND STANDARDS

Meets the requirements of CENELEC HD 629.1.



Termination type	Voltage Um (kV)	Strike distance L (mm)  Diameter over core insulation (mm²)  (mm²)			es	
	, ,	,	min	max	min	max
ITK 12-2	12	260	14	33	50	400
ITK 12-3	12	300	30	50	400	1000
ITK 24-2	24	260	14	33	25	240
ITK 24-3	24	300	30	50	300	800



The complete ITK termination kit comprises the following components:

The kit also comprises water sealing mastic and installation instructions.



3 x ITK 12-2 or ITK 24-2 termination kit

3 x Factory pre-assembled silicone tubes comprising stress relief and sealing mastic.



3 x ITK 12-3 or ITK 24-3 termination kit

3 x Factory pre-assembled silicone tubes comprising stress relief and sealing mastic.

#### **ORDERING INSTRUCTIONS**

Select the part number corresponding to both the system voltage and the cable insulation diameter in mm.

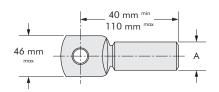
EXA	1	PΙ	F٠
	vv		

The copper wire screened cable is 12 kV, 150 mm<sup>2</sup> stranded aluminium.

The diameter over core insulation is 26.2 mm.

Order a 3 x ITK 12-2 termination kit.

Ordering part number	Voltage Um (kV)  Diameter over core insulation (mm)		core insulation (mm)		onductor es m <sup>2</sup> )
	()	min	max	min	max
3 x ITK 12-2	12	14	33	50	400
3 x ITK 12-3	12	30	50	400	1000
3 x ITK 24-2	24	14	33	25	240
3 x ITK 24-3	24	30	50	300	800



All commercialised European standard cable lugs can be used.

Cable lugs should be within the dimensions specified (not applicable for ITK 12-3 and ITK 24-3).



For use with copper wire screened cables.
No earthing device is necessary.



For use with copper tape screened cables. Also order a Kit CT.



For use with Alupe or C 33-226 cables. Please contact our representative.



For use with three-core cables: see T-ITK.



If the cable lug barrel diameter (A) is less than 20 mm: order a "-1" size kit.



Can be supplied with all common types of cable lugs.

A kit of 3 terminations for use outdoors and exposed to prolonged sunshine and other weather conditions.

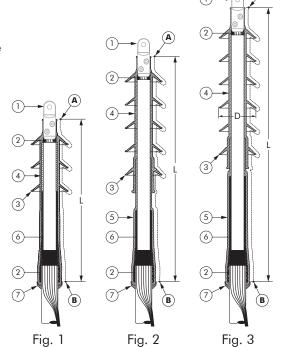
To connect polymeric insulated cable to equipment and for the outdoor terminating on to overhead lines or busbars.



#### **DESIGN**

Outdoor termination comprising:

- 1. Cable lug (not included in the standard kit).
- 2. Water sealing mastic.
- 3. Sheds which can be installed upwards or down.
- 4. Silicone tube with sheds.
- 5. Silicone tube.
- 6. Stress control mastic.
- 7. Conductive EPDM ring.



6/10 (12) kV 6.35/11 (12) kV 8.7/15 (17.5) kV 12/20 (24) kV 12.7/22 (24) kV

Up to 24 kV

## SPECIFICATIONS AND STANDARDS

Meets the requirements of CENELEC HD 629.1 and IEC 60502-4.

Pollution class according to IEC/TS 60815-3.

Termination type	Voltage Um (kV)	Creepage distance A-B	Pollution Class	Strike distance "L" (mm)			Number of sheds	Diameter "D" (mm)	Typ cond sizes (		Fig.
	( )	(mm)		, ,	min	max		, ,	min	max	
OTK 12-2	12	420	Е	300	14	33	3	70	50	400	1
OTK 12-3	12	890	Е	650	30	50	6	79	500	1000	3
OTK 24-2	24	740	Е	540	19	33	5	70	50	240	2
OTK 24-3	24	890	Е	650	30	50	6	79	300	630	3

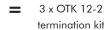


The complete OTK termination kit comprises the following components:

The kit also comprises water sealing mastic and installation instructions.

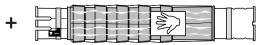


3 x Factory pre-assembled silicone tubes comprising stress relief and sealing mastic.

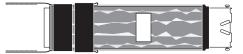




3 x Factory pre-assembled silicone tubes comprising stress relief and sealing mastic.



= 3 x OTK 24-2 termination kit



3 x Factory pre-assembled silicone tubes comprising stress relief and sealing mastic.



3 x Silicone tube with 5 sheds

3 x Silicone tube with 6 sheds

3 x OTK 12-3 or 3 x OTK 24-3

termination kit

#### **ORDERING INSTRUCTIONS**

Select the part number corresponding to both the system voltage and the cable insulation diameter in mm.

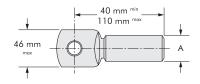
EX	A	M	P	L	E	•

The copper wire screened cable is 24 kV, 150 mm<sup>2</sup> stranded aluminium.

The diameter over core insulation is 26.2 mm.

Order a 3 x OTK 24-2 termination kit.

Ordering part number	Voltage Um (kV)	Diameter over core insulation (mm)		•	
	, ,	min	max	min	max
3 x OTK 12-2	12	14	33	50	400
3 x OTK 12-3	12	30	50	500	1000
3 x OTK 24-2	24	19	33	50	240
3 x OTK 24-3	24	30	50	300	630



All commercialised European standard cable lugs can be used.

Cable lugs should be within the dimensions specified (not applicable for OTK 12-3 and OTK 24-3).



For use with copper wire screened cables.
No earthing device is necessary.



For use with copper tape screened cables. Also order a Kit CT.



If the cable lug barrel diameter (A) is less than 20 mm: order a "-1" size kit.



For use with Alupe or C 33-226 cables. Please contact our representative.



For use with three-core cables: see T-OTK.



Can be supplied with all common types of cable lugs.



A kit of 3 terminations for use indoors in controlled environmental conditions and subject to light condensation. Provides a simple and quick method of stress relieving on screened polymeric cables.



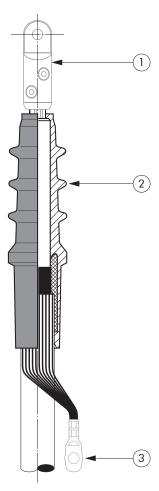
#### **DESIGN**

Indoor termination comprising:

- 1. Cable lug (not included in the standard kit).
- 2. High flexibility silicone rubber housing, allowing larger tolerances on cable insulation diameters, with integrated conductive rubber insert, providing stress relief.
- 3. Earthing lug (not included in the standard kit).

## SPECIFICATIONS AND STANDARDS

Meets the requirements of CENELEC HD 629.1 and IEC 60502-4.



6/10 (12) kV 6.35/11 (12) kV 8.7/15 (17.5) kV 12/20 (24) kV 12.7/22 (24) kV 18/30 (36) kV 20.8/36 (42) kV

Up to 42 kV

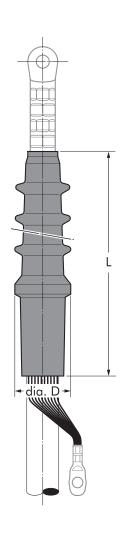
Termination type	Voltage Um	Typical conductor sizes (mm²)				
туре	(kV)	min	max			
AIN 10	12	25	1200			
AIN 20	24	35	1200			
AIN 30	36	50	1000			
AIN 36	42	150	1000			



A kit always comprises 3 termination housings, installation instructions, special lubricant, wiper, adhesive tape, field control mastic, ... Cable lugs and earthing lugs are not included in the standard kit, but can be ordered separately.

#### **ORDERING INSTRUCTIONS**

Select the part number corresponding to both the system voltage and the cable dimensions in mm.



Voltage Um (kV)	Typical Conductor sizes (mm²)		Diameter over core insulation (mm)		Number of sheds	L (mm)	Dia. D	Ordering part number
` ′	min	max	min	max				
	25	95	12.7	21.0	2	150	37	3 x AIN 10-1
	120	240	19.0	28.5	2	150	43	3 x AIN 10-2
12	300	500	27.0	37.0	2	150	60	3 x AIN 10-3
12	630	800	34.0	46.0	3	225	68	3 x AIN 20-4
	10	00	39.0	50.0	7	405	98	3 x AIN 36-5
	1200		46.0	58.0	7	405	98	3 x AIN 36-6
	35	70	18.0	23.5	3	225	47	3 x AIN 20-1
	95	240	22.5	33.0	3	225	56	3 x AIN 20-2
24	300	500	31.0	41.0	3	225	68	3 x AIN 20-3
24	400	630	34.0	46.0	3	225	68	3 x AIN 20-4
	630	800	39.0	50.0	7	405	98	3 x AIN 36-5
	1000	1200	46.0	58.0	7	405	98	3 x AIN 36-6
	50	70	23.5	29.0	6	300	74	3 x AIN 30-1
	95	240	27.0	38.0	6	300	74	3 x AIN 30-2
36	240	400	32.0	43.0	6	300	81	3 x AIN 30-3
	400	630	39.0	50.0	7	405	98	3 x AIN 36-5
	630	1000	46.0	58.0	7	405	98	3 x AIN 36-6
	150	300	31.5	41.0	7	405	98	3 x AIN 36-4
42	400	630	39.0	50.0	7	405	98	3 x AIN 36-5
	630	1000	46.0	58.0	7	405	98	3 x AIN 36-6

#### **EXAMPLE**:

A set of 3 indoor terminations for a 24 kV - 240 mm<sup>2</sup> stranded aluminium cable with copper wire screen without cable lugs. The diameter over core insulation is 30.4 mm.

Order a 3 x AIN 20-2 termination kit.



For use with copper wire screened cables.
No earthing device is necessary.



For use with copper tape screened cables. Order: -/CT.



For use with three-core cables. Please contact our representative.



For use with other cable types.
Please contact our representative.



Can be supplied with all common types of cable lugs.



No heating or flame is required.

A kit of 3 terminations for use outdoors and exposed to prolonged sunshine and other weather conditions.

To connect polymeric insulated cable to equipment and for the outdoor terminating on to overhead lines or busbars.



#### **DESIGN**

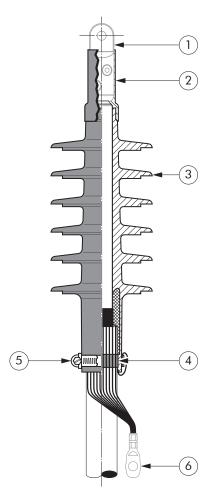
Outdoor termination comprising:

- 1. Cable lug (not included in the standard kit).
- 2. Water sealing silicone sleeve.
- Silicone housing with sheds and integrated conductive silicone rubber insert providing stress relief for the cable.
- 4. Water sealing mastic.
- 5. Earthing clamp.
- 6. Earthing lug (not included in the standard kit).



Meets the requirements of CENELEC HD 629.1 and IEC 60502-4.

Pollution class according to IEC/TS 60815-3.



6/10 (12) kV 6.35/11 (12) kV 8.7/15 (17.5) kV 12/20 (24) kV 12.7/22 (24) kV 18/30 (36) kV 20.8/36 (42) kV

Up to 42 kV

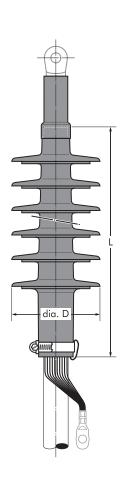
Termination type	Voltage Um	Typical conductor sizes (mm²)			
1,700	(kV)	min	max		
AFN 10	12	25	1200		
AFN 20	24	35	1200		
AFN 30	36	50	1000		
AFN 36	42	70	1000		



A kit always comprises 3 termination housings, water sealing sleeve, the installation instructions, special lubricant, wiper, earthing clamp, water sealing mastic, adhesive tape, field control mastic, ... Cable lugs and earthing lugs are not included in the standard kit, but can be ordered separately.

#### **ORDERING INSTRUCTIONS**

Select the part number corresponding to both the system voltage and the cable dimensions in mm.



Voltage Um (kV)	cond	ical uctor (mm²)	core ins	er over sulation m)	Number of sheds	L (mm) (max)	Dia. D (mm)	Creepage distance (mm)	Pollution Class	Ordering part number
, ,	min	max	min	max			, ,			
	25	95	12.7	21.0	3	210	90	369	E	3 x AFN 10-1
	120	240	19.0	28.5	3	210	96	365	E	3 x AFN 10-2
12	300	500	27.0	37.0	3	210	105	360	E	3 x AFN 10-3
12	630	800	34.0	46.0	4	240	118	462	Е	3 x AFN 20-4
	10	00	39.0	50.0	7	405	127	755	Е	3 x AFN 36-5
	12	00	46.0	58.0	7	405	127	755	Е	3 x AFN 36-6
	35	70	18.0	23.5	4	240	100	480	D	3 x AFN 20-1
	95	240	22.5	33.0	4	240	112	499	D	3 x AFN 20-2
	300	500	31.0	41.0	4	240	118	462	D	3 x AFN 20-3
24	400	630	34.0	46.0	4	240	118	462	D	3 x AFN 20-4
	630	800	39.0	50.0	7	405	127	755	Е	3 x AFN 36-5
	1000	1200	46.0	58.0	7	405	127	755	Е	3 x AFN 36-6
	50	70	23.5	29.0	6	300	115	695	С	3 x AFN 30-1
	95	240	27.0	38.0	6	300	115	694	С	3 x AFN 30-2
36	240	400	32.0	43.0	6	300	127	718	С	3 x AFN 30-3
	400	630	39.0	50.0	7	405	127	755	D	3 x AFN 36-5
	630	1000	46.0	58.0	7	405	127	755	D	3 x AFN 36-6
	70	120	28.0	32.0	7	405	127	755	С	3 x AFN 36-3
40	150	300	31.5	41.0	7	405	127	755	С	3 x AFN 36-4
42	400	630	39.0	50.0	7	405	127	755	С	3 x AFN 36-5
	630	1000	46.0	58.0	7	405	127	755	С	3 x AFN 36-6
	For	use in	heavy pol	luted area	as (termina	itions w	ith an iı	ncreased cre	epage leng	th)
	70	120	28.0	32.0	11	535	127	1079	Е	3 x AFNP 36-3
42	150	300	31.5	41.0	11	535	127	1079	Е	3 x AFNP 36-4
42	400	630	39.0	50.0	11	535	127	1079	Е	3 x AFNP 36-5
	630	1000	46.0	58.0	11	535	127	1079	Е	3 x AFNP 36-6



For higher pollution class please contact our representative.

#### **EXAMPLE**:

A set of 3 outdoor terminations for a 24 kV - 240 mm<sup>2</sup> stranded aluminium cable with copper wire screen without cable lugs.

The diameter over core insulation

is 30.4 mm. Order a 3 x AFN 20-2 termination kit.



For use with copper wire screened cables.
No earthing device is necessary.



For use with copper tape screened cables. Order: -/CT.



For use with three-core cables.
Please contact our representative.



For use with other cable types.
Please contact our representative.



Can be supplied with all common types of cable lugs.



No heating or flame is required.

The AIP/AIS 20 termination is suitable for indoor installation on polymeric insulated medium voltage cables with extruded easy strip conductive screen or bonded extruded conductive screen. With this high quality silicone termination, a wide range of cross-sections is covered per voltage level.

Another benefit given by using the AIP/AIS termination is the quick and easy assembly. The termination is available with additional splitting accessories for three-core, copper wire screened or copper tape screened and armored cables.

(3)



#### **DESIGN**

Indoor termination comprising:

- 1. Longitudinally sealed mechanical cable lug
- Integrated silicone tube on AIS as sealing element when using mechanical cable lugs
- High flexibility silicone rubber housing, ensuring a perfect fit to the cable even during load changes
- 4. Integrated conductive rubber insert
- 5. Earthing cable lug not included in standard kit

## SPECIFICATIONS AND STANDARDS

Meets the requirements of CENELEC HD 629.1

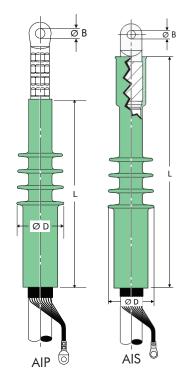
## CLASSIFICATION AND DIMENSIONS

Termination type	Voltage Um (kV)	conduct (m	cial for sizes m²)	insul	er core ation m)	L (mm)	Dia. D (mm)	Ordering part number
	(1.07)	min.	max.	min.	max.			
AIP	12	70	150	17.0	27.0	230	49	3 x AIP 20-1
All	24	25	120	17.0				
	12	150	300*	20.0	25.0	270	53	0 416 00 0
AIC	24	95	300*	20.9	35.0	2/0	33	3 x AIS 20-2
AIS	12	400	630	29.7	44.0	005		0 410 00 0
	24	400	030	29.7	46.0	335	65	3 x AIS 20-3

<sup>\*</sup> for cross sections 300 mm<sup>2</sup> additional sealing elements are required

6/10 (12) kV 6.35/11 (12) kV 8.7/15 (17.5) kV 12/20 (24) kV 12.7/22 (24) kV

#### Up to 24 kV

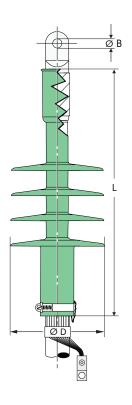






6/10 (12) kV 6.35/11 (12) kV 8.7/15 (17.5) kV 12/20 (24) kV 12.7/22 (24) kV

#### Up to 24 kV



#### **APPLICATION**

AFS terminations are suitable for outdoor installation on polymeric insulated medium voltage cables with extruded easy strip conductive screen or bonded extruded conductive screen. This high-quality silicone termination covers a large range of crosssections with just two sizes per voltage level.

Another benefit is the quick and easy assembly.

The conductor is connected with mechanical cable lugs. Available with additional splitting accessories for three-core cables.

#### **DESIGN**

Outdoor termination comprising:

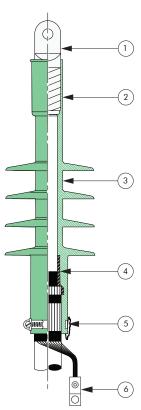
- 1. Longitudinally sealed mechanical cable lug
- 2. Integrated silicone tube as sealing element
- 3. High flexibility silicone rubber housing, ensuring a perfect fit to the cable even during load changes
- 4. Integrated conductive rubber insert
- 5. Earthing clamp
- 6. Earthing cable lug not included in standard kit

#### SPECIFICATIONS AND **STANDARDS**

Meets the requirements of CENELEC HD 629.1 and IEC 60502-4. Pollution class according to IEC/TS 60815-3.

#### **CLASSIFICATION AND DIMENSIONS**

Termination type	Voltage Um (kV)	Typcial conductor sizes (mm²)		Dia. over core insulation (mm)		L	Dia. D (mm)	Creepage distance (mm)	Pollution class	Ordering part number
		min.	max.	min.	max.			()		
AFS	12	70	95	17.0	27,0	295	~100	568	Е	3 x AFS 20-1
	24	25	95	17,0					D	
	12	150	300	20,9	35,0	325		598	Е	3 x AFS 20-2
	24	95	300	20,9					D	
	12	400	630	29,7	46,0	390	~120	687	Е	3 x AFS 20-3
	24	400	630						D	



This universal bushing boot is manufactured from non-tracking EPDM rubber and is designed to mate with all types of cold or heat-shrinkable terminations (without sheds). The bushing part fits interface diameters between 40 and 60 mm. The system is separable and allows easy removal for testing. This boot is suitable for all angles between 90° and 180°.

Dia. 100-

### 6/10 (12) kV 6.35/11 (12) kV 8.7/15 (17.5) kV

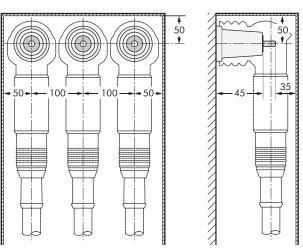
**Up to 17.5 kV** 

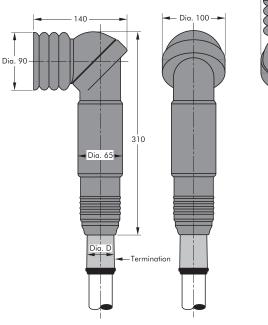
#### KIT CONTENTS

The 3 x 15TS-NSS kit comprises 3 universal bushing boots, silicone grease and installation instructions.

#### **CLEARANCES**

This is an unscreened boot and therefore not safe to touch when energised. When used in a metal enclosed cable box, these minimum clearances must be respected.





Bushing boot	Voltage Um	Conductor	sizes (mm²)	Diameter D over termina- tion (mm)		
type	(kV)	min	max	min	max	
15TS-NSS	17.5 max	35	630	20	50	

In mm.



# **NOTES**



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Catalogue also available on Website and Mobile Apps





Find out more about Nexans Power Accessories.

