



Heat shrink joints



### Application

Joints of type ZRZE and ZRZY are intended for joining plastic communication cables and pair control cables with copper conductors of 1,0mm core diameter (type TCEKEZE and TCEKEZY) armoured (shield) with a layer of wound aluminium wire.

### Marking

Identification marking consists of a letter symbol ZRZE, or ZRZY followed by a number (numbers) indicating nominal number of pairs of joined cable.

Marking example:

ZRZE-12 is a heat shrink joint for cable TCEKEZE with nominal number of 12 pairs

ZRZY 24/30 is a heat shrink joint for cable TCEKEZY with nominal number of 24 or 30 pairs

### Specifications

Heat shrink joint ZRZE, or ZRZY kit components:

- heat shrinkable tubes for creating inner coating above connected cores
- heat shrinkable tubes for creating outer coating above connected wound Al wire
- 2 add-in heat shrinkable tubes for increasing of diameter above inner cable sheath

Add-in tubes are only used while cable joining, with nominal number of 7 and 12 pairs (at cables with nominal pair number 16 and above add-in tubes are not applicable).

- reinforced electrical insulation fiber board (one-side Al laminated) for creating inner sheath
- reinforced electrical insulation fiber board for creating outer sheath
- extruded aluminium tubes (30mm in length) for joining Al screen (drain) wires

-aid components: aloxite emery tape and a cleaning tissue

Based on the customer's request we supply the following material to supplement the basic kit:

- textile tape and self-adhesive joint tape

Heat shrinkable insulation tubes for creating inner and outer cable coating and add-in tubes are covered by hot melt adhesive guaranteeing excellent sealed connection properties.

Detailed description of assembly is described in a detailed installation instruction manual for joints ZRZE and ZRZY. We supply branch joints as well. Individual requests shall be consulted with the manufacturer. Tubes are manufactured from cross-linked PE (properties displayed in the Tab.1).

The Tab. 2 provides dimensions of particular joints.

Heat shrink joints of type ZRZE and ZRZY are manufactured and supplied in compliance with VUKI corporate standards 22 007.



Tab. 1 Material properties (cross-linked PE)

		ZR	ZM
<b>Tensile strength</b>	[MPa]	min. 13	min. 15
<b>Elongation at break</b>	[%]	min. 350	min. 450
<b>Shrink temperature</b>	[°C]	150 - 200	150 - 200
<b>Operating temperature</b> - long-term - short-term	[°C]	100 150	100 150
<b>Volume resistivity</b>	[Ω.m]	10 <sup>13</sup>	10 <sup>14</sup>
<b>Dielectric strength</b>	[kV/mm]	12	15

Tab. 2 Dimensions of ZRZE and ZRZY joints

Nominal number of pairs	Add-in tubes		Inner sheath				Outer sheath			
			Reinforced board		Tube		Reinforced board		Tube	
	d <sub>1</sub> /d <sub>2</sub>	L	L <sub>a</sub>	b	d <sub>1</sub> /d <sub>2</sub>	L	L <sub>a</sub>	b	d <sub>1</sub> /d <sub>2</sub>	L
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
3, 4	-	-	220	140	30/8	400	490	220	47/19	670
7	25/8	165	220	140	47/19	400	570	220	47/19	750
12	25/8	125	220	220	47/19	400	490	320	65/27	670
16	-	-	220	220	47/19	400	490	320	65/27	670
24, 30	-	-	290	320	65/27	480	570	430	89/37	770
48, 61	-	-	330	320	65/27	520	610	430	89/37	840

L - Length of tubes after shrinking

L<sub>a</sub> - Length of reinforced electrical insulation fiber board

B - Width of reinforced electrical insulation fiber board

d<sub>1</sub> - Expanded as supplied Ø d<sub>1</sub> min

d<sub>2</sub> - Fully recovered Ø d<sub>2</sub> max