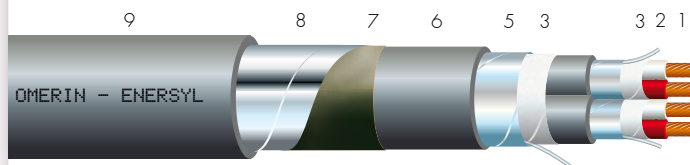


# ENERSYL® RH INTRUM

## Instrumentation cables



- 1 • Solid or stranded bare copper core.
- 2 • Insulation: PVC as per NF M 87-202 + optional filler(s).
- 3 • Optional separating tape.
- 4 • (optional) Individual electrical screen (EI): aluminium/PET tape + continuity wire + PVC sheath.
- 5 • General electrical screen: aluminium/PET tape + continuity wire.
- 6 • (optional) Internal sheath: Hydrocarbon resistant PVC as per NF M 87-202.
- 7 • (optional) Bedding: waxed crepe paper.
- 8 • (optional) Armour: double steel tape (FA).
- 9 • Outer sheath: Hydrocarbon resistant PVC as per NF M 87-202.

### Reference

- (example) ENERSYL® RH EI FA INSTRUM 2PO.9 mm<sup>2</sup>  
RH: Hydrocarbon resistant  
EI, EG: type of electrical screen  
FA, SF: type of armour (SF = no armour)  
INSTRUM: instrumentation cable  
2 : number of pairs, triples or quads  
P, T, Q: pairs, triples or quads  
0.9 mm<sup>2</sup>: cross-section in mm<sup>2</sup>

### Approvals - standards

- IEC 60332-1.
- Inspired by standard NF M 87-202 for oil industry.

### Markings

- OMERIN – ENERSYL < RH xx xx INSTRUM >  
< cross-section > – NF M 87-202 – 300/500V –  
< batch > – < year >  
(if described in standard)
- OMERIN – ENERSYL < RH xx xx INSTRUM >  
< cross-section > – 300/500V – < batch > – < year >  
(if not described in standard)

### Standard products

- Sheath: grey.
- Colour identification of conductors:  
> Pair: red and natural numbered.  
> Triple: blue, red and natural numbered.  
> Quad: blue, red, yellow and natural numbered.

### Technical characteristics

#### Thermal

- Continuous operating temperature: -30 °C to +80 °C.

#### Electrical

- Rated voltage: 300/500 V.
- Test voltage: 1500 V.

#### Fire

- Flame retardant – cable alone:  
IEC 60332-1-2 / NF EN 60332-1-2 / NF C 32-070 test C2.

#### Resistance of outer sheath to chemical attacks as per OMERIN test report NT140404-01:

- Good resistance to acid.
- Good resistance to base.
- Excellent resistance to aliphatic hydrocarbons as per NF M 87-202.
- Excellent resistance to mineral oil in IRM 902.
- Resistance to water: type AD7 as per IEC 60529 without immersion of ends.

### Options

- Other colours: contact us.

For this product, please contact:

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The information provided in this technical data sheet is indicative and may be modified without prior notice, laying, wiring and electrical conditions and the environment of the cable can not be fully considered in our studies. In no way the company OMERIN shall be held responsible for any incidents in the case of inappropriate uses, particularly in the case of wiring conditions that do not respect the good practice and the standards in force. For an optimum use of the cables produced by our company, we recommend testing in real conditions. Our sales department is available for a possible provision of samples, and/or for the conditions of a complete study in our laboratories.  
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Number of pairs, triples or quads	Nominal cross-section (mm <sup>2</sup> )	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal diameter of conductors (mm)	NON-SHIELDED CABLES Nominal outside diameter* (mm)						ARMOURED CABLES Nominal outside diameter* (mm)					
					Pairs		Triples		Quads		Pairs		Triples		Quads	
					EG	EI	EG	EI	EG	EI	EG	EI	EG	EI	EG	EI
1	0.5	1 / 0.80	37.5	1.7	5.7		6.0		6.4		9.6		9.9		10.4	
2**	0.5	1 / 0.80	37.5	1.7	6.4	12.5	8.7	13.0	10.6	14.1	10.4	16.9	12.7	17.4	14.8	18.6
3	0.5	1 / 0.80	37.5	1.7	<b>8.6</b>	<b>13.6</b>	9.2	14.1	11.3	15.1	<b>12.6</b>	<b>17.9</b>	13.4	18.6	15.7	19.6
4	0.5	1 / 0.80	37.5	1.7	9.0	14.6	10.1	15.7	12.4	16.8	13.0	19.1	14.3	20.4	16.8	21.5
5	0.5	1 / 0.80	37.5	1.7	9.8	16.1	11.0	17.2	13.7	18.5	14.0	20.8	15.2	21.9	18.2	23.2
6	0.5	1 / 0.80	37.5	1.7	10.8	17.9	12.0	18.9	14.9	20.4	15.0	22.5	16.4	23.6	19.4	25.3
7	0.5	1 / 0.80	37.5	1.7	<b>11.1</b>	<b>18.0</b>	<b>12.8</b>	<b>19.5</b>	14.9	20.4	<b>15.4</b>	<b>22.5</b>	<b>17.1</b>	<b>24.2</b>	19.4	25.3
8	0.5	1 / 0.80	37.5	1.7	12.0	20.2	13.6	21.5			16.4	25.1	18.1	26.4		
9	0.5	1 / 0.80	37.5	1.7	13.0	22.2	14.7	23.4			17.4	27.1	19.2	28.3		
12	0.5	1 / 0.80	37.5	1.7	<b>14.0</b>	<b>24.4</b>	<b>16.0</b>	<b>25.5</b>			<b>18.5</b>	<b>29.3</b>	<b>20.5</b>	<b>30.4</b>		
19	0.5	1 / 0.80	37.5	1.7	<b>16.8</b>	<b>28.5</b>					<b>21.3</b>	<b>33.6</b>				
24	0.5	1 / 0.80	37.5	1.7	19.6	33.6					24.0	38.9				
27	0.5	1 / 0.80	37.5	1.7	<b>19.3</b>	<b>34.5</b>					<b>24.0</b>	<b>39.8</b>				
37	0.5	1 / 0.80	37.5	1.7	22.6	38.9					27.5	44.4				
1	0.9	7 / 0.40	21.4	2.3	<b>7.0</b>		<b>7.4</b>		<b>7.9</b>		<b>10.9</b>		<b>11.3</b>		<b>11.8</b>	
2**	0.9	7 / 0.40	21.4	2.3	7.9	15.1	11.0	16.0	13.7	17.2	12.0	19.6	15.2	20.7	18.2	21.9
3	0.9	7 / 0.40	21.4	2.3	10.5	16.3	11.7	17.1	14.6	18.5	14.7	21.0	16.1	21.8	19.1	23.2
4	0.9	7 / 0.40	21.4	2.3	11.5	18.0	12.9	18.9	16.3	20.6	15.7	22.7	17.3	23.6	21.0	25.5
5	0.9	7 / 0.40	21.4	2.3	12.6	20.0	14.3	21.0	17.9	22.6	17.0	24.7	18.8	25.9	22.6	27.5
6	0.9	7 / 0.40	21.4	2.3	13.9	22.0	15.8	23.0	19.8	25.0	18.4	26.8	20.5	27.9	24.5	30.1
7	0.9	7 / 0.40	21.4	2.3	13.9	22.0	15.8	23.0	19.8	25.0	18.4	26.8	20.5	27.9	24.5	30.1
8	0.9	7 / 0.40	21.4	2.3	15.8	24.7	17.8	26.2			20.5	29.8	22.5	31.3		
9	0.9	7 / 0.40	21.4	2.3	17.1	27.1	19.3	28.5			21.8	32.2	24.0	33.6		
12	0.9	7 / 0.40	21.4	2.3	18.6	29.6	21.1	31.1			23.3	34.9	26.0	36.4		
19	0.9	7 / 0.40	21.4	2.3	22.0	35.1	24.7	36.9			26.9	40.6	29.8	42.4		
24	0.9	7 / 0.40	21.4	2.3	25.9	41.6					31.0					
37	0.9	7 / 0.40	21.4	2.3	29.9						32.2					
1	1.5	7 / 0.52	12.1	2.8	7.9		8.3		9.1		11.9		12.3		13.1	
2**	1.5	7 / 0.52	12.1	2.8	9.1	17.3	12.9	18.5	16.4	20.4	13.1	22.0	17.3	23.2	21.1	25.3
3	1.5	7 / 0.52	12.1	2.8	12.3	18.6	14.0	20.0	17.4	21.7	16.7	23.3	18.5	24.7	22.1	26.6
4	1.5	7 / 0.52	12.1	2.8	13.7	20.7	15.5	22.0	19.3	24.0	18.2	25.8	20.2	26.9	24.0	28.9
5	1.5	7 / 0.52	12.1	2.8	15.0	22.7	17.0	24.2	21.4	26.6	19.5	27.6	21.7	29.3	26.3	31.7
6	1.5	7 / 0.52	12.1	2.8	16.6	25.1	18.7	26.7	23.4	29.4	21.3	30.2	23.4	31.8	28.3	34.7
7	1.5	7 / 0.52	12.1	2.8	16.6	25.1	18.7	26.7	23.4	29.4	21.3	30.2	23.4	31.8	28.3	34.7
8	1.5	7 / 0.52	12.1	2.8	18.7	28.4	21.3	30.5			23.4	33.5	26.2	35.8		
9	1.5	7 / 0.52	12.1	2.8	20.5	31.3	23.1	33.2			25.4	36.4	28.0	38.5		
12	1.5	7 / 0.52	12.1	2.8	22.2	33.8	25.2	36.2			27.1	39.1	30.3	41.7		
19	1.5	7 / 0.52	12.1	2.8	26.3	40.3	29.8	43.0			31.4	46.0	35.1			
24	1.5	7 / 0.52	12.1	2.8	31.1						36.4					
37	1.5	7 / 0.52	12.1	2.8	35.8						41.3					

\* The rated outer diameter of cables may vary by +/- 20 % depending on the options selected.

\*\* The two pairs with general electrical screen (EG) are twisted like a quad cable.

■ Strandings described in standard NF M 87-202 with a blue sheath.

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For an optimum use of the cables produced by our company, we recommend testing in real conditions. Our sales department is available for a possible provision of samples, and/or for the conditions of a complete study in our laboratories.

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