

**INSTRUMENTATION CABLES, EN 50288-7**

**RE-2Y(St)YQY-fl 70°C / 300 V**  
**CU/PE/OSCR/PVC/SWB/PVC**



SINGLE & MULTI-TRIPLE, PE INSULATED, COLLECTIVE SCREENED, STEEL WIRE BRAIDED, PVC SHEATHED



**APPLICATION:** These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petrochemistry industry plants, power plants, natural gas and petroleum plants, etc... . Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. The armour above the sheath, steel wire braid serves as protection against mechanical traverse loads and act as a magnetic screen against interference. The galvanised steel wires are free of corrosion and oxidation. These cables are recommended for direct burial. They are for indoor and outdoor installation, in dry and wet locations; on racks, trays, in conduits.

**CABLE DESIGN**

Conductor : Plain copper wire, stranded  
 IEC 60228 Sınıf 2, TS/DIN EN 60228 Sınıf 2

Insulation : PE compound, EN 50290-2-23

\*Core identification : Black / White / Red cores are numbered  
 (1-1-1, 2-2-2,...)

Pair : Two conductors twisted to a pair

Lay-up : Pairs laid up in layers of optimum pitch

Separator : Polyester tape

Screen : AL-PES tape over stranded tinned copper drain  
 wire 0,50 mm<sup>2</sup>

Inner sheath : PVC compound, EN 50290-2-22

Armour : Braid of galvanized steel wires, aprx. %85 cov.

Outer sheath : PVC comp., flame retardant; EN 50290-2-22

Sheath colour : RAL 9005, Black or RAL 5015, Blue

\*Upon request ; Colour coded according to IEC 60189-2

**Note:** Other core configurations manufactured upon request.

**TECHNICAL DATA**

Standard : TS/DIN EN 50288-7

Insulation thickness (nominal)	mm <sup>2</sup> 0,50	0,75	1,0	1,3	1,5	mm <sup>2</sup>
	mm 0,40	0,40	0,40	0,45	0,45	mm

Conductor resistance (20°C)	mm <sup>2</sup> 0,50	0,75	1,0	1,3	1,5	mm <sup>2</sup>
	Ω/km 36,7	25,0	18,5	14,2	12,3	Ω/km

Insulation resistance : Min. 5000 MΩ.km

Mutual Capacitance (1 kHz)	: <u>≤ 4 pairs</u>		<u>all other pairs</u>	
	0,50 mm <sup>2</sup>	: max. 115 pF/m	max. 90 pF/m	
	0,75 mm <sup>2</sup>	: max. 115 pF/m	max. 90 pF/m	
	1,0 mm <sup>2</sup>	: max. 115 pF/m	max. 90 pF/m	
	1,3 mm <sup>2</sup>	: max. 120 pF/m	max. 105 pF/m	
1,5 mm <sup>2</sup>	: max. 120 pF/m	max. 105 pF/m		

Capacitance unbalance : (1 kHz) : max. 500 pF/500 m

L / R (ratio) (max.)	mm <sup>2</sup> 0,50	0,75	1,0	1,3	1,5	mm <sup>2</sup>
	μH/Ω 25	25	25	40	40	μH/Ω

Operating voltage : 300 V

U<sub>rms</sub>

Test voltage : U<sub>rms</sub> core-core: 1500 V  
 U<sub>rms</sub> core-screen: 1500 V

Temperature range : operation : - 30 °C ~ + 70 °C  
 installation : - 5 °C ~ + 50 °C

Min. bending radius : 10 x D

Flame retardance test : IEC 60332-1 & EN 60332-1

**Cross Sections**

**RE-2Y(St)YQY-fl**

Part-number	No. of triples	Approx. Bedding Diameter ( mm )	Approx. Outer Diameter ( mm )	Copper Weight (Kg/km )	Approx. Cable Weight ( Kg/km )
1664 41 001	1x3x0,50	6,0	9,8	19	130
1664 41 002	2x3x0,50	9,0	13,0	34	200
1664 41 004	4x3x0,50	10,3	14,3	62	260
1664 41 005	5x3x0,50	11,0	15,2	77	300
1664 41 006	6x3x0,50	11,8	16,0	91	330
1664 41 008	8x3x0,50	13,3	17,5	120	395
1664 41 010	10x3x0,50	14,5	18,9	149	465
1664 41 012	12x3x0,50	15,7	20,1	178	520
1664 41 016	16x3x0,50	17,8	22,4	235	645
1664 41 020	20x3x0,50	19,6	24,2	293	755
1664 41 024	24x3x0,50	21,2	26,4	350	910
1664 42 001	1x3x0,75	6,4	10,2	26	145
1664 42 002	2x3x0,75	9,8	13,8	48	230
1664 42 004	4x3x0,75	11,2	15,4	91	315
1664 42 005	5x3x0,75	12,0	16,2	113	355
1664 42 006	6x3x0,75	12,9	17,1	134	400
1664 42 008	8x3x0,75	14,5	18,9	177	490
1664 42 010	10x3x0,75	16,0	20,4	221	565
1664 42 012	12x3x0,75	17,3	21,9	264	655
1664 42 016	16x3x0,75	19,6	24,2	350	800
1664 42 020	20x3x0,75	21,6	26,8	437	1000
1664 42 024	24x3x0,75	23,8	29,0	523	1175
1664 43 001	1x3x1	6,9	10,7	34	160
1664 43 002	2x3x1	10,5	14,5	62	260
1664 43 004	4x3x1	12,1	16,3	120	365
1664 43 005	5x3x1	13,0	17,2	149	415
1664 43 006	6x3x1	14,0	18,2	178	465
1664 43 008	8x3x1	15,8	20,2	235	575
1664 43 010	10x3x1	17,4	22,0	293	680
1664 43 012	12x3x1	18,8	23,4	350	775
1664 43 016	16x3x1	21,4	26,6	466	1015
1664 43 020	20x3x1	24,0	29,2	581	1230
1664 43 024	24x3x1	26,1	31,5	696	1425
1664 44 001	1x3x1,3	7,5	11,5	42	185
1664 44 002	2x3x1,3	11,7	15,9	80	305
1664 44 004	4x3x1,3	13,5	17,7	155	430
1664 44 005	5x3x1,3	14,5	18,9	192	500
1664 44 006	6x3x1,3	15,7	20,1	230	565
1664 44 008	8x3x1,3	17,7	22,3	304	700
1664 44 010	10x3x1,3	19,6	24,2	379	825
1664 44 012	12x3x1,3	21,2	26,4	454	1000
1664 44 016	16x3x1,3	24,5	29,9	604	1280
1664 44 020	20x3x1,3	27,1	32,7	754	1535
1664 44 024	24x3x1,3	29,4	35,0	903	1765
1664 45 001	1x3x1,5	7,7	11,7	48	195
1664 45 002	2x3x1,5	12,1	16,3	91	325
1664 45 004	4x3x1,5	14,0	18,2	177	460
1664 45 005	5x3x1,5	15,0	19,4	220	540
1664 45 006	6x3x1,5	16,2	20,6	264	610
1664 45 008	8x3x1,5	18,4	23,0	350	760
1664 45 010	10x3x1,5	20,3	24,9	436	900
1664 45 012	12x3x1,5	22,0	27,2	523	1085
1664 45 016	16x3x1,5	25,4	30,8	696	1395
1664 45 020	20x3x1,5	28,1	33,7	868	1675
1664 45 024	24x3x1,5	30,5	36,1	1041	1935