

# HARTING Industrial Cable 8-wire Cat. 7 PUR



## Industrial Cable 8-wire, Cat. 7, PUR



### Advantages

- Suitable for generic cabling Category 7 / Class F according ISO/IEC 11801 respectively EN 50173-1 especially for fixed installation
- Qualified for transmission up to 10GigaBit Ethernet 10GBase-T acc. IEEE802.3an
- Based on solid copper wires AWG23/1 delivers full 100m channel performance up to 600MHz
- Applicable for industrial premises
- High EMC capability based on the PIMF construction
- Flame retardant, halogen free and RoHS compliant
- Oil resistant

### General

This high-speed data cable was designed for fix installation in industrial premises and it's especially suitable for connections between distribution cabinets and industrial outlets.

The four pair / eight wire PIMF-construction allows the transmission of IT digital and analogue signals like Ethernet 10/100Mbit/s, 1/10GigaBit/s, video and voice services as well as IP-based data services.

It delivers all characteristics to construct a Generic cabling system according ISO/IEC 24702:2006 respectively EN 50173-3:2007.

Maximum channel length specified up to 100m (transmission channel class EA)

Transmission performance meets Cat.7 specification up to 600MHz for 10GigaBit Ethernet transmission according IEEE802.3an.

The cable is fully screened (each pair in metal foil plus an overall wire braid) and guaranties a very protective signal transmission and high EMC performance.

PUR elastomer as jacket material provide high resistance against oil and chemicals. The cable is flame retardant, halogen free and RoHS compliant.

### Identification

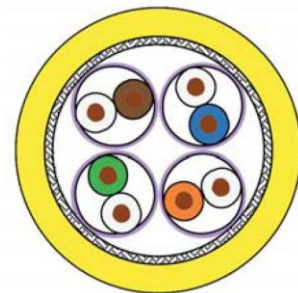
### Part number

### Drawing

Industrial Cable  
8-wire, Cat. 7, PUR

100 m	ring
500 m	reel
1000 m	reel

09 45 600 0651
09 45 600 0650
09 45 600 0660



- Wire: bare copper, AWG23/1
- Insulation: PE, Ø 1.4 mm
- Color code: whbu/bu, whor/or, whgn/gn, whbr/br
- Pairs: Aluminium-bonded polyester tape
- Overall screen: tinned copper wire braid
- Outer sheath: PUR elastomer, flame retardant, halogen free

Color of outer sheath: yellow, RAL 1021  
Overall diameter: approx. 8.3 mm

All data given are in line with the actual state of art and therefore not binding.  
HARTING reserves the right to modify designs without giving the relevant reasons.

## Technical Characteristics

### Performance

Category 7 according to IIEC 61156-5

### Mechanical Characteristics

Minimal bending radius Repeated bending: 8 x diameter  
Single bending: 4 x diameter  
Tensile strength max. 110 N  
Crush 1000 N/100mm

### Electrical Characteristics at 20 °C

Transfer impedance 10 MHz 5 mOhm/m  
Coupling attenuation up to 1000 MHz 85 dB  
Conductor resistance max. 75 Ohm/km  
Insulation resistance min. 5 GOhm\*km  
Mutual capacitance 42 pF/m  
Signal velocity 0.80 c  
Propagation delay 420 ns/100m  
Skew (Delay Skew) at 100 MHz 5 ns/100m  
Characteristic impedance at 100 MHz 100 Ohm +/- 5 Ohm  
Test voltage 1000 V  
Operating voltage max. 125 V

### Chemical Characteristics

Flame retardant IEC 60332-1-2  
Halogen free IEC 60754-2  
Smoke density IEC 61034  
calorific value 0.92 MJ/m  
Free of hazardous substances RoHS 2002/95/EG  
Oil resistance EN 60811-2-1  
Chemical resistance  
Ozone resistance EN 60811  
Microbe resistance DIN VDE 0282  
Hydrolysis resistance DIN 53504

### Thermal Characteristics

Permissible temperature range  
fixed operation - 40 °C to + 70 °C  
flexible operation - 10 °C to + 50 °C

### Printing

HARTING INDUSTRIAL INSTALLATION CABLE S/FTP CAT 7 PUR  
4x2xAWG23/1 \$Charge Number\$ \$meter marking\$

### Weight about

70 kg/km

## Technical Characteristics

Frequency MHz	Attenuation dB/100m		NEXT dB		PS NEXT dB		ACR dB@100m		PS ACR dB@100m		EL FEXT dB@100m		PS EL FEXT dB@100m		Return Loss dB	
	typ.	Cat 7 max*	typ.	Cat 7 min*	typ.	Cat 7 min *	typ.	Cat 7 min *	typ.	Cat 7 min *	typ.	Cat 7 min *	typ.	Cat 7 min *	typ.	Cat 7 min *
<b>1</b>	1.9	2	105	80	102	77	104	78	101	75	98	80	95	77	26.6	23
<b>10</b>	4.8	5.7	105	80	102	77	101	74	98	71	103	74	100	71	35.3	25
<b>100</b>	16.3	18.5	105	72	102	69	89	54	86	51	89	54	86	51	39.6	20.1
<b>200</b>	24.3	26.8	105	68	102	65	81	41	78	38	82	48	79	45	36	18
<b>250</b>	27.5	30.2	105	66	102	63	78	36	75	33	79	46	76	43	34	17.3
<b>500</b>	37.9	44.1	100	62	97	59	62	18	59	15	67	40	64	37	29	17.3
<b>600</b>	42.4	48.9	95	61	92	58	53	12	50	9	60	38	57	35	25.4	17.3
<b>700</b>	47.2	-	95	-	92	-	48	-	45	-	57	-	54	-	24.6	
<b>800</b>	50.3	-	93	-	90	-	43	-	40	-	53	-	50	-	23.5	-
<b>900</b>	54.6	-	90	-	87	-	35	-	32	-	49	-	46	-	26.2	-
<b>1000</b>	58	-	88	-	85	-	30	-	27	-	44	-	41	-	21.5	

\* IEC 61156-5

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