# imall

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#### Ha-VIS Industrial Cable

8-wire, Cat. 6, PVC

#### Advantages

- Suitable for generic cabling Category 6<sub>A</sub> / Class E<sub>A</sub> according ISO/IEC 11 801 respectively EN 50 173-1 especially for flexible installation (patch cords)
- Qualified for transmission up to 10 Gigabit Ethernet 10GBase-T acc. IEEE 802.3an
- Based on stranded copper wires AWG 26/7 delivers patch cord performance up to 500 MHz
- · Applicable for industrial premises
- High EMC capability based on the PIMF construction
- Flame retardant, lead free and RoHS compliant
- UL certified AWM Style 20276

Application

This high-speed data cable was designed for flexible installation in industrial premises and it's especially suitable for termination of HARTING RJ45 data plugs in IP 20 as well as in IP 67 / IP 65. The four pair / eight wire PIMF-construction allows the transmissi-

on of IT digital and analogue signals like Ethernet 10/100 Mbit/s, 10 Gigabit/s, video and voice services as well as IP-based data services.

It delivers all characteristics to complete a generic cabling system according ISO/IEC 24 702 respectively EN 50 173-3. Maximum patch cord length specified up to 20 m (part of transmission channel class  $E_{a}$ )

Transmission performance meets Cat.  $6_A$  specification up to 500 MHz for 10 Gigabit Ethernet transmission according IEEE 802.3an.

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

PVC is used as jacket material. The cable is flame retardant, lead free and RoHS compliant.

Identification	Part number	Drawing						
Industrial Cable								
8-wire, Cat. 6 <sub>A</sub> , PVC								
Sheath material: Polyvinylchlo- ride (PVC), flame retardant, lead free Colour: yellow, RAL 1021								
Cable sheath diameter: 6.3 mm 6.9 mm								
Transmission performancen:		Conductor						
Cat. $6_A$ / transmission class $E_A$ up		wire: stranded bare copper 4x2xAWG 26/7						
to 500 MHz according		Insulation: PE, Ø 1.05 mm						
ISO/IEC 11 801 and EN 50 173-1		colours: wh/bu, wh/or, wh/gn, wh/br						
Transmission rate:		Pairs						
10/100 Mbit/s / 1/10 Gbit/s		Aluminate foil overlapped PIMF						
		Screening						
Cable weight: 47 kg/km		tinned copper wire braid,						
		braid coverage about 70 %						
Order information:		Jacket						
20 m ring	09 45 600 0532	Polyvinylchloride (PVC), flame retardant, lead free						
50 m ring	09 45 600 0532							
100 m ring	09 45 600 0502							
500 m drum	09 45 600 0522							
All data given is in line with the actual state of art and therefore not binding.								

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### Technical characteristics

Transmission performance	Category 6 <sub>A</sub> according to IEC 61 156-6			
Mechanical features				
minimum bending radius	Repeated bending: 8 x cable diameter Singular bending: 4 x cable diameter			
Tensile strength	max. 70 N			
Electrical characteristics at 20 °C				
Conductor resistance	max. 290 Ohm/km			
Insulation resistance	min. 500 MOhm x km			
Propagation delay	5.3 ns/m			
Characterisic impedance at 100 MHz	100 Ohm +/- 5 Ohm			
Test voltage	700 V			
Operating voltage	max. 100 V			
Chemical characteristics				
Flame retardant	IEC 60 332-1-2			
Free of hazardous substances	RoHS 2002/95/EG			
UV resistant				
Thermic features				
Permissible temperature range				
fixed operation	- 20 °C + 80 °C			
flexible operation	- 20 °C + 80 °C			
Printing	HARTING INDUSTRIAL CABLE CAT 6 <sub>A</sub> S/FTP 4x2xAWG26/7 E333435 <b>N</b> AWM STYLE 20276 80°C 30V 094560005000201 "meter marking" "Charge Number" "HARTING LOGO"			
Weight	47 kg/km			

## Technical characteristics

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Frequency	Attenuation	NEXT	PS NEXT	EL FEXT	PS EL FEXT	Return Loss
MHz	dB/100m	dB	dB	dB	dB	dB
1	3.1	75.63	72.3	67.8	64.8	20
4	5.7	66.3	63.3	55.8	52.8	23
8	8.0	61.8	58.8	49.7	46.7	24.5
10	8.9	60.3	57.3	47.8	44.8	25
16	11.2	57.2	54.2	43.7	40.7	25
20	12.6	55.8	52.8	41.8	38.8	25
25	14.1	54.3	51.3	39.8	36.8	24.2
31.25	15.8	52.8	49.9	37.9	34.9	23.3
62.5	22.5	48.4	45.4	31.9	28.9	20.7
100	28.7	45.3	42.3	27.8	24.8	19
200	41.4	40.8	37.8	21.8	18.8	16.4
250	46.6	39.3	36.3	19.8	16.8	15.6
300	51.4	38.1	35.1	18.3	15.3	15.6
400	60.1	36.3	33.3	15.8	12.8	15.6
500	67.9	34.8	31.8	13.8	10.8	15.6

according to IEC 61 156-6

HARTING

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