

M12 male 0° D-cod. / RJ45 male 0° shielded

PUR 1x4xAWG22 shielded gn UL/CSA+drag ch. 22m

Art.No.: 7000-44711-6592200

Weight: 1,997 kg

Country of origin: DE

Model designation: MSRAL0-DA-T659_22.0-ZS

Ethernet CAT5

Male straight – male straight

M12 – RJ45, 4-pole

D-coded

Shielded

with cable sleeves

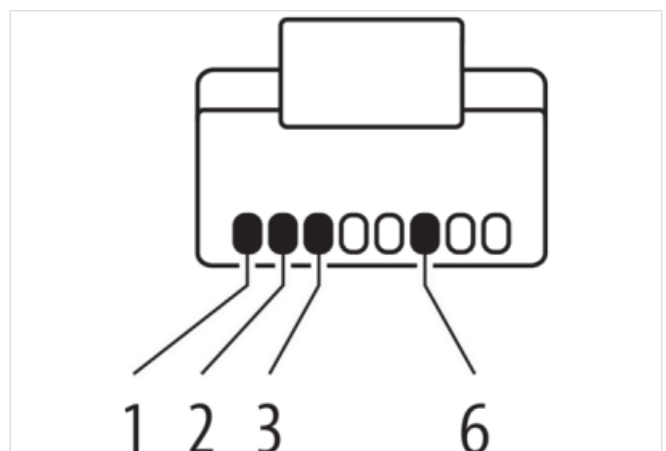
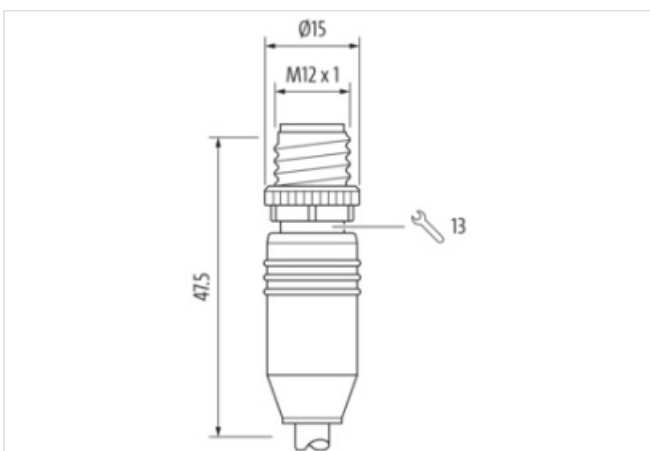
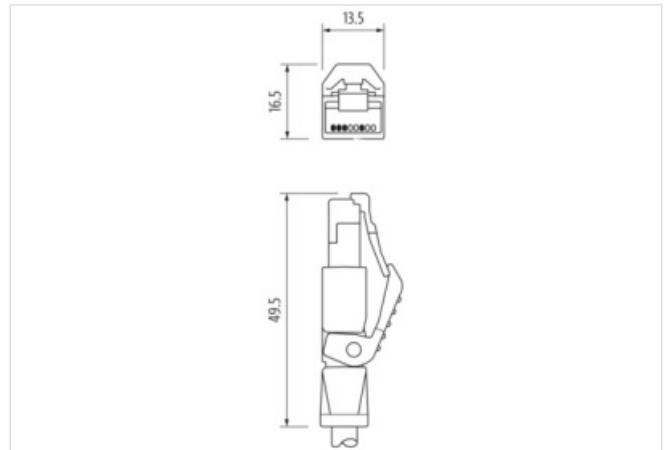
maximum length at channel transmission corresponds to 100 m

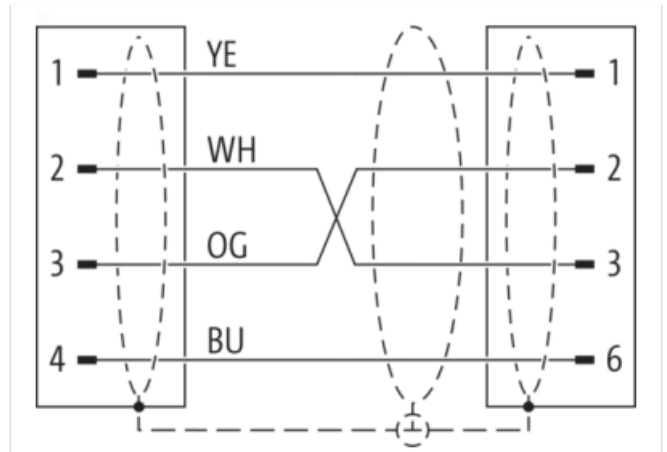
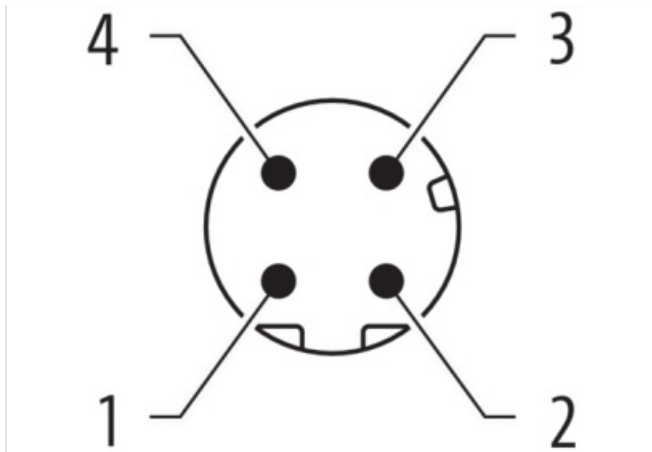
Cable is approved for 600 V

The resistance to aggressive media should be individually tested for your application. Further details on request.

Plastic housings with good resistance against chemicals and oils.

Further cable lengths on request.

[Link to Product](#)**Illustration**



Product may differ from Image



Commercial data

Material short text	MSRAL0-DA-T659_22.0-ZS
URL Webshop	https://shop.murrelektronik.com/7000-44711-6592200
GTIN	4048879904568
ECLASS-6.0	27061801
ECLASS-6.1	27060307
ECLASS-7.0	27060307
ECLASS-7.1	27060307
ECLASS-8.0	27060307
ECLASS-8.1	27060307
ECLASS-9.0	27060307
ECLASS-9.1	27060307
ECLASS-10.0.1	27060307
ECLASS-10.1	27060307
ECLASS-11.0	27060307
ECLASS-11.1	27060307
ECLASS-12.0	27060307
ECLASS-13.0	27060307

ECLASS-14.0	27060307
ETIM-5.0	EC002599
ETIM-6.0	EC002599
ETIM-7.0	EC002599
ETIM-8.0	EC002599
customs tariff number	85444290
EAN	4048879904568
Packaging unit	1

Cable length	22,00 m
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Side 1

Family construction form	M12
No. of poles	4
Coding	D
Gender	male
Mounting method	inserted, screwed
Threaded hole	M12 x 1
Tightening torque	0,6 Nm
Width across flats	SW13
Cable outlet	straight
Material	PUR
Material contact	Copper alloy
Coating contact	gold plated
Degree of protection (EN IEC 60529)	IP67, IP66K, IP65

Side 2

Family construction form	RJ45
No. of poles	4
Gender	male
Mounting method	pluggable
Cable outlet	straight
Material	PUR
Degree of protection (EN IEC 60529)	IP20

Electrical data | Supply

Operating voltage DC max.	60 V
Current operating per contact max.	1,5 A

Industrial Communication

Data transmission rate max.	100 Mbit/s
Transfer parameters	CAT5, Class D (ISO/IEC 11801:2002), (EN 50173-1)

Industrial communication | Ethernet functionality

duplex	Full duplex
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Device protection | Electrical

Additional condition protection degree	inserted, screwed
Pollution Degree	3
Rated surge voltage	1 kV
Material group (IEC 60664-1)	I

Mechanical data

Contour for corrugated hose	without
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Mechanical data | Material data

Material screw connection	Zinc die-casting
Coating of fitting	Nickel
Locking material	PA

Environmental characteristics Climatic	
Operating temperature min.	-30 °C
Operating temperature max.	85 °C
Additional condition temperature range	depending on cable quality
Important installation notes	
Note on bending radius	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.
Note on strain relief	Protect the connectors by suitable measures from mechanical loads, e.g. by the usage of cable ties.
Conformity	
Product standard	EN IEC 61076-2-101 (M12), EN IEC 60603-7 (RJ45)
Installation Cable	
Cable identification	659
Function cable	Data
Stranding	1 × 4 wires around core filler star-shaped twisted
Cable shielding (type)	copper braid, tinned
Cable shielding (coverage)	85 %
Banding	Fleece, Foil
Filler	Yes
Wire arrangement	white, yellow, blue, orange
Cable weight	81 g/m
Material wire insulation	PE
Amount wires	4
Outer diameter insulation	1,4 mm
Outer diameter tolerance core insulation	± 0,05 mm
Shore hardness wire insulation	65 ± 3 Shore D
Ingredient freeness wire insulation	lead-free, CFC-free, halogen-free
Amount strands (wire)	7
Diameter of single wires	30 AWG
Conductor crosssection (wire)	22 AWG
Material conductor wire	Stranded copper wire, bare
Outer-diameter (jacket)	7,4 mm
Tolerance outer diameter (sheath)	± 5 %
Material jacket	PUR
Shore hardness jacket	90 ± 3 Shore A
Freedom from ingredients (jacket)	lead-free, CFC-free, halogen-free
Material inner jacket	TPE-V
Color (inner jacket)	white
Conductor resistance (wire)	55 Ω/km @ 20 °C
Electrical capacity line constant (wire - wire)	50.000 pF/km
Isolation resistance	5 GΩ × km
Nominal voltage max.	600 V
Withstand voltage (wire - wire)	2 kV @ 60 s
Withstand voltage (wire - jacket)	2 kV @ 60 s
Withstand voltage (wire - shield)	2 kV @ 60 s
Current load capacity (standard)	to DIN VDE 0298-4
Current load capacity max. (wire)	4,8 A
Characteristic impedance	100 Ω ± 15 % @ 15 MHz
Operating temperature min. (static)	-40 °C
Operating temperature max. (static)	80 °C
Operating temperature min. (dynamic)	-30 °C
Operating temperature max. (dynamic)	70 °C
Operating temperature min. (drag chain)	-30 °C
Operating temperature max. (drag chain)	70 °C

Flame resistance	IEC 60332-1-2, UL 1581 § 1060, UL 1581 § 1080, UL 1581 § 1090, UL 1581 § 1100
Oil resistance	IEC 60811-404, IRM 902
Ozone resistance	IEC 60811-403
UV resistance	UL 1581 § 1200 @ 300 h
Other resistances	good resistance to saturated hydrocarbons (diesel, kerosene, petrol ether), resistant to microbes, MUD-resistant (NEK 606)
Bending radius (fixed)	5 × Outer diameter
Bending radius (dynamic)	12 × Outer diameter
No. of bending cycles (C-track)	2 Mio. @ 25 °C
Traversing distance (C-track)	5 m @ 25 °C
Travel speed (C-track)	3.3 m/s @ 25 °C
Acceleration (C-track)	2 m/s ² @ 25 °C