

TECHNICAL SPECIFICATION & PRODUCT DESCRIPTION

Multicolor flat ribbon cable TLWY 12 x 0,22 mm²

The offered cable has **12** separately insulated wires with a cross-section of **0,22 mm²**. Thanks to its outstanding performance, it is an excellent choice for any professional who relies on perfect quality, reliability and convenience of use. This flexible, well-laying, resistant to surrounding conditions and user-friendly product is ideal for even the most advanced production projects and any assembly, service or hobby work.



Cable technical parameters:

• Number of single wires in ribbon cable	12
• Conductor cross-sectional area of single wire	0,22 mm² CSA
• Single wire conductor size in AWG inch system	AWG 24
• Manufacturer product number BQ MPN	TLWY12/0.20
• Conductive conductor cores material	Copper Cu
• Structure of each single wire conductor	7 x Ø 0,20 mm
• Construction of the conductive conductors	Regularly twisted wire strands
• Single conductor resistance at T = 20°C	max.89,3 ÷ min.80,4 mΩ/m
• Copper index – conductors net weight	23,8 kg/km
• Insulation material of conductors	Modified polyvinite PVC
• Outer diameter of each single wire	Ø 1,4 mm ± 0,05
• RAL code number and color order of single wires insulation in ribbon cable	01. RAL 3000 Red 02. RAL 5015 Blue 03. RAL 9005 Black 04. RAL 9016 White 05. RAL 6018 Green 06. RAL 8003 Brown 07. RAL 1021 Yellow 08. RAL 3000 Red 09. RAL 5015 Blue 10. RAL 9005 Black 11. RAL 9016 White 12. RAL 6018 Green

• Tool-less separation into wires and strips	YES
• Resistance to vibration, oscillation, overload	YES
• Resistance to lubricants and chemical agents	YES
• Resistance to flame propagation	YES / Self - extinguishing type Eca
• Method of electrical assembly and connecting	Crimping, Soldering, Twisting
• Permissible current load of each wire in ribbon	2,5 A (max. 4,5 A)
• Long-term current capacity of each single wire	2,2 A
• Maximum operating voltage of each single wire	300 V
• Nominal cable working voltage U_0 / U	150 V / 300 V
• Breakdown voltage of the insulation	> 5 kV
• Operating temperature range of the cable	-40°C ÷ +105°C (max. +120°C)
• Length of cable section in package	50 meters
• Approximate gross weight of the package	2,14 kg
• Approximate dimensions of packaging - disc	Ø = 305mm ± 3% / H = 16,8mm ± 3%
• Ribbon cable packaging system	Evenly and rigidly rolled into a disc and cross-reinforced with PP tape
• Packaging logistical security	Thermo - shrinkable POF film cover

We guarantee constant availability of items in stock and immediate shipping !

Multicolor flat ribbon cables **TLWY** with **BQ** logo guarantee not only the highest global product quality and the latest production technologies, taking into account environmental protection, but also ensure comfort of use and savings resulting from reliability.

Thanks to the use of highest quality copper, with specially increased purity in regularly twisted conductor strands in available cross-sections and their appropriate construction, **TLWY** cables supplied by **BQ** guarantee almost lossless transmission of sent signal or current, significant facilitation of soldered, twisted, terminal blocks screwed and connectors crimped assembly, resistance to vibrations and oscillations as well as exceptional softness, ease of bending and flexibility.

BQ new generation of modified polyvinite insulation is specially thinned to guarantee a smaller outer diameter of the each single wire in ribbon at the same cross-sectional areas of conductive conductors and while maintaining all dielectric parameters and operating voltage up to **300 V** or **500 V** depending on the ribbon cable cross-sections areas used. This allows for better planning of electrical harnesses and more efficient use of cable glands. This is possible thanks to the increased physicochemical properties of insulation, which further makes offered cables perfectly cope with the surrounding conditions and aggressive chemical agents. The insulation is extremely smooth and glossy, is not absorbent, does not harden and does not crumble, and allows an unprecedented operating temperature in the wide range from **-40°C** up to **+105°C** (max. **+120°C**). This increased thermal range also reduces installation time and significantly decreases the risk of insulation melting when making high-current soldered connections or encapsulating connections with heat shrink covers or tubes. Additionally series of new generation multi-pin connectors requires using wires in thinned insulation, since wires of standard thickness are too thick and unable to fit in dense array of contact fields, covers or cable glands.

Individual, separately insulated base wires are precisely laser-welded into a ribbon, allowing them to be quickly and tool-free separated into individual wires or strips of wires with the number of wires needed for installation, without the risk of damaging the insulation of adjacent wires. We offer ribbons containing **8, 10 or 12** wires with cross-sections of **0,12mm², 0,22mm², 0,35mm², 0,50mm², 0,75mm²** and **1,00mm²**.

Multi-core, grey or multi-colored ribbon cables available on the market are usually not separatable or solderable due to the common insulation making it impossible. In addition, these cables are intended only for the transmission of low-voltage control signals or data transfer and are connected by crimp connector with appropriate spacing between conductor. The contact between the connector and the conductor in the form of insulation point-cutting forks gets tarnished over time, which interferes with or prevents signal transmission. **BQ** ribbon cables due to their ability to be separated and safely soldered without melting the insulation have a much wider range of applications. The insulation is resistant to higher voltages and cable can carry significant currents and powers. With **TLWY** flat ribbon cables, you can provide control, steering and power to the executive elements, greatly simplifying installation and reducing wiring costs. In addition, multiple receivers can also be freely connected with a single **TLWY** cable without fear of running out of power to control or power supply them.

The color arrangement of the wires in each **TLWY** ribbon cable has been constant for years and standardized (RED - BLUE - BLACK - WHITE - GREEN - BROWN - YELLOW - RED - BLUE - BLACK - WHITE - GREEN) based on the **RAL** color palette, regardless of the ribbon cable cross-section used, which allows a significant savings in cable marking systems. This eliminates the need for cable markers use and allows for quick identification of a particular single wire along the entire length of the ribbon cable, even in hard-to-reach places. This makes service jobs or modernization works simpler and easier to do.

Making multi-wire harnesses is extremely simple and fast, because the base single wires in ribbon cable are connected directly to each other. This makes assembling multi-wire harnesses exceptionally easy. The wires are immediately integrated into the whole, they only need to be led from the controller to the receiver and connected. If necessary, multi-point strands detachment for connections can also be made, tool-free and without any additional mounting materials.

TLWY flat ribbon cables are supplied in sections of **50m** or **25m** lengths depending on the cross-sections used and evenly rolled up into convenient discs. **BQ** equips all discs with a seal confirming that the product has passed a quality test, along with an end marker to make it easy to quickly find the beginning of the cable section and packs them in a sealed cover made of transparent shrink film, which allows you to quickly find the cable you need on the shelf in the warehouse, protects the insulation from oxidation, dust or getting dirty during storage and always guarantees the end user the highest quality of the ribbon cables after removing them from the packaging.

BQ ribbon cables have been made using **ISO 9001** and **ISO 14001** standards, are approved for use in **EU** markets and comply with the requirements of the environmental directives **RoHS-3** (2015/863/EU), **RoHS-2** (2011/65/EU), **RoHS** (2002/95/EU) and also comply with the requirements of **REACH** (Regulation 1907/2006) meeting regularly updated ECHA restrictions.

Offered flat multicolor ribbon cables **TLWY** type are universally applicable thanks to their professional design & performance and are ideal for most manufacturing, service or hobby projects in all areas of electronics and electrotechnical or electrical engineering. They are most often used in industrial and electro-medical automation, cranes, lifts, automotive and lighting industry, construction of all kinds of machines and devices from access control and alarm systems, intercoms, traffic lights and sound signals, multimedia advertising screens, power supplies, distribution and vending machines, scales, arcade game machines, parcel lockers, parking meters, laboratory equipment, taximeters, tachometers, audio video equipment, consumer electronics devices, household appliances or tanning sunbeds to advanced technological lines, when making power supply lines, steering, control, executive and on-board installations, warning or alarm systems, data transmission and many other applications. Due to the high current capacity and flat design that allows them to be easily hidden under upholstery, they are also often used in the manufacture, modernization, modification, tuning or reconstruction of all types of vehicles: electric drive scooters, mopeds, bikes and skateboards, motorbikes, quads, buggies, cars, vans and trucks with electric, hybrid or fuel engines drive, special vehicles (taxis, ambulances, fire trucks, police cars, banking armored cars, campers, cranes, tow trucks, loading lifts etc.), buses, tractors, semi-trailers, trailers, caravans, trams, trains, and they can be found even on yachts and speedboats, drones, powered hang gliders or sailplanes. **BQ** ribbon cables are often used to control and power energy-efficient LED lighting and emergency lighting systems, connect sensors and computer controllers to receivers, control LCD or LED displays and digital touch panels, implement complex smart buildings projects, as well as for any service and hobby work.

TLWY multicolor flat ribbon cables supplied by **BQ** are the perfect solution for any professional who appreciates the quality and convenience of multi-wires cables use. The use of these cables is simple, fast, economical and always guarantees excellent reliability.

BQ CABLE

