

# AUTOMOTIVE CABLES

ПГВА,  
PGVA,

ПВА,  
PVA,

ПВАМ  
PVAM



Operational temperatures:

- ПГВА cables – from **-40°C** to **+70°C**,
- ПВА and ПВАМ cables – from **-40** to **+105°C**.

## APPLICATION

**ПГВА** cables - for interconnection and installation of electrical equipment and devices with nominal voltage up to 48V, mainly for tractors, agricultural machinery, and trucks.

**ПВА** cables - the same, but with more strict requirements to flexibility and heat-resistance of wiring, mainly for passenger cars, light trucks and buses.

**ПГВА and ПВА** cables conform to specification TU 16.K17-21-94

**ПВАМ** cables - for interconnection and installation of instruments, electrical and electronic equipment, including electronic systems for motor and fuel injection control. The cable was specially designed for modern models of passenger cars, commercial vehicles, trucks and buses.

ПВАМ cables conform to the requirements of technical specification TU 16.K17-030-97.

The design of ПВА and ПВАМ cables conforms to ISO 6722.

## DESIGN

**Conductor** – soft copper multi-wire conductor, flexibility class 4 - for ПГВА cables and flexibility class 5 acc. to GOST 22483-2012 (IEC 60228:2004) - for ПВА and ПВАМ cables.

Conductor cross-sections - from 0.35 mm<sup>2</sup> to 120 mm<sup>2</sup> (up to 6 mm<sup>2</sup> for ПВАМ cables)

- Insulation**
- thick-wall; PVC compound of temperature class “A” according to ISO 6722 - for ПГВА cables;
  - thick-wall; lead-free PVC compound of temperature class “B” to ISO 6722 - for ПВА cables;
  - thin-wall; lead-free PVC compound of temperature class “B” according to ISO 6722 - for ПВАМ cables.

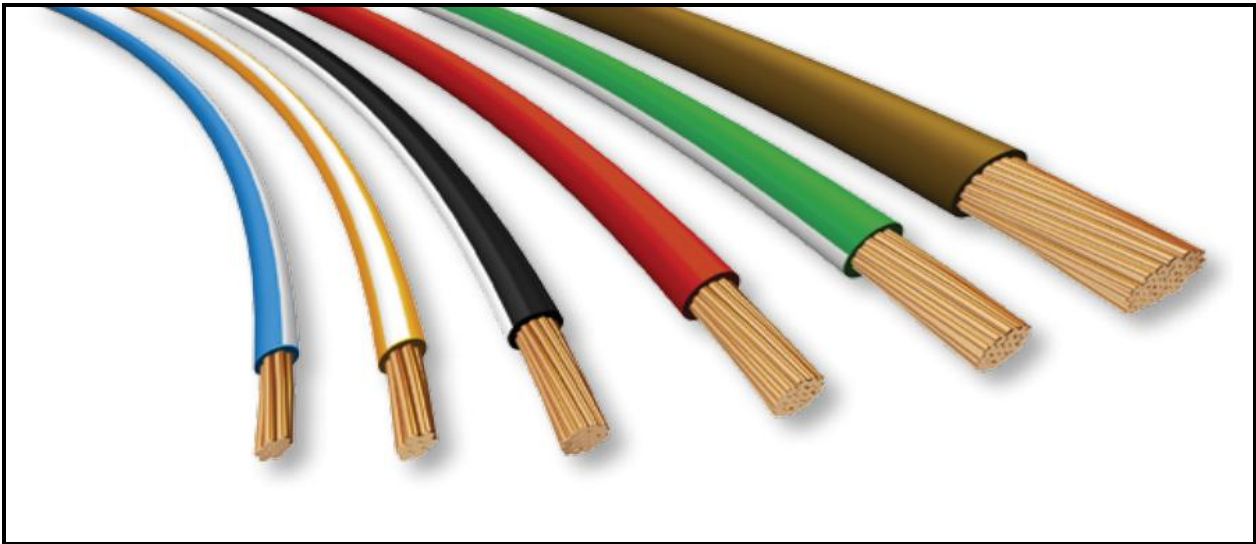
## PACKAGE

The cables with cross-sections up to 7 mm<sup>2</sup> are delivered on conical spools of 3 types:

NPS 400x400, NPS 400x250, NPS 400x150;

The cables with cross-sections 7.0 mm<sup>2</sup> and more – on reels according to GOST 5151-79, by agreement with customer.

## Automotive Cables as per Foreign Standards



### Automotive Cables of Temperature Class “B” According to ISO 6722

#### VLPY R

The cables conform to the requirements of **36-05-009/L (Renault)**.  
The cables have been validated by Renault for installation in their cars.

The cables are used for manufacture of LV harnesses to be installed in car passenger compartment and external units.

Temperature range - acc. to ISO 6722  
from -40°C to +105°C (3000 h.)  
+125°C (240 h.)

#### DESIGN

**Conductor** – soft copper multi-wire conductor of flexibility class 5  
according to GOST 22483-2012 (IEC 60228:2004)  
Conductor cross-sections - from 0.35 mm<sup>2</sup> to 10 mm<sup>2</sup>

**Insulation** – thin-wall; lead-free PVC compound according to ISO 6722 Class “B”

#### PACKAGE

The cables with cross-sections up to 6 mm<sup>2</sup> are delivered on conical spools of 3 types:  
NPS 400x400, NPS 400x250, NPS 400x150;

The cables with cross-section 7.0 mm<sup>2</sup> - on reels, by agreement with customer.

#### AVS, AVSS

The cables conform to the requirements of **ES 91110**.  
The cables have been validated for installation in Hyundai and Kia cars.  
The cables are used for manufacture of LV harnesses to be installed in car passenger compartment and external units.

Temperature range - according to ISO 6722  
from -40°C to +105°C (3000 h.)  
+125°C (240 h.)

#### DESIGN

**Conductor** – soft copper multi-wire conductor of flexibility class 5

according to GOST 22483-2012 (IEC 60228:2004)  
Conductor cross-sections - from 0.3 mm<sup>2</sup> to 8 mm<sup>2</sup>

- Insulation** - thin-wall; lead-free PVC compound  
according to ISO 6722 Class "B" for cables with cross-sections 0.3 mm<sup>2</sup>-2.0 mm<sup>2</sup> ;  
- thick-wall; lead-free PVC compound  
according to ISO 6722 Class "B" for cables with cross-sections 3.0 mm<sup>2</sup>-8.0 mm<sup>2</sup>;

## PACKAGE

The cables with cross-section up to 5 mm<sup>2</sup> are delivered on conical spools of 3 types:  
NPS 400x150, NPS 400x250, NPS 400x400  
The cables with cross-section 8.0 mm<sup>2</sup> - on reels, by agreement with customer.

## FLRY – A(B)/ T105, FLRYsn – A/ T105, FLY(C)/T105

The cables conform to the requirements of **LV 112 (VW)**  
The cables have been validated by Volkswagen for installation in their cars.  
The cables are used for manufacture of LV harnesses to be installed in car passenger compartment and external units.  
Temperature range - acc. to ISO 6722  
from -40°C to +105°C (3000 h.)  
+125°C (240 h.)

## DESIGN

- Conductor** - soft copper multi-wire conductor of flexibility class 5 according to GOST 22483-2012 (IEC 60228:2004) for FLRY A(B)/ T105 and FLY-A/T105 cables;  
- soft copper multi-wire conductor of flexibility class 5 of tinned copper according to GOST 22483-2-12 (IEC 60228:2004) - for FLRYsn-B/T105 cables.

Conductor cross-sections - from 0.35 mm<sup>2</sup> to 40 mm<sup>2</sup>

- Insulation** - thin-wall; lead-free PVC compound  
according to ISO 6722 Class "B" for FLRY A(B)/ T105 and FLRYsn-A/T105 cables  
with cross-sections 0.35 mm<sup>2</sup>- 6.0 mm<sup>2</sup>;  
- thick-wall; lead-free PVC compound according to ISO 6722 Class "B"  
for FLY – B(C)/105 cables with cross-sections 10 mm<sup>2</sup> - 40 mm<sup>2</sup>.

## PACKAGE

The cables with cross-sections up to 6 mm<sup>2</sup> are delivered on conical spools of 3 types:  
NPS 400x150, NPS 400x250, NPS 400x400  
The cables with cross-sections from 7.0 mm<sup>2</sup> to 40 mm<sup>2</sup> - on reels, by agreement with customer.

## FLRY – A(B)/ T105 (2 TAD,2TBD); FLRYsn – A/ T105 (2TAE); FLY-B(C)/105 (2SB(C)D)

The cables conform to the requirements of **ES-AU5T-1A348-AA (Ford)**  
The cables have been validated by Ford for installation in their cars.  
The cables are used for manufacture of LV harnesses to be installed in car passenger compartment and external units.  
Temperature range - according to ISO 6722  
from -40°C to +105°C (3000 h.)  
+125°C (240 h.)

## DESIGN

- Conductor** – soft copper multi-wire conductor of flexibility class 5 according to GOST 22483-2012 (IEC 60228:2004) for FLRY – A(B)/ T105 ( 2 TAD,2TBD),  
FLY – B/T105 (2SB(C)D) cables;  
- soft copper multi-wire conductor of flexibility class 5 of tinned copper  
according to GOST 22483-2012 (IEC 60228:2004) for FLRYsn – A/ T105(2TAE) cables.

Conductor cross-sections - from 0.35 mm<sup>2</sup> to 40 mm<sup>2</sup>

**Insulation** - thin-wall; lead-free PVC compound according to ISO 6722 Class "B" for FLRY A(B)/ T105 and FLRYsn-A/T105 cables with cross-sections 0.35 mm<sup>2</sup> - 10,0 mm<sup>2</sup>  
- thick-wall; lead-free PVC compound according to ISO 6722 Class "B" for FLY – B/105 cables with cross-sections 10 mm<sup>2</sup> - 40 mm<sup>2</sup>

#### **PACKAGE**

The cables with cross-sections up to 6 mm<sup>2</sup> are delivered on conical spools of 3 types:

NPS 400x150, NPS 400x250, NPS 400x400

The cables with cross-sections from 7.0 mm<sup>2</sup> to 40 mm<sup>2</sup> - on reels, by agreement with customer.

### **Automotive Cables of Temperature Class "C" According to ISO 6722**

#### **FIL F3Z**

The cables conform to the requirements of **36-05-009/--P (Renault)**.

The cables have been validated by Renault for installation in their cars.

The cables are used for manufacture of LV harnesses to be installed in car passenger compartment, external units and engine compartment.

Temperature range - according to ISO 6722

from -40°C to +125°C (3000 h.)

+150°C (240 h.)

#### **DESIGN**

**Conductor** – soft copper multi-wire conductor of flexibility class 5 according to GOST 22483-2012 (IEC 60228:2004)

Conductor cross-sections - from 0.35 mm<sup>2</sup> to 7.0 mm<sup>2</sup>

**Insulation** – thin-wall; lead-free PVC compound according to ISO 6722 Class "C".

#### **PACKAGE**

The cables are delivered on conical spools of 3 types:

NPS 400x150; NPS 400x250, NPS 400x400

The cables with cross-section 7.0 mm<sup>2</sup> and more - on reels, by agreement with customer.

**FLRY – A(B)/ T125** (3TAD, 3TBD);

**FLRY-C/T125** (3TCD), **FLRYsn – A/ T125** (3TAE);

**FLY-B(C)/125** (3SBD, 3SCD)

The cables conform to the requirements of **ES-AU5T-1A348-AA (Ford)**

The cables have been validated by Ford for installation in their cars.

The cables are used for manufacture of LV harnesses to be installed in car passenger compartment, external units and engine compartment.

Temperature range - according to ISO 6722

from -40°C to +125°C (3000 h.)

+150°C (240 h.)

#### **DESIGN**

**Conductor** – soft copper multi-wire conductor of flexibility class 5 according to GOST 22483-2012 (IEC 60228:2004)

Conductor cross-sections - from 0.35 mm<sup>2</sup> up to 7.0 mm<sup>2</sup>

**Insulation** – thin-wall; lead-free PVC compound according to ISO 6722 Class "C";

#### **PACKAGE**

The cables are delivered on conical spools of 3 types:

NPS 400x150, NPS 400x250, NPS 400x400

The cables with cross-sections 7.0 mm<sup>2</sup> and more - on reels, by agreement with customer.

## **FL9Y (3SAD)**

The cables conform to the requirements of **ES-AU5T-1A348-AA (Ford)**.

The cables have been validated by Ford for installation in their cars.

The cables are used for manufacture of LV harnesses to be installed in car passenger compartment, external units and engine compartment.

Temperature range - according to ISO 6722

from -40°C to +125°C (3000 h.)

+150°C (240 h.)

## **DESIGN**

**Conductor** – soft copper multi-wire conductor of flexibility class 5 according to GOST 22483-2012 (IEC 60228:2004)

Conductor cross-sections - from 0.35 mm<sup>2</sup> to 2.0 mm<sup>2</sup>

**Insulation** – halogen-free compound according to ISO 6722 Class “C”.

## **PACKAGE**

The cables are delivered on conical spools of 3 types:

NPS 400x150, NPS 400x250, NPS 400x400