

LABOR – ASTER

INDUSTRIAL AUTOMATION



AC 083
QMS

TRANSMISSION LINES SEPARATOR, TRANSLATOR type ST-RS232/TTY

- Separation and conversion of standard RS232C to signals in current loop of standard TTY
- Transmission speed 19200 bits/s
- Full galvanic separation of all circuits

EMC requirements 2014/30/UE - PN-EN 61326-1:2013-06
LVD requirements 2014/35/UE – PN-EN 61010-1:2011

APPLICATION:

The separator is design to convert signals in RS232C standard to signals in current loop of standard TTY (and vice versa). At the same time it ensures full galvanic separation between both sides: a device operating in standard RS232C and a device communicating with it through ST-RS232/TTY connected to current loop TTY (0, 20mA).

On the RS232 side the separator only supports Rx/D and Tx/D data lines. Two jumpers J1 and J2 are easily accessible inside the separator housing allow to change the phase of the Tx signal and independently Rx.



Housing - housing 25mm width
mounting - on railTS35
protection level - IP20

BASIC TECHNICAL PARAMETERS:

RS232C side

receiver parameters

low level - -12...-3V
high level - +3...+12V

input resistance - $\geq 3k\Omega$

transmitter parameters

output voltage - min. $\pm 5V$ on load $\geq 3k\Omega$
monitoring of the transmitting on Rx/D receiving line (U_{Rx} $\geq 3V$, logic 0)

separator transmitting line Tx
separator receiving line Rx

receiver sensitivity - switching level 10mA
voltage dropout on the input - $\leq 3,5V$ @ 20mA

monitoring of the receiving line - diode LED lights during transmitting on Rx receiving line (I=0mA, logic 0)

signal from transmitter - I=0mA \rightarrow R=51 Ω , U_{out}=0V
- I=20mA \rightarrow U_{out}=24V
R_{load} $\leq 1000\Omega$

Transmission speed - 19200 bits/s

Max length of line for

RS232C side - 15m (total capacity < 2500pF)

TTY side - 1200m, max R_{load} $\leq 1000\Omega$

Power supply - 21...28Vdc, 50mA

Galvanic separation - 2kV, 50Hz between all circuits

MTBF - 122000h

HOW TO ORDER:

Order example:

Transmission lines separator, rail housing, power supply 24Vdc type **ST-RS232/TTY**

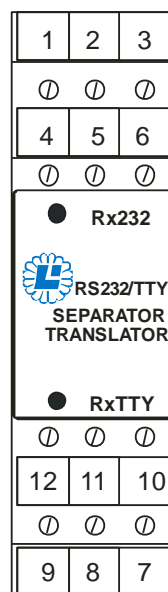


Fig.1 Description of terminals

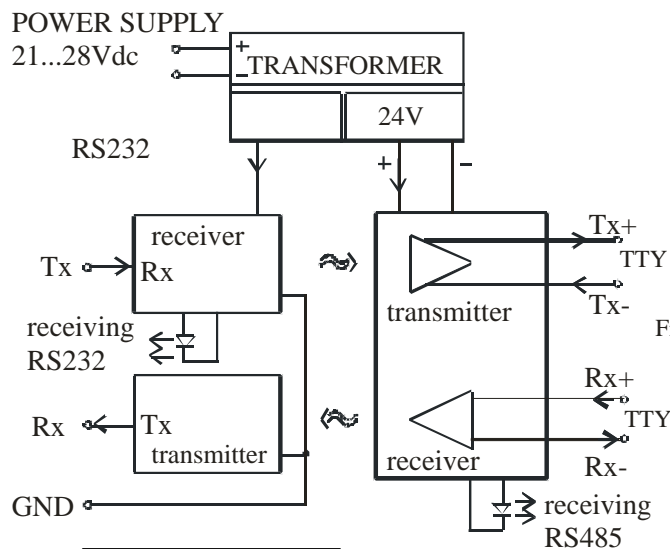


Fig.2 Block diagram of the RS232 / TTY separator

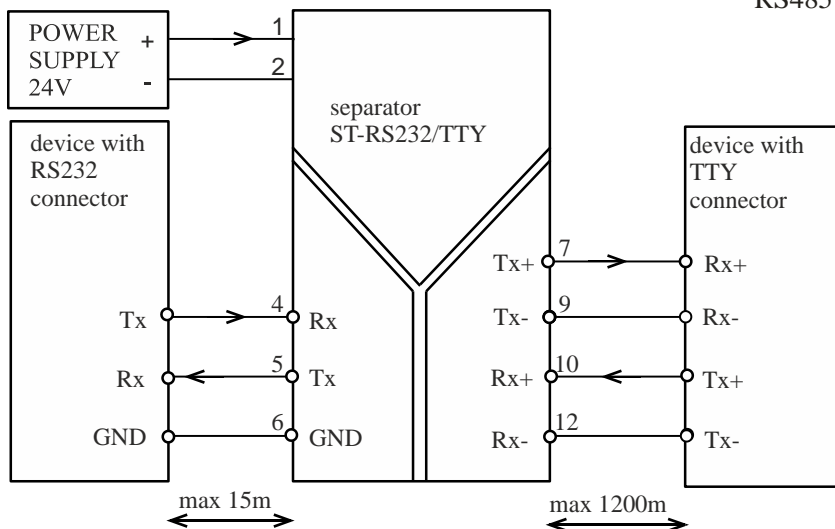


Fig.3 Connection for long distance (with galvanic separation) of a device with RS232 standard with a device with TTY standard

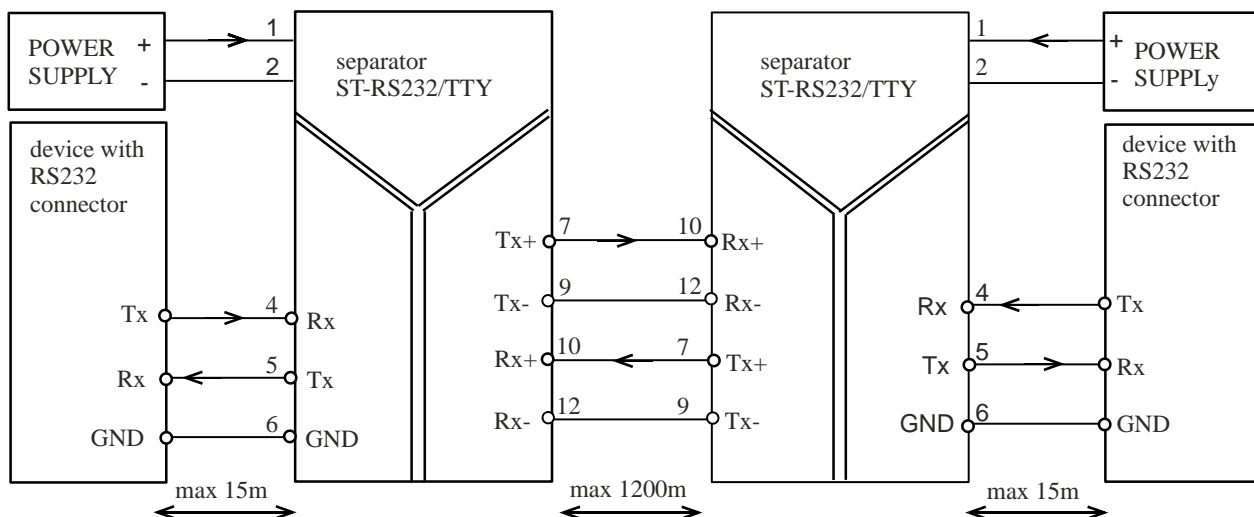


Fig.4 Connection for long distance of devices with the same RS232C standards using separator with translation to current loops TTY.

Production and distribution:

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The manufacturer reserves the right to make changes to the product.

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