

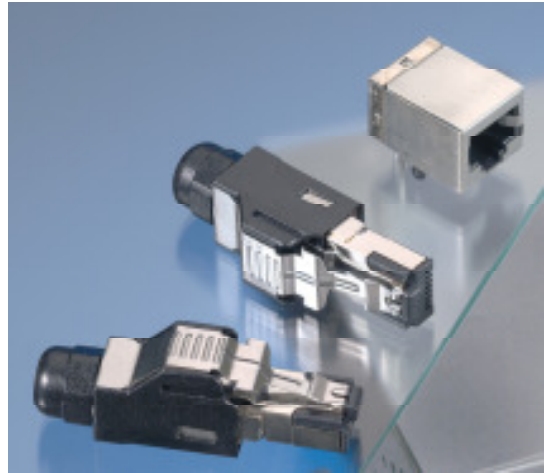
SafetyNETp Know How: SafetyNETp Connection Technology

Field bus experience has shown, that the reliability and simplicity of connection technology are decisive factors in contributing to the success of an industrial communication system.

In this edition we would like to provide you with a brief understanding of the SafetyNET p connection technology.

Cabling

At SafetyNET p signal transmission takes place through copper cables (twisted pair), 2-pair, drilled and shielded copper cable. Transmission speed is 100 Mbit/s, this equates to 100 BASE-TX (Fast-Ethernet). Up to 100m cable is permitted between two network machines. Only shielded cables and connection elements are permitted. Single components must fulfil the requirements according to category 5 of the ISO/IEC 11801.



Connector plug

A vital criterion for the industrial use of Ethernet is the controllability of the connection technology on-site. There are 3 industrial Ethernet connector plug types specified:

- IP 20 area: RJ 45
- IP 67 area: RJ 45 Push Pull, M12 D-coded
- The wire colours and pin out at SafetyNET p are as follows:

Signal	Function	Wire Colour	Pin Out	
			RJ 45	M 12
TD+	Transmission Data +	yellow	1	1
TD-	Transmission Data -	Orange	2	3
RD+	Receiver Data +	white	3	2
RD-	Receiver Data -	Blue	6	4