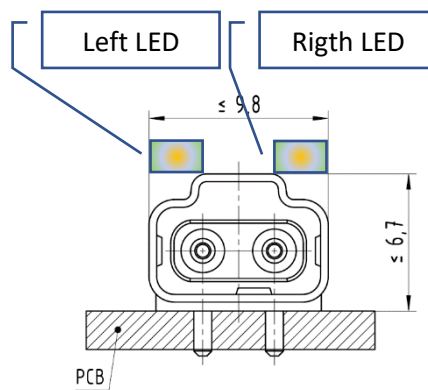# APPLICATION NOTE

SINGLE PAIR ETHERNET SIGNALING LED'S

PROPOSAL FOR THE SIGNALING LED'S AT SPE PORTS

The signaling of the status and the function of Ethernet ports is very helpful for the user to identify the function or to evaluate failures easely. The picure below illustrade the postion of the 2 signaling LED's.

Picture 1: IP20 jack acc. to IEC 63171-6 with 2 signaling LED's

It is recommended to use Bi-Color LED with green/yellow colour.

The table below show the proposal of the signaling of the LED's:

LED POSITION	LED SIGNAL	FUNCTION
LEFT LED **GREEN/YELLOW** (MANDATORY FOR ALL DEVICES)	OFF	No Link
	Green ON	Active Link
	Alternating between Green/Yellow	Link & Activity
	Green LED blinks 1x per periode	Port in "Spanning Tree blocked" mode (optional)
	Green LED blinks 3x per periode	Reserved for redundancy States (optional)
RIGHT LED **GREEN/YELLOW** (MANDATORY FOR UNMANAGED SWITCHES OR PSE; OPTIONAL FOR SMALL END DEVICES/PD)	Green LED OFF	Power off
	Green LED ON	Power on (PoDL or Hybrid Power)
	Yellow LED ON	Power Fault (e.g. voltage out of range)
	Yellow LED blinks 1x per periode	10 Mbit/s – connection (optional – unmanaged)
	Yellow LED blinks 2x per periode	100 Mbit/s – connection (optional – unmanaged)
	Yellow LED blinks 3x per periode	1000 Mbit/s – connection (optional – unmanaged)
	Yellow LED blinks 4+ per periode	Faster than 1000 Mbit/s – connection (optional – unmanaged)

Table 1: Proposal of the signaling LED functions

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CONTACT

SPE Industrial Partner Network e.V.

Weher Straße 151

D-32369 Rahden

Germany

info@single-pair-ethernet.com

www. single-pair-ethernet.com