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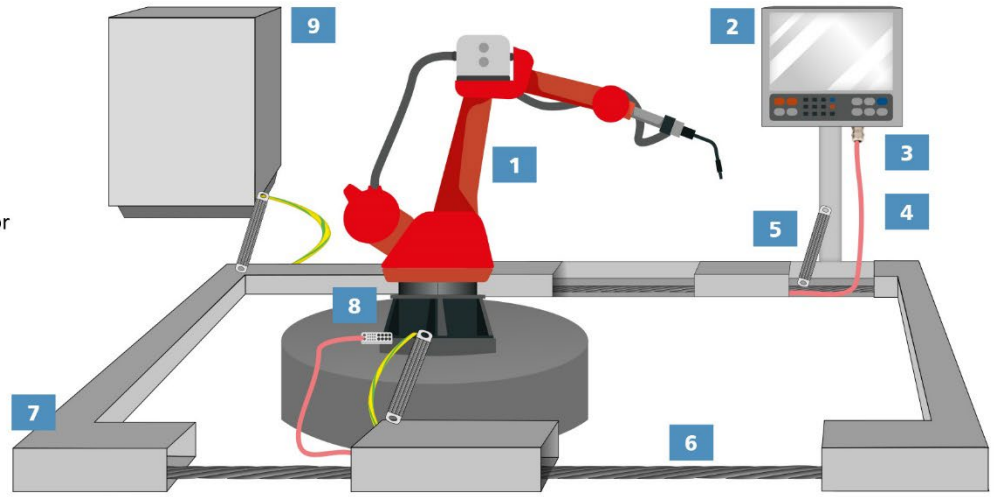
Expertos en conectividad industrial

EXAMPLE OF A PLANT EARTHING CONCEPT

The stranded conductor (6) is laid in the cable duct (7) and connected to all conducting plant sections to provide potential equalization and prevent magnetic field interference from the outset. The diagram shows the switching cabinet (9), robot (1) and control panel (2) connected together by a copper earthing strap (5).

Thanks to its enlarged contact surface, the EMC gland (3) improves conductivity between the cable shield and the cable gland on the housing. The diagram also shows the use of H07V-K/07V-K single core cables (4) and PROFInet devices (8) for earthing each individual plant component. It is up to the plant engineer to decide, on an application-by-application basis, whether green/yellow (protective earthing) or pink (functional earthing / FE) cables are used as per DIN EN 60445.

1 Robot
2 Control panel
3 EMC gland
4 H07V-K / 07V-K
5 Copper earthing strap
6 Tinned stranded conductor
7 Cable duct
8 PROFInet device
9 Switching cabinet



Inside de cable duct

So-called copper earthing straps are attached to the machinery by installers. For optimal protection against electro- magnetic interference, we also recommend installing a stranded conductor (class 2 or 5) in the cable duct together with an earthing / potential equalization block. The strand- ed conductor acts as an antenna and dissipates most of the electromagnetic radiation so that only a fraction of it reaches the data cables. The radiation that does reach them is then fully attenuated by the cable shields and the end result is error-free data transmission. Another benefit of our concept is the freedom it gives plant operators to upgrade their cur- rent cable ducts in a simple manner as and when required